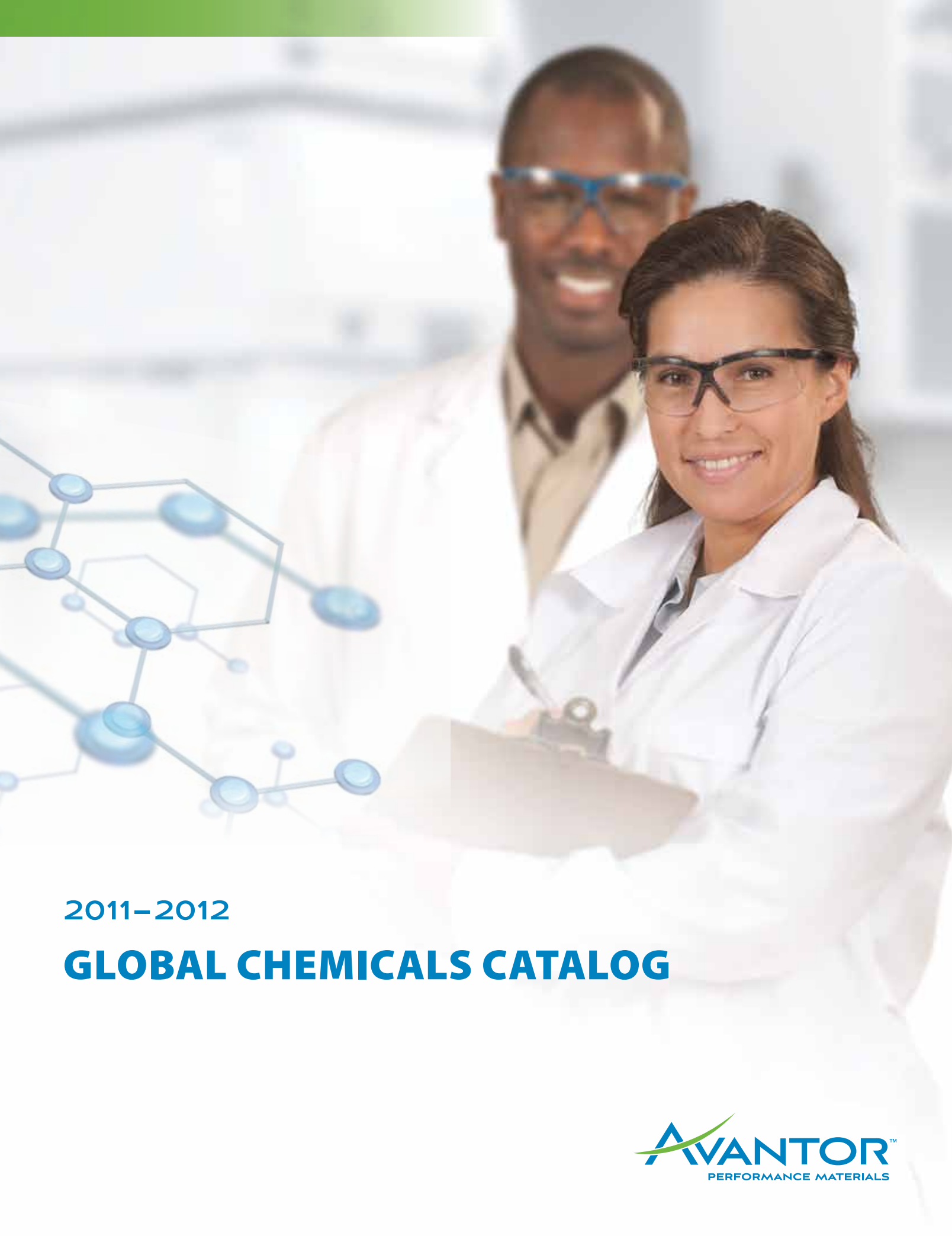


2011–2012

GLOBAL CHEMICALS CATALOG

AVANTOR™
PERFORMANCE MATERIALS

Performance materials for tomorrow's world

Specialty Chemicals That Deliver on Performance.

Avantor™ Performance Materials offers laboratories, research centers and industry worldwide the high-purity chemicals they need to create the next generation of discoveries. Our products lead the way in quality and reproducibility.

We give our customers a marketplace advantage in a time of advanced instrumentation, of smaller, more precise samples and increased emphasis on near-perfect repeatability and consistency. Our specialized, application-optimized products are at work wherever purity is essential, from research and discovery to high-volume production.

Giving you quality solutions for quality results.

Contents

Avantor Performance Materials: A new name. A new generation of discovery.

Our name has changed. But our commitment to remain a leading global supplier of the performance materials you need has not changed. We will continue to offer the proven quality of J.T.Baker high-performance chemistries and the versatility of our Macron Fine Chemicals brand products so you can still count on us to provide a single, unified source of high-quality, high-purity products. You also have a bold new partner, a growing market leader who is passionate about helping you create the next generation of innovation — in every field from life sciences, pharmaceuticals and biotechnology to microelectronics and solar energy.

J.T.Baker Chemicals: Purity in your laboratory.

J.T.Baker chemicals are known worldwide for excellence every step of the way — reliable results that help our customers achieve new heights in chemistry. Our products are application optimized, to help you get the most from high-performance specialty instrumentation. Every day, J.T.Baker specialty chemicals help customers forge their own reputations for high quality and performance.

Macron Fine Chemicals: A new name for consistency in your process.

The name change that resulted in our new Macron Fine Chemicals brand name reflects our renewed energy and commitment to your future needs. Macron Fine Chemicals represents a unique name for a unique line of products, chemicals that embody quality and consistency recognized across the industry and around the world. Under the Macron Fine Chemicals name, we'll continue to provide you with chemical products that are synonymous with reliability, consistency, and repeatability. So they can meet ever-increasing performance demands. Macron Fine Chemicals universal solvents and reagents are already at work in laboratories, clinics, manufacturing and academic facilities worldwide — and their versatility lets users reduce inventory needs and develop more cost-effective processes.

Quality solutions for quality results.

As our organization has evolved, one thing has never changed: our ability to build trust with our customers. Our consistent quality exceeds expectations. We offer application-optimized J.T.Baker specialty chemicals, along with the flexibility and cost-effectiveness of our broad Macron Fine Chemicals product line. Our purity reaches the parts-per-trillion level. Worldwide, users of sophisticated laboratory instrumentation and other laboratory testing techniques have come to count on the reproducible results they achieve with our products. Today, Avantor Performance Materials is helping bring the future capabilities of those processes within reach for customers the world over.

Certified Capabilities Across the World

Avantor excellence is recognized by ISO certifying bodies around the world. Every one of our manufacturing facilities is ISO 9001 certified, and our Phillipsburg and Deventer facilities are ISO 14001 certified. We are also known for Six Sigma processes, improving efficiency in manufacturing and logistics processes. And our Lean Manufacturing practices conserve material, energy and time.

Avantor is also known in the pharmaceutical world for our "GMP culture," the result of our total quality approach and our recognized leadership in cGMP-produced chemicals for drug production. We excel in the implementation of Statistical Process Controls (SPC), providing a foundation for customer support excellence.

ISO

Phillipsburg, NJ 9001: 2008 & 14001: 2004
Paris, KY 9001: 2008
Mexico City, Mexico 9001: 2008
Deventer, the Netherlands 9001: 2008 & 14001: 2004 & 13485: 2003
Selangor, Malaysia 9001: 2008

How Avantor helps enable your pharmaceutical and biotech processes.

For our pharmaceutical and biotechnology customers, our broad line of analytical reagents and application-optimized performance chemistries goes beyond exceeding industry standards or regulations. We aim to exceed your expectations, with the kind of purity, consistency and performance that allows groundbreaking advances in discovery, development and manufacturing. So you can get the most from today's most productive technology — and tomorrow's.

ULTRAPURE BIOREAGENT

Empowering Discovery

For our pharmaceutical and biotechnology customers, we provide chemical products that expand and extend discovery capabilities, such as analytical reagents and optimized high-performance chemistries. From the research laboratory to full-scale production, our products are helping customers worldwide to bring next-generation products to market, rapidly and cost-effectively.

That kind of performance requires chemical products that offer unsurpassed levels of purity, consistency, and reproducibility. That's why Avantor offers bioreagents, biological buffers, purification chemicals and high quality biotech offerings such as our ULTRAPURE BIOREAGENT molecular biology line. We can provide proprietary bonding chemistries for chromatography sorbents and excipients tailored to either synthetic or biologically derived pharmaceuticals. Our innovation — and product purity — helps our customers bring new discoveries within reach. And our diverse product line helps you optimize your workflow, whether you are working on small or large molecules. In PCR applications, in monoclonal antibody development, at the intracellular level and on the production line, Avantor products are at work, helping to create new worlds of biotechnology possibilities.

Supporting Development

Our commitment to supporting pharmaceutical manufacturing excellence isn't limited to high-purity, quality products. We also help our customers balance regulatory compliance, production efficiency and quality goals by offering a complete range of value-added services and features, including global risk mitigation, cost of ownership savings, supply chain management, reduced resource use and much more.

Today's product development customers expect leading-edge advances in drug performance and delivery. Avantor responds with capabilities like particle characterization at nanoscale levels. Reliable, efficient mobile phase chromatography solutions for capture. Excipient products with unique morphology. In all these ways and more, we help development specialists maximize efficiency, contain costs and make scientific visions a reality.

Strengthening Manufacturing

Making good manufacturing processes better is an Avantor specialty. That means you can achieve better productivity, consistency and quality through high-performing excipients, buffers and cGMP-approved bioprocess solutions. Whether you need basic cleaning solutions, mobile phases or custom blends, we can deliver quickly with the required regulatory information, and without risk of sera- or animal-based contamination. Our cGMP produced biotech reagent products are becoming recognized as "Best Practices" in material sourcing, and some have been produced to cGMP standards even though a compendial monograph did not exist. Avantor offers the kind of expertise that helps you find the right solution to improve manufacturing efficiency and product performance. We take pride in helping customers bring high-quality products to market — and bringing them to market faster.

Scale up with confidence — all throughout the development process.

In an era where global chemical product supply can be vulnerable to market, environmental and even political conditions, Avantor customers can remain confident that supply reliability and availability will stay consistent and dependable. Our supply chain stability helps customers scale up to their target production levels — rapidly and easily — along any step of the development, approval and manufacturing process.

A full spectrum of chemistries to help technology evolve — in a world of emerging applications

Our commitment to excellence in performance materials reaches far beyond the laboratory. Environmental initiatives the world over count on the purity and consistency of our products. Our chemistries are used by countless healthcare providers, academic researchers and food producers in a wide range of cutting-edge applications. Because for every product, in every application, the goal is the same: unsurpassed quality.

For our pharmaceutical and biotechnology customers, our broad line of J.T.Baker products and Macron Fine Chemicals chemistries more than meets industry standards or regulations. We aim to exceed your expectations, with the kind of purity, consistency and performance that allows groundbreaking advances in discovery, development and manufacturing. So you can get the most from today's most productive technology—and tomorrow's.

Around the world, Avantor specialty chemical products are enabling test results that are accurate, reliable, and meet all international standards. We help meet the challenge of detecting pollutants and impurities. And we help respond to emerging challenges with forward-looking innovations like J.T.Baker ULTREX II acids, with parts-per-trillion sensitivity that takes environmental analysis to another level, and Macron Fine Chemicals AR Select Plus products that bring versatility to the laboratory.

In laboratories, clinics, hospitals and physician offices, Avantor reagents and other biochemical products are top performers in immunoassay, spectrophotometry, electrophoresis, microimmunoassay and other clinical diagnostic procedures. Our reagents are created with today's clinical needs in mind — smaller sampling sizes (as little as 10 µL), greater throughput demands, and the continual development of new assays for infectious diseases, metabolic markers, cardiology and more.

Academic research facilities trust Avantor products for consistency, purity and cost-effective performance that also yields predictable, repeatable results. Our high-purity solvents and reagents have a proven track record of supporting pivotal research projects conducted by elite doctoral-level researchers in academic and nonprofit settings. Through both products and packaging, Avantor continues a proud reputation for contributions to cost savings, reliability and laboratory safety in academic research and training facilities.

Processes that were only a dream just a short time ago are now basic expectations in the industrial chemical world: nanoscale-level characterization, nanometer precision for integrated circuits, resistance to extreme temperatures and unprecedented levels of efficiency in solar cell efficiency. Avantor meets all these needs and more, helping industrial producers make emerging technologies a reality.

As global regulatory requirements become stricter and more complex, Avantor helps food and beverage customers ensure compliance while meeting tight deadlines and maintaining high throughput. That includes providing consistently high-quality chemical testing products to prevent time-consuming and expensive recalls and reprocessing. We can also help customers maximize efficiency, reduce process variability and increase automation while cutting costs.

Technical Support for a World of Challenges

What's ASK Avantor? That's an excellent question — and an important one. ASK Avantor is a rapid, convenient, online portal for technical support and answers to questions. It even has a Live Chat feature that lets you talk online with our customer support or technical support representatives. ASK Avantor is another facet of our technical support philosophy: partnering with customers and contributing to scientific advancement.

Approaches for a greener world

Avantor has long been known for our ability to provide chemical packaging that responds to a complete spectrum of customer needs. And we have a complete range of safety-enhancing packaging options. But our greenest initiative is our proven, proprietary CYCLE-TAINER solvent delivery system, featuring high-purity, sustainable packaging for high-purity solvents. CYCLE-TAINER packaging means returnable, reusable containers, with solvents refilled by Avantor to minimize exposure to the environment.

CYCLE-TAINER packaging is also engineered, in both materials and concept, for preservation of solvent purity as well as maximum efficiency. In addition, our superior global supply chain ensures refill-on-demand capabilities. For more information on the CYCLE-TAINER Solvent Delivery System, see pages 99-105.

General Information

How to Use This Catalog

The catalog is organized into five main sections. The table below provides a brief description of the information contained in each section and how to quickly navigate through the catalog.

	Section	Description
1	**Introduction**	The color section provides an introduction to the J.T.Baker and Macron Fine Chemicals brand product lines and is a good place to start to get a broad understanding of the types of products and services offered by Avantor Performance Materials, Inc.
2	**General Information**	The General Information section provides a reference for doing business with Avantor. It covers a series of topics ranging from "How to Use This Catalog" to more detailed explanations, such as our "Guide to Product Listings".
3	**Analytical Methods**	Product information for specific analytical methods.
	Products by Application	Product information for specific applications and markets.
4	**Alphabetical Section** • **J.T.Baker Brand** • **Macron Fine Chemicals Brand**	The alphabetical sections are the first places to look for a specific chemical by name. Each product listing provides detailed information, including product grade, description, product number, container type, package size, specifications, CAS number, and much more. Please refer to the "Guide to Product Listings" overview on pages 14–16 for a detailed explanation.
5	**Packaging Appendix**	Review the common packaging options available for our major product lines. Complete with photos and dimensions for our high performance packages.
	Indices	Search by CAS number, product number, or topic and quickly find the product information you are looking for.
	Reference Information	A periodic table of the elements and conversion tables for quick and easy reference.

General Information

Resources Available via the Avantor Web Site (www.avantormaterials.com)

The Avantor web site offers a wealth of information about our products. Below is a sample of the information available on the site.

Section	Description
Product Catalog	Our online product information provides the latest product sizes, prices, specifications, regulatory information, and more. Our data is updated daily.
Material Safety Data Sheets (MSDS)	The Material Safety Data Sheets (MSDS) section allows customers to search our MSDS database by Product Number, Product Name, Formula or CAS number. Our data is updated daily.
Certificates of Analysis	Customers can retrieve a Certificate of Analysis for a specific lot number or for a random lot of a product. Our data is updated daily.
Specifications	Customers can retrieve current product specifications for any product in the catalog. Our data is updated daily.
Technical Library	The Technical Library section of the Avantor web site provides a large body of information about products and some of their end applications. Customers have the ability to search documents by key words.
Product Literature	The Product Literature section provides descriptions of all available product literature pieces and allows you to request hard copies via mail. In many cases the documents are also available as a downloadable PDF in the Technical Library.
News and Events	The News and Events section of the web site provides the latest news and information about the products, including press releases and tradeshow participation.
ASK AVANTOR	ASK AVANTOR allows customers to live chat, search our database of frequently asked questions, or submit a new question to the technical support staff or other areas of the company. Answers are provided in real time by chat or e-mail. 
CHEMCHOICE	The CHEMCHOICE Chemical Cross Reference application delivers a quick and easy way for our customers to compare related products. By simply entering the product name or number of a competitive product, CHEMCHOICE will automatically reference the product and display the available Avantor products that match.
Contact Us	You can place your order for Avantor products or services in two ways: contact any authorized Avantor Distributor; or call, fax or e-mail our Customer Service Department at 1-855-282-6867 or 1-610-573-2600.
Distributors	The "Find a Distributor" section allows customers to search for a distributor that serves your particular location.

Definitions of Purity

J.T.Baker Brand

BAKER—A grade of chemicals for laboratory use, for organic synthesis, and for routine research usually controlled by physical criteria and often by assay (by GC).

BakerDRY—A group of low-water solvents specifically manufactured and tested for use in organic, organometallic, and oligonucleotide synthesis. Most BakerDRY solvents meet ACS specifications and are ready to use, eliminating the need for any further purification. These solvents are available in 100 mL and 1 liter septum-seal bottles and the CYCLE-TAINER solvent delivery system.

BAKER ANALYZED Reagent—A grade of high-quality chemicals for laboratory and specialized industrial use. Analytical methods used for these determinations are based on standard test procedures described in technical publications. Frequently, improvements developed by our scientists and engineers are employed to achieve a higher degree of reliability.

The quality of many BAKER ANALYZED reagents meets or exceeds the requirements set forth by the American Chemical Society (ACS). These products are designated BAKER ANALYZED ACS reagents.

When J.T.Baker product specifications surpass those listed in the ACS, either in tighter purity levels or additional parameters, the statement "exceeds ACS specifications" will be found in the product listings in the catalog, on our Certificates of Analysis, and on our product labels. These tighter limits and additional specifications provide you with improved consistency and characterization of your reagents.

BAKER ANALYZED HPLC Reagent—A group of high-purity solvents, buffer salts, and mobile phase modifiers for use in analytical and preparative separations. BAKER ANALYZED HPLC reagents are optimized for all of your liquid chromatography applications, including high-performance liquid chromatography, gel-permeation chromatography, and UV-spectrophotometric analysis. These highly characterized reagents are manufactured and tested to assure interference-free separations and have unmatched lot-to-lot consistency. Recalibration or instrument adjustments due to solvent lot changes are minimized. Solvents are controlled for high assay and low UV absorption, fluorescence, residue, and water.

BAKER ANALYZED Biochemical—High quality biochemicals for research use.

BAKER ANALYZED LC/MS—A group of solvents and solvent blends specifically developed to provide the lowest interferences in the industry. Products are manufactured under strict controls to ensure lot-to-lot consistency and are filtered through a 0.2 µm filter to remove particles.

BAKER BIO-ANALYZED Reagent—A group of high-purity solvents and reagents specially purified and carefully tested to assure suitability and reliability in nucleic acid or peptide synthesis. Carefully controlled low water levels and unsurpassed lot-to-lot consistency deliver better synthesis yields and coupling efficiencies.

BAKER INSTRA-ANALYZED—Acids and standards that are purified and characterized for use in trace-element analysis.

Biotech Reagent—A grade of product which is produced under GMP guidelines, but for which there is no USP/NF compendia for the product.

FCC—FCC grade products are intended for use in food processing operations and meet requirements as described in the current edition of the Food Chemical Codex. These products are prepared to be of such purity as to reduce the levels of harmful or objectionable contaminants so as to not represent a hazard to the end user.

Multi-Compendial—Manufactured under Good Manufacturing Practices (GMPs), these chemicals conform to the requirements of the United States Pharmacopoeia (USP) or the National Formulary (NF). These products are subject to regulations issued by the FDA. All meet the requirements necessary for their use in pharmaceutical processing and prescription compounding (USP and NF). Additionally, these chemicals meet the specifications of the PhEur (EP, European Pharmacopoeia), BP (British Pharmacopoeia), and JP (Japanese Pharmacopoeia), where appropriate.

PHOTREX—High-purity solvents characterized for use in UV, visible, and

General Information

IR spectrophotometry. The certificate of analysis includes the results for UV absorbancy at selected wavelengths.

Purified—Chemicals of good quality where there are no official standards or compendia, or in some cases, that meet the requirements of former compendia articles.

Practical—Chemicals of sufficiently high quality for use in diverse applications. Some products may contain intermediates, isomers, or homologs.

Technical—Chemicals of selected commercial quality, useful in some applications.

ULTRA LC/MS—High purity solvents designed for the most demanding ultra-high pressure liquid chromatography (UHPLC) and mass spectrometry research and analytical testing applications. These products are filtered through 0.1 micron filters to remove troublesome particles. Low trace metal levels are sustained over time; providing low ion suppression enabling maximum sensitivity and improved analyte identification. Advanced suitability testing is performed on each lot with both electrospray positive and negative modes.

ULTRA RESI-ANALYZED Reagent—A group of ultra-high purity solvents and salts developed for organic residue extraction/concentration procedures. These solvents are fully characterized and lot controlled by ECD, FID, or other method-specific detectors to deliver the highest level of purity and lot-to-lot consistency. Advanced stabilizer systems are incorporated in ULTRA RESI-ANALYZED solvents to ensure solvent stability and superior performance that is guaranteed through the expiration period stated on the label. ULTRA RESI-ANALYZED reagents are suitable for exacting EPA sample cleanup protocols.

ULTREX/ULTREX II—Acids and salts of extremely high purity with low levels of metallic impurities, especially for use in ppt trace element analysis. These products are manufactured using state-of-the-art processing and are packaged under clean-room conditions. Post-packaging characterization is performed using advanced analytical instrumental methods. A Certificate of Actual Lot Analysis is provided with every bottle.

ULTRAPURE BIOREAGENT—A line of high-purity reagents tested for use in biotechnology applications, such as electrophoresis and liquid chromatography. Where applicable, tests include DNase, RNase, Protease, heavy metals, and insoluble matter.

USP, NF—Manufactured under GMPs, these chemicals conform to the requirements of the United States Pharmacopoeia (USP) and the National Formulary (NF). Subject to regulations issued by the FDA, USP, and NF, products meet the requirements necessary for their use in pharmaceutical processing and prescription compounding.

Macron Fine Chemicals Brand

ACS—Reagents meeting the requirements of the American Chemical Society Committee on Analytical Reagents.

AR—The standard Macron Fine Chemicals grade of analytical reagents suitable for laboratory and general use. If the reagent also meets the requirements of the American Chemical Society Committee on Analytical Reagents, it will be denoted as an AR (ACS) reagent.

AR (ACS)—An analytical reagent of exceptional purity that is specially manufactured for standardizing volumetric solutions and preparing reference standards.

AR Select—A line of acids specifically developed for trace metal analysis; analyzed for up to 32 metals in the low ppb range.

AR Select Plus—The purest grade of Macron Fine Chemicals acids for trace metal analysis. AR Select Plus acids are packaged in glass bottles. These products are tested for 40 elements in the high ppt to low ppb range, ensuring low background interference.

Certified—A line of stains certified by the Biological Stain Commission.

ChromAR—Solvents that are suitable for liquid chromatography and UV spectrophotometry.

CP (Chemically Pure)—Products of purity suitable for use in general applications.

FCC—Products that meet the requirements of the current Food Chemical Codex.

GenAR—A line of reagents specifically developed for use in biotechnology and genetic research.

Lab Grade—A line of solvents suitable for histology methods and general laboratory applications.

NF—Chemicals manufactured under current Good Manufacturing Practices (cGMP) and meeting the requirements of the National Formulary.

OR—Organic reagents that are suitable for research applications.

Purified—Chemicals of good quality where there are no current compendia. Most Purified grade chemicals were formerly listed in the USP and NF compendium. The specifications from the former compendia listing have been retained wherever possible.

SilicAR—Silica gel products with physical and chemical characteristics that are optimal for column and thin layer chromatography.

SpectrAR—A line of solvents designed for UV Spectophotometric applications.

StandARd—Prepared volumetric and analytical solutions. These solutions are suitable for use in ACS, USP and NF compendial methods and general laboratory applications.

Technical—A grade suitable for general industrial use.

UltimAR—Solvents that meet ACS specifications for liquid chromatography, UV spectrophotometry, and general purpose use. They are also tested by GC/ECD and GC/FID for use in extraction/concentration sample clean up protocols for trace-level organic impurities.

USP—Chemicals manufactured under current Good Manufacturing Practices (cGMP) and which meet the requirements of the US Pharmacopeia.

USP-GenAR—A line of chemicals manufactured under cGMP, which meet the requirements of the US Pharmacopeia, meet European Pharmacopoeia (PhEur, EP) and British Pharmacopoeia (BP) specifications where designated, and are endotoxin (LAL) tested where appropriate.

Guide to Product Listings

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Acetic Acid, Glacial					
BAKER ANALYZED ACS Reagent (Aldehyde Free)					
9508-02	Glass S/S	500 mL	cma	55.05	
		12 x 500 mL	cma	55.05	660.60
9508-01	Glass	12 x 500 mL	cma	33.40	400.80
9508-00	Poly Coated	6 x 500 mL	cma	37.35	224.10
9508-05	Glass S/S	2.5 L	cma	98.10	
		6 x 2.5 L	cma	98.10	588.60
9508-03	Glass	6 x 2.5 L	cma	59.35	356.10
9508-18	Poly	6 x 2.5 L	spr	54.75	328.50
9508-33	Poly Coated	6 x 2.5 L	cma	66.75	400.50
9508-06	Poly	4 x 4 L	cma	93.45	373.80
9508-07	Poly Pail	40 lb	bul	Inquire	
9508-08	Poly Drum	125 lb	bul	Inquire	
9508-15	Poly Drum	450 lb	bul	Inquire	

CH_3COOH FW: 60.05

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Assay (by GC, corrected for water) .....min. 99.7 %
Color (APHA) .....max. 10
Dilution Test .....Passes Test
Residue after Evaporation .....max. 0.001 %
Acetic Anhydride ($(CH_3CO)_2O$) .....max. 0.01 %

Trace Impurities (in ppm):

Chloride (Cl) .....max. 1
Sulfate (SO_4) .....max. 1
Heavy Metals (as Pb) .....max. 0.5
Iron (Fe) .....max. 0.2
Substances Reducing Dichromate .....Passes Test
Substances Reducing Permanganate .....Passes Test
Titrable Base (meq/g) .....max. 0.0004
Acetaldehyde .....max. 0.005 %
Sensitivity .....Passes Test

Trace Impurities (in ppb):

Arsenic and Antimony (as As) .....max. 50
Boron (B) .....max. 100
Chromium (Cr) .....max. 200
Cobalt (Co) .....max. 100
Copper (Cu) .....max. 100
Heavy Metals (as Pb) .....max. 500
Iron (Fe) .....max. 200
Lead (Pb) .....max. 300
Manganese (Mn) .....max. 200
Nickel (Ni) .....max. 100
Potassium (K) .....max. 300
Tin (Sn) .....max. 100
Titanium (Ti) .....max. 300
Zinc (Zn) .....max. 200

IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378

1. Purity Grade For complete definitions, see pages 11–13.

2. Supplemental Description Chemical synonyms, application, or qualifying information appear here.

3. Product Number Use this number when ordering.

4. Container Type Avantor takes great care in packaging products to maintain purity and provide ease of use and safety. The chart below is a key to the container designations used in the product listings. See the Packaging Appendix in the back of this catalog for photos and additional information, on pages 569–594.

J.T.Baker Brand Container Descriptions

Container Type	Description
Al SAFETAINER	Aluminum Can
Ampoule	Sealed Ampoule
Cubitainer	A square corrugated case with an internal polymer diaphragm and liquid dispensing port.
Flowmor	Moisture Barrier Drum with Desiccant
Fluoropolymer	Fluoropolymer Bottle
Glass	Glass Bottle
Glass Carboy	Glass Carboy
Glass in Can	Glass Bottle inside a Can, with Vermiculite
Hedpak	Rectangular HDPE Bottle with Spigot
Leverpak	Fiber Drum with Liner and Metal Ring Closure
Lined Fiber Dr	Fiber Drum with Liner
Lined Steel Dr	Lined Steel Drum
NOWPak	Returnable Container System—HDPE outer shell with collapsible inner liner
Poison Pack	A package allowing Class B poisons up to 500 g to ship through normal channels, including UPS
Poly	Polyethylene Bottle
Poly Coated	Plastic-coated Glass Bottle
Poly Drum	Polyethylene Drum
Poly Pail	Cylindrical high-density polyethylene pail with a reclosable screw-top lid.
S/S	Single Shipper
Septum-Seal Cap	Glass Bottle with Septum-Seal Cap
Steel Drum	Steel Drum
Steel Pail	Steel Pail

Macron Fine Chemicals Brand Container Descriptions

Container Type	Description
Al Bottle	A break-resistant, seamless, aluminum can.
AR-CAN	A tin-plated steel container with a screw-top closure. This container is highly break-resistant.
Circle of Safety	A bottle used exclusively for packaging hydrofluoric acid (HF). The bottle has a circle of blue indicating ink around the bottle that turns yellow when it comes in contact with HF. The ink returns to blue when the bottle is washed clean of the HF. This warns users that the bottle is contaminated with hydrofluoric acid.
Cubitainer	A square corrugated case with an internal polymer diaphragm and liquid dispensing port.
Flowmor	Moisture Barrier Drum with Desiccant
Hedpak	Rectangular HDPE bottle with spigot
Leverpak	Fiber drum with liner and metal ring closure.
NOWPak	Returnable Container System—HDPE outer shell with collapsible inner liner
Poison Pack	A package allowing Class B poisons up to 500 g to ship through normal shipping channels, including UPS.
Poly Pail	Cylindrical high-density polyethylene pail with a reclosable screw-top lid.
POLYSTORMOR	A specially designed rectangular shaped, high-density polyethylene bottle for efficient space utilization. Inorganic salts and other dry products are available in 125 g and 500 g sizes.
SAFEMOR	Plastic-coated glass bottles that are shatter-resistant. Macron Fine Chemicals brand acids and solvents are available in this packaging.
S/S	A single shipper
STAKMOR	A square reclosable corrugated box with a polyethylene liner, available in 2.5 and 12 kg sizes. This space-saving configuration allows you to store 25% more inorganic salts or other dry products in the same space as traditional round fiber drums.

5. Package Size In the example shown, 500 mL indicates the unit package size. When products are available in cases, the units per case will precede the unit package size. In some instances, the product number refers to both a single unit and a case.

6. Group Code A summary of the Product Group Codes follows:

J.T.Baker Brand Group Codes

Code	Classification
bbp	Bulk Bonded Phases
bio	Biochemicals
bks	Small Bulk Reagents
bul	Bulk Reagents
cac	Case Acids
cbs	Bio-Analyzed Solvents
chi	Chiral and Preparative Columns
chp	High Purity Solvents
cma	Major Acids
col	Chromatography Columns
cor	Case Organics
csa	Case Salts
cso	Case Solvents
elp	Electrophoresis Products
fls	Flash Chromatography Cartridges
lsc	Liquid Scintillation Counting Products
lws	Low Water Solvents
non	Non-Case Products
npk	NOWPak Products and Accessories
org	Organic Specialties
pro	SPE Processors, SPE/*Speedisk* Accessories
rac	Regulated Acids
rnc	Regulated Non-Case Products
rsb	Regulated Small Bulk
rss	Regulated Salts and Solvents
saf	Spill Cleanup Products
sbk	Small Bulk
sbo	Small Bulk Organics
sol	Standard Solutions
spd	*Speedisk* Products
spe	SPE Columns
spr	Specialties
tng	Safety Training Products and Programs
upr	Ultrapure Bioreagents

Macron Fine Chemicals Brand Group Codes

Code	Classification
AS	AR Select/ AR Select Plus
BP	Bulk Reagents
FA	FDA Regulated Acids
FG	FDA Regulated Salts and Solvents
GD	General Line Dry Reagents (less than 12 kg)
GE	GenAR Products
GS	General Line Reagent Solvents (up to 20 L)
NP	NOWPak Products and Accessories
RA	Reagents Acids
RP	Precious Metals and other products with volatile pricing
SB	Small Bulk Solvents (up to 20 L)
SD	Small Bulk Dry Products (12 kg)
SG	Specialty Dry Products (SilicAR, Amberlite, AluminAR, Florisil, DRIERITE, Mallcosorb)
SO	Stock Organics
SP	Specialty Products (UltimAR, ChromAR, Nanograde, CHEM-CLEAR)
SR	SpectrAR Solvents
ST	StandARd Solutions
UR	Unique Reagents

7. Suggested List Price for Single Units This price (in U.S. dollars) applies to purchases of single units and less than full case quantities. For case items, this price shows the savings when purchasing full case quantities (generally 33⅓% per bottle).

8. Suggested List Price per Case This price (in U.S. dollars) applies to purchases of full case quantities.

9. Chemical Formula

10. Formula or Atomic Weight

11. Reference to Official Compendium

12. Additional Designations Selected J.T.Baker products meet reagent specifications for testing USP/NF monographs as published in the reagent section of the USP/NF. Selected J.T.Baker USP/NF products are also tested to meet compendial specifications for the European Pharmacopoeia (PhEur, EP) and British Pharmacopoeia (BP).

Products featuring the cGMP icon are manufactured under current Good Manufacturing Practices (cGMP). This symbol provides assurance that the product is suitable for use in production and that the documentation required for GMP manufacture is available.

Products featuring the Food Grade icon (FOOD GRADE) are manufactured under general Good Manufacturing Practices guidelines for food chemicals as described in the Food Chemicals Codex (FCC).

General Information

13. Specifications The J.T.Baker and Macron Fine Chemicals brands are kept current with industry standards. Our specifications are updated to improve our products and as compendia change. For current specifications at time of purchase, consult our online product information at www.avantormaterials.com. If you have questions about specifications, contact our Technical Service Department at 1-800-669-8230 or use ASK AVANTOR at www.avantormaterials.com.

14. The Chemical Abstracts Service Registry Number Your key to access information available through CAS, a division of the American Chemical Society. For details on searching the CAS database, visit www.cas.org or contact:

Chemical Abstracts Service
Customer Services
P.O.Box 3012
Columbus, OH 43210
800-848-6538

15. Transportation/Hazard Classification 49 Code of Federal Regulations (CFR) Research and Special Programs Administration (Carriage by Public Highway) reference.

For products listed in section 49CFR 172.101 or meeting the definitions of a regulated material, the DOT hazard class and United Nations (UN) or North American (NA) identification numbers are included with the product listing.

DOT Key	
Class 3	Flammable Liquids
Class 4	Flammable Solids
4.1	Flammable Solids
4.2	Spontaneously-Combustible Material
4.3	Dangerous When Wet Material
Class 5	Oxidizing Substances
5.1	Oxidizers
5.2	Organic Peroxides
Class 6	Toxic Materials
6.1	Toxic Material Packaging Group I & II
	Packaging Group III
Class 8	Corrosive Materials
Class 9	Miscellaneous Hazardous Materials

The DOT class number and UN/NA identification number only appear under the specific product in the price list when the product is regulated.

16. Merck Index The Merck Index monograph numbers are cited from The Merck Index, Fourteenth Edition (2006) for the J.T.Baker Brand, S. Budavari, M. O'Neil, A. Smith, R.Heckelman, Eds., with the permission of the copyright owner, Merck & Co., Inc., Whitehouse Station, N.J., U.S.A. © Merck & Co., Inc. 2006. The Merck Index, Thirteenth Edition (2001) for the Macron Fine Chemicals Brand, S. Budavari, M. O'Neil, A. Smith, R.Heckelman, Eds., with the permission of the copyright owner, Merck & Co., Inc., Whitehouse Station, N.J., U.S.A. © Merck & Co., Inc. 2001.

17. Recommended J.T.Baker Spill Clean-up Product J.T.Baker brand spill cleanup products are proprietary mixtures designed to effectively absorb common laboratory spills and reduce associated hazards. For complete product information, see the Spill Cleanup Products in the alphabetical section of this catalog.

MSDS Information

Material Safety Data Sheets Available Round-the-Clock

We want you to have the safety information you need, when you need it. For this reason, Avantor gives you access to our Material Safety Data Sheets 24/7 via the Avantor website.

Search our Internet catalog or MSDS page for the product you want and Material Safety Data Sheets are only a mouse click away. Visit www.avantormaterials.com.

For more information about any of these services, please call our Customer Service Department at 1-855-282-6867.

Quality Information

cGMP Explanation

A product that is labeled as USP, NF, FCC, or cGMP-produced is:

- Produced in an FDA-registered facility*
- Manufactured in a GMP building
- Made under validated, GMP processes
- Documented in terms of stability, retained samples, and packaging when applicable
- Traceable to its raw materials

* Registration does not denote FDA approval of a firm or product.

Product Stability

Based upon the results of stability studies, research data, or technical product information, Use Before or Retest dates for Avantor products are established for those chemicals with known limited stability. In the absence of a Use Before or Retest date, our products can generally be considered stable when they are stored under the following conditions:

- Original, unopened container, and
- In accordance with specific storage directions or limitations provided on the label, or
- If no specific storage directions are provided on the label, the product must be protected from moisture, freezing, and excessive heat.

Once the container is opened, shelf life depends on how the chemical is stored and handled within your facility. Product performance capability is best determined by re-testing the chemical against the original Quality Control tests and specifications provided on the Certificate of Analysis.

The chart below depicts the key elements of the GMP and ISO 9001 requirements that are included in the Avantor quality management system.

Overview of Avantor Quality Systems

Quality Systems and Controls	Required for GMP Manufacturing	Required for ISO Certification
Customer Notification of Change System: Notification of changes from established production and process-control procedures that can affect the quality of the product	•	•
Product Design: Process for managing the design and development of products.		•
Purchasing and Supplier Quality Systems: Verification of product conformance to purchase requirements upon receipt. Documented process for supplier approval and on-going evaluation.	•	•
Buildings and Equipment: Maintain infrastructure to achieve conformity to product requirements.	•	•
Raw Materials, Processes, and Production Controls: Designed to meet product requirements. Documented and approved. Production carried out under controlled conditions with supporting records.	•	•
Packaging Processes and Packages: Use of proper materials and labels to prevent contamination, mix-ups, and errors.	•	•
Product Handling, Storage, and Distribution: Product handled to prevent degradation, contamination, and cross contamination.	•	•
Product Traceability: Traceability of product history from raw material to customer using product number/lot number combination.	•	•
Returned Product: Identified, quarantined, and segregated pending investigation and final disposition.	•	
Quality Management Systems: System in place to manage quality to consistently provide product that meets customer and applicable regulatory requirements.	•	•
Documentation and Records: All processes related to product manufacturing and testing are documented and approved to ensure the effective planning, operation, and control of the processes. Records are maintained to provide evidence of conformity to requirements.	•	•
Laboratory and Inspection: Material is inspected/tested at appropriate stages of the process to verify conformance to requirements, including testing of the final product prior to release. Testing conducted according to documented and approved procedures and specifications.	•	•
Organization and Personnel Training: Quality Assurance unit is independent of production. Personnel have necessary competence to perform work affecting product quality. Training conducted to ensure competence and to meet regulatory requirements.	•	•
Corrective and Preventative Actions: Nonconformances and potential nonconformances are investigated with the intent to eliminate the cause and prevent recurrence. Investigations are documented and approved by Quality Assurance.	•	•
Internal Audits: Conducted at regular intervals to verify compliance with GMP and ISO 9001 requirements. Results documented and shared with management.	•	•
Management Review: Top management reviews the quality management system at planned intervals to ensure its continuing suitability, adequacy, and effectiveness.		•
Validation (GMP products): Planned tests are conducted on processes that are critical to product quality in order to verify the capability to routinely produce products that meet the intended result.	•	
Stability (GMP products): Testing of product in the saleable container at planned intervals to determine or verify shelf life.	•	
Continued Improvement: Continually improve the effectiveness of the quality management system.		•
Avantor Quality Systems are more comprehensive than GMP or ISO requirements alone. Rigorous control of our processes provides better control of your processes.		

Doing Business with Avantor Performance Materials, Inc.

Where to Order

You can place your order two ways—direct by calling our Customer Service Department at 1-855-282-6867 or with any of our authorized distributors. Our network of authorized distributors is backed by our global distribution centers. To find a distributor in your area, access our web site at www.avantormaterials.com.

Inquiries

MSDSs and Certificates of Analysis can be accessed 24 hours a day, 365 days a year via the internet. Our Customer Service Department is available to serve you from 8:00 A.M. to 6:00 P.M. Eastern Time, Monday through Friday. For technical questions, visit ASK AVANTOR at www.avantormaterials.com.

For emergency contact outside of normal business hours, please call 1-610-573-2600. This number is attended 24 hours a day, 365 days a year.

Terms and Conditions

Prices/Specifications

Prices and specifications are current at time of publication; both are subject to change without notice. Note that most case prices offer significant savings compared to less-than-full-case quantities. All prices in this publication are quoted in U.S. Dollars and are valid only for sales in the United States. Visit our web site catalog at www.avantormaterials.com for current prices, updated daily.

Payment Options

Avantor Performance Materials, Inc. accepts MasterCard, Visa, and American Express for corporate purchases. Contact our Customer Service Department for details.

Quality Guarantee

Avantor unconditionally guarantees our products to conform to current specifications. If you find that an Avantor product does not meet specifications, please call our Customer Service Department and we will accept the non-conforming material back for full credit or replacement in accordance with our return policy.

Transportation

All prices are F.O.B. shipping point. Lost or damaged freight is the responsibility of the carrier. The carrier will reimburse for lost or damaged goods at a released value of $2.65 per pound (subject to change).

Avantor products are normally shipped via small parcel package, parcel post, common carrier, or ocean freight carrier. The mode of transportation utilized is determined by weight, dimensions, hazard class, and cost of shipment. All shipments comply with DOT, IMO, and other applicable regulations.

Shipping Regulations

Certain classifications of chemicals require special packaging. If these products are ordered, special packaging charges will be added to the invoice. When special handling is required for shipment, a special handling charge will be assessed due to carrier imposed fees.

Toxic Substance Control Act

The Toxic Substance Control Act (TSCA) requires any person who intends to manufacture or import a new chemical substance for a commercial purpose to submit a pre-manufacturing notice (PMN) at least 90 days before manufacture and/or importation. TSCA Section 5(h)(3) exempts from the pre-manufacture notification requirements those chemical substances that are used solely for research and development purposes.

Some products in this catalog are not listed on the TSCA inventory. Such products are intended solely for use in analysis, experimentation, and/or research and development. If used solely for R&D, these may qualify for exemption from the new chemical notification requirements. You are responsible for assuring that products you purchase are used appropriately and meet all regulatory requirements. Non-exempt uses may trigger pre-manufacture notification requirements.

Contact our Technical Service Department if you have any questions or anticipate that a pre-manufacturing notice is required for any product purchased from Avantor Performance Materials, Inc.

FDA Regulated Products

Only Avantor products designated USP, NF, FCC, or products sold as cGMP-produced are offered for use in food, drug, and cosmetic products.

Hazards, Precautions, Warnings

Computer generated Material Safety Data Sheets, required by Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1200 Hazard Communication Standard, are sent to the customer the first time the product is purchased from Avantor Performance Materials, Inc. The MSDS is sent under separate cover to the attention of the Safety Director. You are responsible for providing the MSDS to your employee prior to handling and use of the material. We also provide comprehensive warnings on our labels.

All chemicals should be handled only by qualified, trained professionals who are familiar with the potential hazards. The absence of warnings should not be interpreted that the product has no risks of exposure. There is little or no health effect information available on many substances, and the user is responsible to follow standard laboratory safety procedures and avoid any contact with the chemicals used.

Warranty

Avantor products are warranted to conform, on the date of shipment, to current specifications at the time of manufacture. Avantor Performance Materials, Inc.'s warranty obligation is limited to replacement of the non-conforming product or the refund of the purchase price, at the option of Avantor Performance Materials, Inc. Under no circumstances shall Avantor Performance Materials, Inc. be liable for special, indirect, incidental, punitive, or consequential damages of any nature, including without limitation, loss of profits or business interruption.

Disclaimer of Other Warranties

The warranty detailed in the previous section is the only applicable warranty. All other warranties, express or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed. Avantor Performance Materials, Inc. will not be bound by any term or condition appearing on an order form or a purchase order of the purchaser purporting to require the giving of any warranty other than that which is printed in the previous section, and Avantor Performance Materials, Inc. will not be bound by any such claimed warranty.

Except as expressly indicated to the contrary, the chemicals listed in this publication are offered for laboratory and manufacturing use only by qualified personnel, knowledgeable in the use and handling of the chemicals.

Avantor Performance Materials, Inc. believes that the information and data included in this publication are true and accurate. Any recommendations or suggestions are made without warranty or guaranty of any kind. Consequently, Avantor Performance Materials, Inc. can assume no responsibility connected with the use of any of our products or the information included herein. Nothing contained herein shall be construed to imply the non-existence of any relevant patents nor to constitute a permission, inducement, or recommendation to practice any invention covered by any patent owned by Avantor Performance Materials, Inc. or by others without authority from the owner of the patent.

Customer Service:
1-855-282-6867
1-610-573-2600
Technical Service:
1-800-669-8230
1-610-573-2600
www.ASKAVANTOR.com
Web Site: www.avantormaterials.com

Trademarks

The following list of trademarks is accurate to the best of our knowledge at the time of printing. Any errors brought to our attention will be corrected in the next issue of this catalog. Please contact the trademark owners or public resources for specific information about these trademarks.

Registered Trademarks of Avantor Performance Materials, Inc.

AGILE
AluminAR
ANHYDRONE
AR
AR Select
BAKER ANALYZED
BAKER BIO-ANALYZED
BAKER INSTRA-ANALYZED
BAKERBOND
BakerDRY
BakerFACTS
Baker-flex
BETACOUNT
BuCAIM
BuffAR
CHEMCHOICE
CHEM-CLEAR
ChemFax
Chemistry That Empowers Discovery
CHEM-SOLV
ChromAR
Circle of Safety
CYCLE-TAINER
Deal-AR-Pak
DESICCHLORA
DILUT-IT
DISKMATE
DispensAR
DUAL-TINT
Flowmor
GenAR
GRANUSIC
HYDRA-POINT
HYDROCOUNT
Hyqual
ICHTHYMALL
IndicatAR
J.T.Baker
Klean-AR
LabGuard
Mallcosorb
Nanograde
NEUTRACIT
NEUTRASORB
OR
Parlodion
PharmaTest
PHOTREX
PolarPlus
Protocol C^3
RESISORB
Right from the Start
SAFEMOR
SAFETAINER
SafetyCoat
SHaRE
SilicAR
SOLUSORB
Solvit
SpectrAR
Speedisk
STAKMOR
StandARd
STYRA-PAK
TEAM
UltimAR
ULTRA RESI-ANALYZED
ULTREX

Trademarks of Avantor Performance Materials, Inc.

AR-CAN
Beaker to Bulk
CARBOXY-SULFON
CINNASORB
CYCLE-PAK
CYCLE-TAP
CYCLE-TOT
CYCLE-TOTE
ExplorER
GelTwin
Global Pharma
HI-Propyl
Macron Fine Chemicals
narc
POLYSTAKMOR
POLYSTORMOR
PREPSCALE
PuritySeal
QUAT
SAF-T-DATA
SAF-T-SPILL
SAF-T-TRAINING
SCOUT
spe-500
The Gripper
VERSA-TEN
Your Outsource Resource

The following Trademarks of the companies indicated appear in this catalog:

ASPEC	Gilson, Inc.
Crillet	Croda International Plc
LabTec	SciLog, Inc.

The following Registered Trademarks of the companies indicated appear in this catalog:

Amberlite	Rohm and Haas Company
Ascarite II	Arthur H. Thomas Company
Brij	ICI Americas, Inc.
Carbitol	Union Carbide Corporation
Carbowax	Union Carbide Corporation
Celite	Celite Corporation
CELLOSOLVE	Union Carbide Corporation
Cubitainer	Hedwin Corporation
Darco	Norit Americas, Inc.
Dowex	Dow Chemical Company
DRIERITE	W.A.Hammond Company
Entegris	Entegris, Inc.
FerroZine	Hach Chemical Company
Flash+	Biotage, Inc.
Florisil	U.S. Silica Company
Hedpak	Hedwin Corporation
Hyamine	Lonza, Inc.
Leverpak	Grief Bros. Corp of Ohio, Inc.
Norit	Norit N.V.
NOWPak	ATMI, Inc.
Rieke	Rieke Corporation
Sephadex	Amersham Biosciences AB
SPE-DEX	Horizon Technology, Inc.
Swagelok	Swagelok Company
Tergitol	Union Carbide Corporation
Triton	Union Carbide Corporation
Tween	ICI Americas, Inc.
Viton	E.I. duPont de Nemours and Company

Design marks of Avantor Performance Materials, Inc.

AVANTOR™ PERFORMANCE MATERIALS

MACRON FINE CHEMICALS™

Flowmor

J.T.Baker®

Application-Optimized LC/MS Function-Tested

Analytical Methods

Analytical Methods
Analytical Chromatography

In the world of analytical chemistry, chromatography has become the most widely used analytical technique due to the convenience, speed of separations, reproducibility, and quantitative accuracy of results that are inherent to the techniques. As instrument sensitivity continues to improve, suitable high purity solvents for the mobile phase and an effective sorbent stationary phase are becoming even more vital to success in the laboratory.

At Avantor, we manufacture chromatography media, develop proprietary bonding chemistries, offer innovative products to support diverse separation techniques and applications, and produce high purity solvents to maximize separation performance in all your chromatography applications.

High Performance Liquid Chromatography (HPLC) Analysis

Liquid chromatography (LC) is the most widely used chromatographic technique being done in most laboratories in operation today. The reasons are many—ease of use, speed, separation reproducibility, and accuracy of results. LC is also generally non-destructive to the sample components, allowing them to be recaptured as they come off the instrument. For optimum HPLC performance, you need the right solvents and reagents. Whatever your analytical application, Avantor offers the products you need to be successful.

Solvents, Acids, Bases, and Ion Pair Reagents

J.T.Baker HPLC grade and Macron Fine Chemicals ChromAR and UltimAR grade products are recommended for use in HPLC applications.

For critical HPLC applications, J.T.Baker solvents remain the preferred choice for chemists throughout the world. Continuing a decades-long tradition of innovation, purity and consistency, these solvents represent years of research and manufacturing excellence to help today's HPLC instruments achieve optimum results.

Macron Fine Chemicals ChromAR and UltimAR solvents offer excellent performance in HPLC applications along with the economy of a "universal" solvent suitable for multiple applications. ChromAR solvents meet ACS specifications. UltimAR

J.T.Baker HPLC Solvents

Product	Product Number
Acetone	9002
Acetone, Low Water	9003
Acetonitrile	9012
Acetonitrile*	9017
Chloroform, Hydrocarbon Stabilized	9174
Chloroform	9175
Cyclohexane	9292
o-Dichlorobenzene	9233
Ether, Anhydrous	9237
Ethyl Acetate	9282
n-Heptane	9177
Hexanes (95% n-hexane)	9304
Isobutyl Alcohol	9048
Methanol	9093
Methyl tert-Butyl Ether	9042
Methylene Chloride	9315
Methyl Ethyl Ketone	9214
Pentane	9331
2-Propanol	9095
Pyridine, Low Water	9393
Tetrahydrofuran	9441
Tetrahydrofuran (Stabilized)	9440
Tetrahydrofuran, Low Water	9439
Toluene	9351
1,2,4-Trichlorobenzene	9444
2,2,4-Trimethylpentane	9480
Water	4218

*ULTRA Gradient

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

J.T.Baker HPLC Acids and Buffers

Product	Product Number
Acetic Acid, Glacial	9515
Ammonium Acetate	0599
Ammonium Carbonate	0651
Ammonium Phosphate, Monobasic, Crystal	0777
Sodium Bicarbonate, Powder	3508
Trifluoroacetic Acid	9470

J.T.Baker Ion Pair Reagents

Product	Product Number
1-Heptanesulfonic Acid, Sodium Salt	2173
1-Hexanesulfonic Acid, Sodium Salt	2175
1-Octanesulfonic Acid, Sodium Salt	2818
1-Pentanesulfonic Acid, Sodium Salt	2841
Tetrabutylammonium Hydrogen Sulfate (98%)	V360
Tetrabutylammonium Hydroxide, Titrant (0.4 M in H_2O)	V365
Tetrabutylammonium Hydroxide in Water	9580
Tetrabutylammonium Phosphate	V375

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

solvents meet ACS specifications for HPLC and UV spectrophotometry applications.

Our HPLC solvents are manufactured using multi-step purification processes that produce reliable, low backgrounds free of extraneous peaks. Statistical Quality Control (SQC) and Statistical Process Control (SPC) of our processes provide unmatched lot-to-lot consistency. Products are function tested for assay, water, residue after evaporation, and UV absorbance and fluorescence in critical ranges.

Select J.T.Baker acids, bases and ion pair reagents are also available in HPLC grade. These products enhance the usefulness of HPLC as an analytical technique. Products are controlled for solubility in aqueous and organic solutions, UV transparency, and metallic impurities.

Macron Fine Chemicals UltimAR Universal Solvents

Product	Product Number
Acetone	H451
Acetonitrile	H454
Chloroform	V551
Cyclohexane	V552
Dichloromethane	H485
Ether	V326
Ethyl Acetate	V553
Heptane	V554
Hexanes (95% n-Hexane)	H487
Isopropyl Alcohol	V555
Methyl Alcohol	H488
Pentane	V557
Petroleum Ether, 35°-60°C	H489
Tetrahydrofuran	V558
Toluene	V560
2,2,4-Trimethylpentane	V559

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Macron Fine Chemicals ChromAR Liquid Chromatography Solvents

Product	Product Number	Product	Product Number
Acetic Acid, Glacial	V155	Ethyl Acetate*	H078
Acetone	2435	Heptane	5139
Acetonitrile	2856	Isopropyl Alcohol	3043
Acetonitrile*	H076	Methyl Alcohol, Anhydrous	3041
Chlorobenzene	4426	Methyl Alcohol, Anhydrous*	H080
Chloroform	H407	Methyl tert-Butyl Ether	5398
Chloroform	4443	Methyl Ethyl Ketone	6206
Dichloromethane	4879	Methyl Isobutyl Ketone	5923
Dichloromethane*	H077	NMP (N-Methyl-2-pyrrolidinone)	6392
N,N-Dimethylacetamide	5407	n-Propyl Alcohol	5351
N,N-Dimethylformamide	5356	Tetrahydrofuran	2858
Dimethyl Sulfoxide	2969	Toluene	4483
Ether	2854	2,2,4-Trimethylpentane	6043
Ethyl Acetate	3442	Water	6795

*SAFEMORE Container

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Analytical Methods

Sorbents and Pre-Packed Columns

In addition to high-performance solvents, Avantor manufactures chromatography media for use in HPLC separations. J.T.Baker BAKERBOND sorbents are synthesized using trifunctional silane chemistry, which results in highly efficient and effective media.

J.T.Baker BAKERBOND Sorbents Trifunctional Silane Chemistry

Feature	Benefit
Increased resistance to hydrolysis	Longer column life
Greater stability at pH extremes	Broader effective pH use range
Reduced silanol interactions	Higher recoveries and less "tailing"
More consistent ligand density	Increased resolution and increased column lifetime versus monofunctional bonded phases

In the broadest terms, our sorbents include bonded phases on narrow-pore and wide-pore spherical or irregular silica and spherical polymer media. Our silica based BAKERBOND media are available in pre-packed columns or in bulk form for small and large molecule separations.

J.T.Baker Pre-Packed Analytical Columns

Description	Column Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
Narrow-Pore—Reverse Phase						
Octadecyl (C_{18})	4.6 × 150 mm	5 µm	Spherical	120 Å	7098-01	$868.50
	4.6 × 250 mm	5 µm	Spherical	120 Å	7098-00	858.40
Octyl (C_8)	4.6 × 250 mm	5 µm	Spherical	120 Å	7109-00	1016.60
Cyano (CN)	4.6 × 250 mm	5 µm	Spherical	120 Å	7111-00	1024.20
Narrow-Pore—Normal Phase						
Cyano (CN)	4.6 × 250 mm	5 µm	Spherical	120 Å	7111-00	1024.20
Wide-Pore—Reverse Phase						
WP Butyl (C_4)	4.6 × 250 mm	5 µm	Spherical	300 Å	7116-00	786.20
WP Octyl (C_8)	4.6 × 100 mm	5 µm	Spherical	300 Å	7105-01	863.70
WP Octadecyl (C_{18})	4.6 × 100 mm	5 µm	Spherical	300 Å	7104-01	845.10
	4.6 × 250 mm	5 µm	Spherical	300 Å	7104-00	789.40
WP QUAT (strong anion exchanger)	4.6 × 50 mm	5 µm	Spherical	300 Å	7158-05	1263.30
	7.75 × 100 mm	5 µm	Spherical	300 Å	7158-06	1506.80
WP CBX (weak cation exchanger)	4.6 × 250 mm	5 µm	Spherical	300 Å	7114-00	1108.00
WP CARBOXY-SOLFON	4.6 × 250 mm	5 µm	Spherical	300 Å	7159-00	1113.70

Please inquire for additional sizes, configurations or functional groups.

J.T.Baker BAKERBOND Analytical Sorbents

Description	Package Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
Narrow-Pore—Ion Exchange						
Propyl Sulfonic Acid (SO_3H)	10 g	5 µm	Spherical	120 Å	7081-01	$676.50
Narrow-Pore—Normal Phase						
Amino (NH_2)	10 g	5 µm	Spherical	120 Å	7070-01	628.70
Narrow-Pore—Reverse Phase						
Octadecyl (C_{18})	10 g	5 µm	Spherical	120 Å	7067-01	471.10

Please inquire for additional sizes, configurations or functional groups.

Ion Chromatography

As chromatography applications spread to separation of biomolecules, such as proteins and peptides, ion chromatography became a widely used technique. In this technique, the separation is due to ionic interactions between opposite charges in the molecules, sorbent, and liquid phase.

Ion chromatography is further subdivided into cation exchange and anion exchange chromatography. Change of pH or ionic concentration of the mobile phase is generally used to cause elution of the analyte.

Avantor manufactures a number of sorbents on spherical or irregular silica for use in ion exchange chromatography of both small and large molecules. J.T.Baker BAKERBOND spherical silica media exhibits higher mechanical strength than irregular silica and incorporates our proprietary surface chemistry in a variety of particle and pore sizes. Our online Technical Library at www.avantormaterials.com contains a selection of application notes for ion exchange applications.

J.T.Baker BAKERBOND Ion Chromatography Media

Description	Package Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
Narrow Pore Media						
Propyl Sulfonic Acid (SO_3H)	10 g	5 µm	Spherical	120 Å	7081-01	$676.50
	100g	40 µm	Irregular	60 Å	7045-00	386.40
Quaternary Amine (N^+)	100 g	40 µm	Irregular	60 Å	7043-00	391.90
	1 kg	40 µm	Irregular	60 Å	7043-01	1824.90
Aromatic Sulfonic Acid ($C_6H_5SO_3H$)	100 g	40 µm	Spherical	60 Å	7046-00	519.40
	1 kg	40 µm	Spherical	60 Å	7046-01	3840.50
Carboxylic Acid (COOH)	100 g	40 um	Irregular	60 Å	7044-00	386.40
DEAM	100 g	10 um	Spherical	120 Å	7316-00	640.10
	1 kg	10 um	Spherical	120 Å	7316-01	5120.70
	500g	20 um	Spherical	120 Å	7317-05	2814.00
Wide Pore Media						
ABx (antibody exchanger)	10 g	40 µm	Irregular	275 Å	7269-02	132.90
	100 g	40 µm	Irregular	275 Å	7269-00	579.70
	500 g	40 µm	Irregular	275 Å	7269-05	2560.40
	1 kg	40 um	Irregular	275 Å	7269-01	4830.80
	10 g	15 um	Spherical	300 Å	7157-02	135.40
	100 g	15 um	Spherical	300 Å	7157-00	652.30
	500 g	15 um	Spherical	300 Å	7157-05	2867.60
	10 g	40 um	Irregular	500 Å	7369-02	134.70
	100 g	40 um	Irregular	500 Å	7369-00	640.10
	500 g	40 um	Irregular	500 Å	7369-05	2853.60
Abx Plus (antibody exchanger)	10 g	40 um	Irregular	275 Å	7254-02	132.90
	100 g	40 um	Irregular	275 Å	7254-00	579.70
	500 g	40 um	Irregular	275 Å	7254-05	2294.70

Analytical Methods

J.T.Baker BAKERBOND Ion Chromatography Media

Description	Package Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
WP PEI (weak anion exchanger)	10 g	40 um	Irregular	275 Å	7264-02	$160.00
	100 g	40 um	Irregular	275 Å	7264-00	579.70
	500 g	40 um	Irregular	275 Å	7264-05	2294.70
	10 g	15 um	Spherical	300 Å	7180-02	134.70
	100 g	15 um	Spherical	300 Å	7180-00	640.10
	500 g	15 um	Spherical	300 Å	7180-05	2866.20
	10 g	40 um	Irregular	500 Å	7368-02	132.90
	100 g	40 um	Irregular	500 Å	7368-00	640.10
	500 g	40 um	Irregular	500 Å	7368-05	2814.00
WP DEAM (weak anion exchanger)	10 g	40 um	Irregular	275 Å	7473-02	132.90
	100 g	40 um	Irregular	275 Å	7473-00	579.70
	500 g	40 um	Irregular	275 Å	7473-05	2294.70
	1 kg	40 um	Irregular	275 Å	7473-01	4589.40
	100 g	5 um	Spherical	300 Å	7471-00	5289.00
	10 g	15 um	Spherical	300 Å	7472-02	132.90
	1 kg	15 um	Spherical	300 Å	7472-01	Inquire
WP QUAT (Strong Ion Exchanger)	10 g	40 um	Irregular	275 Å	7251-02	132.90
	100 g	40 um	Irregular	275 Å	7251-00	579.70
	10 g	15 um	Spherical	300 Å	7183-02	135.40
WP CBX (weak cation exchanger)	10 g	40 um	Irregular	275 Å	7263-02	188.10
	100 g	40 µm	Irregular	275 Å	7263-00	820.50
	500 g	40 µm	Irregular	275 Å	7263-05	3247.70
	1 kg	40 µm	Irregular	275 Å	7263-01	6495.50
	10 g	15 µm	Spherical	300 Å	7181-02	135.40
	500 g	15 µm	Spherical	300 Å	7181-05	2867.60
WP CARBOXY-SULFON (weak cation exchanger)	10 g	40 µm	Irregular	275 Å	7252-02	184.70
	100 g	40 µm	Irregular	275 Å	7252-00	579.70
	500 g	40 µm	Irregular	275 Å	7252-05	2294.70
	1 kg	40 µm	Irregular	275 Å	7252-01	4589.40
	10 g	15 µm	Spherical	300 Å	7184-02	132.90
	500 g	15 µm	Spherical	300 Å	7184-05	2814.00
WP SULFONIC (strong cation exchanger)	10 g	40 µm	Irregular	275 Å	7489-02	132.90
	100 g	40 µm	Irregular	275 Å	7489-00	579.70
	500 g	40 µm	Irregular	275 Å	7489-05	2294.70

LC/MS and UHPLC Analysis

The rapid growth of LC/UV and LC/MS and the development of Ultra High-Pressure Liquid Chromatography (UHPLC) technology have created a need for suitable solvents for use in these applications. Avantor has responded by applying our many years of experience in purification, distillation, and blending to develop a line of high quality J.T.Baker solvents and solvent blends to ensure optimal instrument performance.

Solvents and Solvent Blends

The new J.T.Baker ULTRA LC/MS line of products was developed for the most demanding UHPLC and mass spectrometry (MS) applications, such as proteomics, drug discovery, pharmacokinetics, and clinical research. ULTRA LC/MS solvents are designed to extend the useful life of UHPLC columns by significantly reducing particles and minimizing the occurrence of erroneous peaks caused by the formation of metal adducts or the presence of organic impurities, such as phthalates or polyethylene glycol.

Solvents and Solvent Blends for UHPLC and LC/MS Applications

J.T.Baker ULTRA LC/MS Solvents

Product	Product Number
Acetonitrile	9853
Methanol	9863
Water	9823

J.T.Baker LC/MS Solvents and Blends

Product	Product Number
Acetonitrile	9829
Acetonitrile-0.1% Formic Acid	9832
Acetonitrile-0.1% Trifluoroacetic Acid	9835
Ethyl Acetate	9828
Methanol	9830
2-Propanol	9827
Water	9831
Water-0.05 % Formic Acid	9837
Water-0.1% Formic Acid	9834
Water-0.15% Formic Acid	9838
Water-0.05% Trifluoroacetic Acid	9839
Water-0.1% Trifluoroacetic Acid	9836
Water-0.15% Trifluoroacetic Acid	9840

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

ULTRA LC/MS products undergo advanced suitability testing with both electrospray positive and negative modes to strengthen detection of extraneous organic impurities. The result is minimal baseline noise, reduced ionization suppression, and improved sensitivity to both small and large molecule detection. Solvents are packaged in borosilicate bottles to minimize leaching of trace metal impurities over time, which reduces metal adduct formation, improves analyte identification and ensures reliable, consistent, and reproducible results.

J.T.Baker LC/MS grade solvents and blends are optimized to provide low particulates, polyethylene glycol, phthalates and amides, and extremely low levels of metal ions and non-volatile residue. Products are function tested for LC/MS suitability, ESI+, UV-Vis absorbance, trace metals, residue after evaporation, and assay. Interference-free baselines ensure users can have the highest confidence in solvent performance in their applications.

Products for Gas Chromatography (GC) Analysis

The rigorous demands of EPA extraction/concentration protocols drove the development of J.T.Baker and Macron Fine Chemicals brand solvents for GC analysis. J.T.Baker solvents are designed, manufactured and tested to provide the best performance on any GC. Macron Fine Chemicals solvents are tested and controlled for optimum purity and lot-to-lot consistency for reproducible results at an economical price.

J.T.Baker ULTRA RESI-ANALYZED Solvents

Product	Product Number
Acetone	9254
Acetonitrile	9255
Carbon Disulfide	E350
Chloroform	9257
Cyclohexane	9258
Dichloromethane	9264
Ether	9259
Ethyl Acetate	9260
n-Heptane	9338
Hexanes (95% n-Hexane)	9262
Hexanes (99% n-Hexane)	N168
Methanol	9263

Product	Product Number
Methanol (for Purge & Trap analysis)	9077
Methyl tert-Butyl Ether	9043
Methylene Chloride	9264
Pentane	9333
Petroleum Ether	9265
2-Propanol	9334
Sodium Sulfate Anhydrous (12-60 Mesh)	3375
Tetrachloroethylene	9360
Toluene	9336
2,2,4-Trimethylpentane (Iso-octane)	9335
Water	4219

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals UltimAR Solvents

Product	Product Number
Acetone	H451
Acetonitrile	H454
Chloroform	V551
Cyclohexane	V552
Dichloromethane (Methylene Chloride)	H485
Ether	V326
Ethyl Acetate	V553
Heptane	V554

Product	Product Number
Hexanes (95% n-Hexane)	H487
Isopropyl Alcohol	V555
Methanol	H488
Pentane	V557
Petroleum Ether, 35-60 °C	H489
Tetrahydrofuran	V558
Toluene	V560
2,2,4-Trimethylpentane	V559
Water	V564

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Solvents

J.T.Baker ULTRA RESI-ANALYZED solvents and Macron Fine Chemicals UltimAR solvents are recommended for use in GC applications.

J.T.Baker ULTRA RESI-ANALYZED solvents start with the finest raw materials available, pass through a combination of chemical and non-chemical purification technologies that remove reactive solvent impurities, producing higher assays and narrow solvent fronts, and are packaged to maintain purity. Inert gas blanketing throughout the manufacturing and packaging processes, and our unique stabilizer systems provide unmatched product stability and interference-free results.

Products are then function-tested on high resolution capillary GC and proven suitable to the ppt/ppb level on both ECD and FID detectors. Products are tested to meet EPA requirements for extraction/concentration procedures and AOAC requirements for pesticide residue analysis. They are also performance-tested to purity levels below the Lower Level of Quantitation (LLQ) for trace analyte detection by standard EPA methods.

Macron Fine Chemicals UltimAR solvents are manufactured using advanced multi-step purification processes to assure dependable, consistent solvent performance. These solvents are tested for use in extraction/concentration protocols for trace level organic residue analysis. Low UV absorbance, residue after evaporation, and water levels provide flat base lines and extend column life, while consistent gradient profiles deliver reproducible results. The versatility of UltimAR universal solvents eliminates the need to inventory multiple grades of solvents for different applications.

Thin-Layer Chromatography and Flash Chromatography Analysis

The techniques of Thin Layer Chromatography (TLC) and Flash Chromatography can be carried out with very simple apparatus, yet produce very effective separations of compounds. Both types of chromatography offer an opportunity to utilize efficient and economical technology to achieve excellent separation results. Both techniques can be used for preliminary characterization of samples for processing in HPLC instrumentation without putting an expensive column at risk. Other common uses include process development, organic synthesis monitoring, and sample component separations for further analysis or processing

Thin-Layer Chromatography

J.T.Baker Thin-Layer Chromatography (TLC) plates and polyester-backed sheets are configured with and without fluorescent indicators using a variety of sorbents and layer thicknesses. Some glass plates are configured with individual channels (4 or 19) to prevent crossover of samples during processing. Polyester-backed sheets can be easily cut to remove a section of the sheet containing a sample component of interest.

J.T.Baker Hard Layer, Glass-Backed TLC Plates

		Without Fluorescent Indicator			With Fluorescent Indicator		
Plate Size (cm)	**Qty**	**Description**	**Product Number**	**Price**	**Description**	**Product Number**	**Price**
10 µm SILICA GEL PLATES, 250 µm Analytical Layer							
20 x 20	25	BAKER Si250	7000-04	$177.15	BAKER Si250F	7001-04	$177.15
10 x 20	50	BAKER Si250	7000-03	241.10	BAKER Si250F	7001-03	241.10
5 x 20	100	—	—	—	BAKER Si250F	7001-00	256.70
1 x 3 (inch)	100	—	—	—	BAKER Si250F	7001-01	231.10
5 x 10	150	—	—	—	BAKER Si250F	7001-02	313.55
10 µm SILICA GEL PLATES, 500 µm Analytical Layer							
20 x 20	20	—	—	—	BAKER Si500F	7002-05	327.60
5 µm SILICA GEL PLATES, High Performance TLC, 200 µm Preparative Layer							
10 x 20	50	—	—	—	BAKER SiHPF	7011-03	657.80
5 µm SILICA GEL PLATES, 1000 µm Preparative Layer							
20 x 20	20	—	—	—	BAKER Si1000F-PA (19C)	7130-10	549.75
10 µm SILICA GEL PLATES, 250 µm Analytical Layer							
20 x 20	25	BAKER Si250-PA	7003-04	230.10	BAKER Si250F-PA	7004-04	284.95
20 x 20	25	BAKER Si250 (19C)	7005-04	201.45	BAKER Si250F (19C)	7007-04	201.45
20 x 20	25	BAKER Si250-PA (19C)	7009-04	253.80	BAKER Si250F-PA (19C)	7010-04	242.00
5 x 20	100	—	—	—	BAKER Si250F (4C)	7008-00	299.30
10 µm SILICA GEL PLATES, Reverse Phase, Octadecyl Silica (C_{18}), 200 µm Analytical Layer							
20 x 20	25	BAKER Si-C_{18}	7012-04	575.05	BAKER Si-C_{18}F	7013-04	575.05

Note: PA in description indicates preadsorbent spotting area. (19C) in description indicates a 19-channel plate. (4C) in description indicates a 4-channel plate.

J.T.Baker Baker-flex Polyester-Backed TLC Sheets

		Without Fluorescent Indicator			With Fluorescent Indicator		
Plate Size (cm)	**Qty/Box**	**Description**	**Product Number**	**Price**	**Description**	**Product Number**	**Price**
ALUMINUM OXIDE SHEETS, 200 µm Analytical Layer							
2.5 x 7.5	200	Aluminum Oxide 1B	4466-02	$170.90	Aluminum Oxide 1B-F	4467-02	$171.25
5 x 20	50	—	—	—	Aluminum Oxide 1B-F	4467-00	175.65
20 x 20	25	—	—	—	Aluminum Oxide 1B-f	4467-04	292.95

Analytical Methods

J.T.Baker Baker-flex Polyester-Backed TLC Sheets

		Without Fluorescent Indicator			With Fluorescent Indicator		
Plate Size (cm)	Qty/Box	Description	Product Number	Price	Description	Product Number	Price
Cellulose Sheets, 250 µm Analytical Layer							
5 x 20	50	—	—	—	Cellulose F	4469-00	198.90
20 x 20	25	Cellulose	4468-04	$332.80	—	—	—
5 x 20	50	Cellulose PEI	4473-00	228.60	Cellulose PEI-F	4474-00	198.90
20 x 20	25	Cellulose PEI	4473-04	389.25	Cellulose PEI-F	4474-04	337.70
5 x 20	50	Cellulose DEAE	4477-00	207.60	—	—	—
20 x 20	25	Cellulose Microcrystalline	4480-04		—	—	—
Silica Gel, 250 µm Analytical Layer							
2.5 x 7.5	200	Silica Gel IB2	4448-02	175.50	Silica Gel IB2-F	4449-02	175.50
5 x 20	50	Silica Gel IB2	4448-00	178.95	Silica Gel IB2-F	4449-00	173.90
20 x 20	25	Silica Gel IB2	4448-04	305.05	Silica Gel IB2-F	4449-04	264.00
Silica Gel, 250 µm Analytical Layer							
2.5 x 7.5	200	Silica Gel IB	4462-02	177.85	Silica Gel IB-F	4463-02	164.30
5 x 20	50	Silica Gel IB	4462-00	182.45	Silica Gel IB-F	4463-00	178.50
20 x 20	25	Silica Gel IB	4462-04	293.35	Silica Gel IB-F	4463-04	270.10

Flash Chromatography

Avantor offers spherical silica media for flash chromatography that provide separation performance comparable to HPLC. Most flash chromatography media on the market today is irregular shaped silica. Additional advantages of using J.T.Baker flash chromatography media include higher adsorption capacity, improved reproducibility of separations, higher flow rates for improved productivity, and higher mechanical strength for longer column life.

For the best economy, we recommend Macron Fine Chemicals SilicAR irregular media, available in a large variety of sizes. This media is ideal for academic or industrial applications where you pack your own columns.

J.T.Baker Flash Chromatography Products

Description	Size	Particle Size	Pore Size	Product Number	Price
BAKERBOND Spherical Flash Silica Gel					
	500 g	50 µm	60 Å	7620-01	$238.25
	1 kg	50 µm	60 Å	7620-02	398.25
	5 kg	50 µm	60 Å	7620-03	1344.15

Macron Fine Chemicals Flash Chromatography Products

Description	Size	Particle Size	Pore Size	Product Number	Price
Macron SilicAR Silica					
Silica Gel 60 (40–63 microns) SilicAR	1 kg	47-61 µm	55-77 Å	V150-10	$506.80

Silica Gels for Preparative (Low Pressure) Chromatography

J.T.Baker silica gels are available in either 60 or 150 Å pore sizes for use in low pressure preparative chromatography. Most have mesh specifications to ensure there is not an excess of fines in the product, which can affect flow rates and separation performance.

Macron Fine Chemicals SilicAR silica gels are an excellent value for laboratory, pilot plant, and production facility purifications. High surface area of these sorbents improves productivity by increasing loading capacity and yield per liter of solvent consumed. Narrow-pore size distribution sharpens peaks and improves resolution. Lot-to-lot consistency provides predictable separations whether you are using gram or kilogram quantities of sorbent.

J.T.Baker Silica Gels for Preparative (Low Pressure) Chromatography

Description	Package Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
Silica Gel – Flash	500 g	40 µm	Irregular	60 Å	7024-05	$142.35
	1 kg	40 µm	Irregular	60 Å	7024-01	236.00
	12 kg	40 µm	Irregular	60 Å	7024-02	1332.00
	25 kg	40 µm	Irregular	60 Å	7024-25	2025.10
Silica Gel (60-200 mesh)	500 g	—	—	150 Å	3405-01	247.45
	2.5 kg	—	—	150 Å	3405-05	581.35
	4 x 2.5 kg	—	—	150 Å	3405-05	2325.40
	25 kg	—	—	150 Å	3405-25	3637.10
Silica Gel (40-140 Mesh)	500 g	—	—	60 Å	3404-01	151.50
Silica Gel (170-400 Mesh)	25 kg	63 µm	Irregular	60 Å	7605-25	1352.60
Silanized Glass Wool	50 g	—	—	—	7084-05	102.30
Sand	500 g	—	—	—	7023-01	33.85

Macron Fine Chemicals SilicAR Silica Gels for Preparative (Low Pressure) Chromatography

Description	Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
Silica Gel 30	250 g	75 – 150 µm	Irregular	30 Å	V152-02	$141.90
	4 x 250 g	75 – 150 µm	Irregular	30 Å	V152-02	454.00
	2.3 kg	75 – 150 µm	Irregular	30 Å	V152-13	1075.00
	4 x 2.3 kg	75 – 150 µm	Irregular	30 Å	V152-13	2925.20
Silica Gel 60	1 kg	40-63 µm	—	60 Å	V150-10	506.80
	5 kg	40-63 µm	—	60 Å	V150-64	1030.80
	25 kg	40-63 µm	—	60 Å	V150-23	2848.85
Silica Gel Type 60 Å	250 g	250-500 µm	—	60 Å	6462-02	127.75
Silica Gel Type 60 Å	250 g	150-250 µm	—	60 Å	6451-02	172.60
Silica Gel Type 60 Å	250 g	75-150 µm	—	60 Å	6447-02	158.70
Silica Gel Grade 62	250 g	75-250 µm	—	150 Å	6551-02	164.95
Silica Gel Grade 62	2.5 kg	75-250 µm	—	150 Å	6551-05	624.90
Silica Gel Type 150 Å	250 g	75-150 µm	—	150 Å	6512-02	159.90
SilicAR CC-4	500 g	75-250 µm	—	60 Å	7086-12	530.00

Sample Preparation Products

For as long as scientists have been analyzing compounds, there has been a need for sample preparation to extract and purify sample components. Today's technology for sample preparation is Solid Phase Extraction (SPE), pioneered by Avantor scientists in the 1970's. SPE is grounded in the principles of chromatography—differential interaction between a liquid sample and a solid sorbent that can separate the sample components. Advantages of today's SPE over other wet chemistry methods, such as liquid/liquid extraction, include increased speed, reduced hazardous solvent use and exposure, and improved reproducibility of the separation.

We offer a wide range of J.T.Baker silica- and polymer-based SPE columns and unique, high performance *Speedisk* columns and disks. Columns are available in a wide variety of sorbents to improve and simplify sample cleanup and concentration. Our polymer sorbents are highly rigid, water-wettable, and stable over pH range 1–14.

The Avantor online technical library at www.avantormaterials.com contains many Application Notes concerning specific use of our products in applications.

Our SPE products are available in a variety of formats and configurations.

Avantor also offers J.T.Baker vacuum and positive-pressure processors for SPE columns, disks, and plates.

The guide on the following page can help you select appropriate sorbents and solvents for separations based on sample type and separation parameters.

J.T.Baker SPE Product Formats

Format	Description
BAKERBOND SPE Columns	Standard BAKERBOND SPE 1, 3, and 6 mL columns, round-rimmed and ear shaped in ultraclean polypropylene and glass.
Speedisk Columns	*Speedisk* 1, 3 and 6 mL columns are configured to run 9 times faster than traditional SPE columns, operating with smaller solvent volumes and having higher capacity per milligram sorbent than conventional SPE columns.
Speedisk 96 Columns	Rimless 20 mg *Speedisk* columns made for insertion in a *Speedisk* 96 column holder for use on a microplate processor.
Speedisk 96 Well Plate	A one-piece molded 96 well plate that is pre-assembled with the silica or polymer sorbent of your choice. The plate was designed with standard geometries to adapt to most popular automated liquid handling systems.
Speedisk Extraction Disks	50 mm disks that are the correct choice for samples from 200 mL to 2 L. They are neither cartridge nor membrane. A thin bed of BAKERBOND sorbent microparticles is supported in a laminar structure to maintain speed and capacity and enhance reproducibility of adsorption.

Selection Guide for SPE Sorbents and Solvents

SAMPLE SOLUBILITY	Organic Solvent Soluble			Water Soluble				
				Ionic		Non-ionic / Ion paired		
SAMPLE MATRIX	Organic	Organic	Aqueous	Aqueous		Aqueous	Aqueous	Aqueous
	Polar	Moderately Polar	Non Polar	Anionic	Cationic	Non Polar	Moderately Polar	Polar
MECHANISM[1]	NPC	LSC	RPC	IEC	IEC	RPC	LSC	NPC
	H_2O-Philic DVB	H_2O-Phobic DVB	H_2O-Phobic DVB	H_2O-Phobic WA-DVB	H_2O-Phobic SC-DVB	H_2O-Phobic DVB	H_2O-Phobic DVB	H_2O-Philic DVB
SPE PHASE	Cyano	H_2O-Philic DVB	H_2O-Philic DVB	H_2O-Philic SA-DVB	H_2O-Philic SC-DVB	H_2O-Philic DVB	H_2O-Philic DVB	Cyano
RECOMMENDED[2]	Diol	Silica gel	SA-DVB	Amino	Cyano	SDB-1/SDB-2	Silica Gel	Diol
	Amino	Florisil	SDB-1/SDB-2	1,2 Amino	Carboxylic Acid	Octadecyl	Florisil	Amino
	1,2 Amino	Alumina	Octadecyl	Quaternary Amine	Sulfonic Acid	Octyl	Alumina	1,2 Amino
			Octyl			Cyclohexyl		
			Cyclohexyl			Phenyl		
			Phenyl			Cyano		
			Cyano					
SOLVENTS[3,4]	Hexane	Hexane	Hexane	Acids, buffers	Acids, bases, buffers	Hexane	Hexane	Hexane
	Chloroform	Chloroform	Methylene Chloride			Methylene Chloride	Chloroform	Chloroform
	Methylene Chloride	Methylene Chloride	Acetone			Acetone	Methylene Chloride	Methylene Chloride
	Acetone	Acetone	Acetonitrile			Acetonitrile	Ethyl Acetate	Acetone
	Methanol	Methanol	Methanol			Methanol	Methanol	Methanol
			Water			Water		

[1] Separation Mechanism

LSC: Liquid Solid Chromatography (Adsorption)

NPC: Normal Phase Chromatography (Bonded Phase Partition)

RPC: Reverse Phase Chromatography (Bonded Phase Partition)

IEC: Ion Exchange Chromatography (Bonded Phase Ion-Exchange)

SDB: styrene divinylbenzene

DVB: divinylbenzene

H_2O-Phobic WA-DVB: Weak anion exchanger

H_2O-Phobic SC-DVB: Strong cation exchanger

H_2O-Philic SA-DVB: Strong anion exchanger

H_2O-Philic SC-DVB: Strong cation exchanger

[2] Bonded phases listed in order of increasing polarity

[3] Eluting solvents listed in order of increasing polarity

[4] Selective elution can be performed by combining two or more miscible solvents to achieve various degrees of polarity

[3,4] Solvents:

9254 Acetone, ULTRA RESI-ANALYZED
9255 Acetonitrile, ULTRA RESI-ANALYZED
9257 Chloroform, ULTRA RESI-ANALYZED
9260 Ethyl Acetate, ULTRA RESI-ANALYZED
9262 Hexane, ULTRA RESI-ANALYZED
9264 Methylene Chloride, ULTRA RESI-ANALYZED
9077 Methanol, ULTRA RESI-ANALYZED
4219 Water, ULTRA RESI-ANALYZED

Analytical Methods

Silica Columns

With J.T.Baker BAKERBOND SPE and *Speedisk* columns, you can choose the column that best fits your sample size and performance requirements. We recommend BAKERBOND SPE columns when standard performance with good economy is needed. *Speedisk* columns are recommended when higher levels of speed and performance are required. Following is a performance comparison between a BAKERBOND SPE column and a *Speedisk* column for a typical separation.

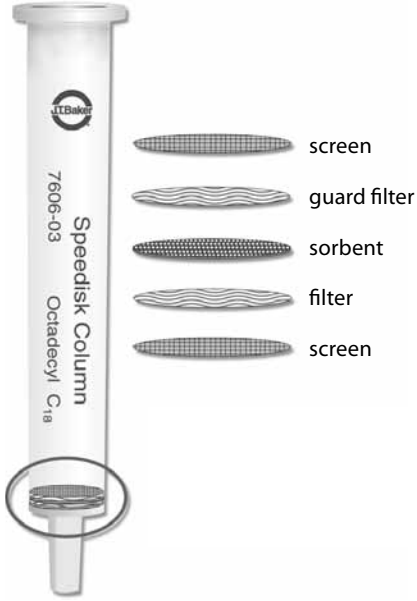
The following tables list the various sorbents that we offer pre-packed in J.T.Baker BAKERBOND SPE and *Speedisk* columns. Also included is the functional mode that the column works in and the type of general applications for which the column is used.

J.T.Baker BAKERBOND SPE and *Speedisk* Columns Performance Comparison

Attribute	BAKERBOND SPE	*Speedisk* Columns
Recommended sample size of 0.2 mL to 10 mL	•	
Recommended sample size of 35 µL to 10 mL		•
Fastest processing time (9x faster than conventional SPE columns)		•
Silica based sorbents	•	•
Polymer based sorbents		•
Smaller solvent volumes		•
Higher sorbent capacity per mg		•
Standard speed, recovery and final concentration	•	
High speed, recovery and concentration		•
Optimized, round-rimmed tube and frits made from ultrapure polymers	•	•
Tubes fit all popular processors and racks	•	•
Tube inlet adapters are available for use with Gilson ASPEC	•	•
"Rimless" 1 mL tube is available for close tube spacing, such as in a 96-position rack		•
Fit manual vacuum processors	•	•
Fit for use in positive pressure processors		•

J.T.Baker BAKERBOND SPE and *Speedisk* Columns Analysis Comparison

Typical Separation	BAKERBOND SPE	*Speedisk*
Column size / sorbent	1 mL/100 mg	1 mL/20 mg
Particle size	40 µm	25 µm
Sample volume	2 mL	1 mL
Column conditioning	2 mL	0.5 mL
	(20–40 sec)	(5–10 sec)
Sample addition	2 mL	50 µL–0.5 mL
	(100 sec)	(2–5 sec)
Washing	1.5 mL	0.4 mL
	(15–20 sec)	(2–5 sec)
Elution	1–2 mL	0.3–0.6 mL
	(15–20 sec)	(2–5 sec)
Sample concentration/evaporation	3–10 minutes	Reduced or eliminated



Speedisk columns offer microparticulate silica on a unique bed support system that ensures higher levels of performance than standard SPE columns.

J.T.Baker BAKERBOND SPE Columns

Description	Functional Mode	General Applications	Sorbent Weight	Column Size	Qty per Box	Product Number	Price
Octadecyl (C_{18})	Reverse Phase	Non-ionic, non-polar to moderately polar analytes	100 mg	1 mL	100	7020-01	$202.00
Jumbo Pack			100 mg	1 mL	400	7020-21	736.90
			200 mg	3 mL	50	7020-02	138.40
Jumbo Pack			200 mg	3 mL	400	7020-22	966.10
			500 mg	3 mL	50	7020-03	149.80
Jumbo Pack			500 mg	3 mL	400	7020-23	1056.10
			500 mg	6 mL	30	7020-06	99.90
Jumbo Pack			500 mg	6 mL	250	7020-26	660.70
		Meets requirements for EPA Method 525.2	1000 mg	6 mL	30	7020-07	139.20
Jumbo Pack		Meets requirements for EPA Method 525.2	1000 mg	6 mL	250	7020-27	933.00
Octadecyl (C_{18}) LightLoad, Non-endcapped	Reverse Phase	Non-ionic, non-polar to polar analytes	100 mg	1 mL	100	7189-01	217.90
			200 mg	3 mL	50	7189-02	148.00
			500 mg	3 mL	50	7189-03	155.60
			500 mg	6 mL	30	7189-06	104.70
PolarPlus Octadecyl (C_{18})	Reverse Phase	Non-ionic, basic, non-polar to polar analytes	500 mg	6 mL	30	7466-06	110.90
			1000 mg	6 mL	30	7466-07	145.90
			2000 mg	6 mL	30	7466-08	188.90
Octyl (C_8)	Reverse Phase	Non-ionic, non-polar to moderately polar analytes	100 mg	1 mL	100	7087-01	220.00
			200 mg	3 mL	50	7087-02	146.50
			500 mg	3 mL	50	7087-03	177.80
			500 mg	6 mL	30	7087-06	163.40
Jumbo Pack			500 mg	6 mL	250	7087-26	1050.20
Ethyl (C_2)	Reverse Phase	Polar and Basic Analytes	100 mg	1 mL	100	7273-01	258.40
Phenyl (C_6H_5)	Reverse Phase	Polar from non-polar/polar solvents using hydrogen bonding like mechanisms	100 mg	1 mL	100	7095-01	214.00
			500 mg	3 mL	50	7095-03	176.20
Cyclohexyl (C_6H_{11})	Reverse Phase	Non-ionic, non-polar analytes	500 mg	3 mL	50	7212-03	227.10
Cyano (CN)	Reverse Phase/ Normal Phase	Non-ionic, non-polar to polar analytes	100 mg	1 mL	100	7021-01	265.80
			500 mg	3 mL	50	7021-03	221.70
			1000 mg	6 mL	30	7021-07	199.20
Diol (COHCOH)	Normal Phase	Non-ionic, polar analytes	500 mg	3 mL	50	7094-03	215.80
Amino (NH_2)	Normal Phase/Ion Exchange	Lipids (fatty acids, cholesterol)	500 mg	3 mL	50	7088-03	214.00
			1000 mg	6 mL	30	7088-07	183.70
Diamino (NH_2/NH_2)	Normal Phase/Ion Exchange	Lipids (fatty acids, cholesterol)	500 mg	3 mL	50	7089-03	224.50
Quaternary Amine (N^+)	Strong Anion Exchange	Ionic, acidic analytes	500 mg	3 mL	50	7091-03	220.00
Aromatic Sulfonic Acid ($C_6H_5SO_3H$)	Strong Cation Exchange	Ionic, basic analytes	100 mg	1 mL	100	7090-01	276.80
			500 mg	3 mL	50	7090-03	206.80
Jumbo Pack			500 mg	6 mL	400	7090-29	1757.50
			1000 mg	6 mL	30	7090-07	187.50
Carboxylic Acid (COOH)	Weak Cation Exchange	Ionic, basic analytes	500 mg	3 mL	50	7211-03	206.40
Florisil (Mg_2SiO_3)	Adsorption	Adsorbs low to moderately polar analytes from nonaqueous solutions	500 mg	3 mL	50	7213-03	112.60
			500 mg	6 mL	30	7213-06	105.80
			1000 mg	6 mL	30	7213-07	132.00

Analytical Methods

J.T.Baker BAKERBOND SPE Columns

Description	Functional Mode	General Applications	Sorbent Weight	Column Size	Qty per Box	Product Number	Price
Florisil (Mg_2SiO_3) Jumbo Pack			1000 mg	6 mL	250	7213-27	$798.90
Silica Gel (SiOH)	Adsorption	Adsorbs polar analytes from non-polar solvents like hydrocarbons and less polar esters and ethers	100 mg	1 mL	100	7086-01	186.60
			500 mg	3 mL	50	7086-03	141.80
Jumbo Pack			500 mg	3 mL	400	7086-23	1279.30
			500 mg	6 mL	30	7086-06	119.10
Jumbo Pack			500 mg	6 mL	250	7086-26	801.00
			1000 mg	6 mL	30	7086-07	137.30
Jumbo Pack			1000 mg	6 mL	250	7086-28	832.50
narc-1 (Δ9-carboxy THC)	Mixed	Carboxy-tetrahydrocannabinol (THC)	500 mg	3 mL	50	7221-03	168.30
narc-2 (Cocaine, BEC)	—	Hydrophobic/basic analytes (Cocaine, Benzoylecgonine)	125 mg	3 mL	50	7225-04	178.80
Jumbo Pack			125 mg	3 mL	400	7225-24	701.10
			250 mg	6 mL	30	7225-05	148.90
			500 mg	6 mL	30	7225-06	173.30

J.T.Baker *Speedisk* Columns

Description	Functional Mode	General Applications	Sorbent Weight	Column Size	Qty per Box	Product Number	Price
Octadecyl (C_{18})	Reverse Phase	Non-ionic, non-polar to moderately polar analytes	20 mg	1 mL	100	7606-01	$266.90
			50 mg	3 mL	50	7606-04	183.30
			100 mg	3 mL	50	7606-06	188.90
			200 mg	6 mL	30	7606-09	181.30
Rimless Column			20 mg	1 mL	96	7606-11	297.60
Octadecyl (C_{18}) Lightload	Reverse Phase	Non-ionic, non-polar to polar analytes	20 mg	1 mL	100	8151-01	262.40
			35 mg	1 mL	100	8151-02	269.60
			50 mg	3 mL	50	8151-04	174.90
			100 mg	3 mL	50	8151-06	181.90
			100 mg	6 mL	30	8151-08	154.00
			200 mg	6 mL	30	8151-09	171.40
Octadecyl (C_{18}) PolarPlus	Reverse Phase	Non-ionic, basic, non-polar to polar analytes	20 mg	1 mL	100	8153-01	252.30
			35 mg	1 mL	100	8153-02	272.10
			35 mg	3 mL	50	8153-03	173.30
			50 mg	3 mL	50	8153-04	181.10
			100 mg	3 mL	50	8153-06	183.60
			200 mg	6 mL	30	8153-09	173.00
Octyl (C_8)	Reverse Phase	Non-ionic, non-polar to moderately polar analytes	35 mg	1 mL	100	8154-02	272.10
			50 mg	3 mL	50	8154-04	180.00
			100 mg	3 mL	50	8154-06	183.60
			200 mg	6 mL	30	8154-09	173.00
Rimless Column			20 mg	1 mL	96	8154-11	279.50
Phenyl (C_6H_5)	Reverse Phase	Polar from non-polar/polar solvents using hydrogen bonding like mechanisms	35 mg	1 mL	100	8160-02	351.40
			50 mg	3 mL	50	8160-04	173.00
			100 mg	3 mL	50	8160-06	163.60
			200 mg	6 mL	30	8160-09	173.00

J.T.Baker *Speedisk* Columns

Description	Functional Mode	General Applications	Sorbent Weight	Column Size	Qty per Box	Product Number	Price
Quanternary Amine (N^+)	Strong Ion Exchange	Ionic, acidic analytes	35 mg	1 mL	100	8168-02	$272.10
			35 mg	3 mL	50	8168-03	173.30
			50 mg	3 mL	50	8168-04	176.60
			100 mg	3 mL	50	8168-06	183.60
			200 mg	6 mL	30	8168-09	173.00
Amino (NH_2)	Ion Exchnage/Normal Phase	Lipids (fatty acids, cholesterol)	35 mg	1 mL	100	8165-02	266.90
			35 mg	3 mL	50	8165-03	173.30
			50 mg	3 mL	50	8165-04	176.60
			100 mg	3 mL	50	8165-06	183.60
			200 mg	6 mL	30	8165-09	173.00
Aromatic Sulfonic Acid	Strong Ion Exchange	Ionic, basic analytes	35 mg	1 mL	100	8170-02	266.90
			50 mg	3 mL	50	8170-04	176.60
			100 mg	3 mL	50	8170-06	183.60
			100 mg	6 mL	30	8170-08	155.50
			200 mg	6 mL	30	8170-09	173.00
Carboxylic Acid	Weak Cation Exchange	Ionic, basic analytes	100 mg	3 mL	50	8172-06	175.10
			50 mg	6 mL	30	8172-07	146.90
			200 mg	6 mL	30	8172-09	164.90
Silica	Adsorption	Adsorbs polar analytes from non-polar solvents like hydrocarbons and less polar esters and ethers	20 mg	1 mL	100	8163-01	249.90
			35 mg	1 mL	100	8163-02	269.60
			35 mg	3 mL	50	8163-03	171.70
			50 mg	3 mL	50	8163-04	174.90
			100 mg	3 mL	50	8163-06	181.90
			200 mg	6 mL	30	8163-09	171.40
narc-1 (Δ9-carboxy THC)	Mixed	Carboxy-tetrahydrocannabinol (THC)	50 mg	3 mL	50	8174-04	176.60
			100 mg	3 mL	50	8174-06	183.60
			100 mg	6 mL	30	8174-08	155.50
narc-2 (Cocaine, BEC)	-	Hydrophobic/basic analytes (Cocaine, Benzoylecgonine)	35 mg	1 mL	100	8175-02	272.10
			35 mg	3 mL	50	8175-03	173.30
			50 mg	3 mL	50	8175-04	176.60
			100 mg	3 mL	50	8175-06	183.60
			200 mg	6 mL	30	8175-09	173.00

Special Application Columns

We offer a number of SPE columns for specific applications. These columns are generally configured for an application with either a specific sorbent, volume of sorbent, or special column.

Drugs of Abuse Testing Columns

For drug testing applications, we offer narc-1 and narc-2 columns. narc-1 columns are formulated for rapid, reproducible extraction of Δ9 THC-carboxylic acid from urine without co-extracting many other common drugs. narc-2 columns contain a mixed-mode sorbent for the extraction of basic compounds, such as opiates, LSD, phencyclidine, amine-based drugs, cocaine, and others. narc-2 columns can be used for basic drug screening, as well as acidic/neutral drugs. Both sorbents are available in J.T.Baker BAKERBOND SPE and *Speedisk* formats. Application Notes for use of these products are available in our Technical Library at www.avantormaterials.com.

Proteins and Polynucleotides Columns

For large biomolecule separations, we offer SPE columns packed with J.T.Baker BAKERBOND wide-pore media designed specifically for this use. For methods development or optimization, our sorbent selection kit contains columns with a variety of sorbents. See the Sorbent Selection Kits section, on page 39 for more information on these kits.

BAKERBOND SPE Columns—Drugs of Abuse

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
narc-1 (Δ9-carboxy THC)	500 mg	3 mL	50	7221-03	$168.30
narc-2 (Cocaine, BEC)	125 mg	3 mL	50	7225-04	178.80
Jumbo Pack	125 mg	3 mL	400	7225-24	701.10
	250 mg	6 mL	30	7225-05	148.90
	500 mg	6 mL	30	7225-06	173.30

***Speedisk* Silica Columns—Drugs of Abuse**

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
narc-1 (Δ9-carboxy THC)	50 mg	3 mL	50	8174-04	$176.60
	100 mg	3 mL	50	8174-06	183.60
	100 mg	6 mL	30	8174-08	155.50
narc-2 (Cocaine, BEC)	35 mg	1 mL	100	8175-02	272.10
	35 mg	3 mL	50	8175-03	173.30
	50 mg	3 mL	50	8175-04	176.60
	100 mg	3 mL	50	8175-06	183.60
	200 mg	6 mL	30	8175-09	173.00

BAKERBOND SPE Columns—Protein, Polynucleotide Sample Prep

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
Sorbent Selection Kits—Proteins and Large Molecules*	500 mg	6 mL	15	7239-09	$184.40
Wide-Pore Butyl (C_4) Jumbo Pack	300 mg	3 mL	250	7216-23	815.60
	500 mg	6 mL	30	7216-06	175.80
Wide-Pore CBX (COOH)	500 mg	6 mL	30	7217-06	194.80
Wide-Pore PEI (NH)	500 mg	6 mL	30	7218-06	175.80
Wide-Pore HI-Propyl (C_3)	500 mg	6 mL	30	7238-06	202.50
Sephadex G-25	1000 mg	6 mL	30	7219-07	168.80

*Contains 3 of each of CBX, PEI, HI-Propyl, Butyl, and Sephadex G-25.

BAKERBOND SPE Columns—Wide-Mouth, 19 mL

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
Octadecyl (C_{18})	500 mg	19 mL	50	7020-13	$177.30
Jumbo Pack	500 mg	19 mL	250	7020-33	695.80
Carboxylic Acid (COOH)	500 mg	19 mL	50	7211-13	229.70

J.T.Baker SPE Columns for EPA Method 525.2

Description	Sorbent Weight	Column Size	Quantity per Box	Product Number	Price
Octadecyl (C_{18})	1000 mg	6 mL	30	7020-07	$139.20
	500 mg	19 mL Wide-Mouth	30	7020-13	177.30
Jumbo Pack	1000 mg	6 mL	250	7020-27	933.00
Jumbo Pack	500 mg	19 mL Wide-Mouth	250	7020-33	695.80

BAKERBOND SPE Columns—Sorbent Selection Kits

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
Small Molecules[1]	500 mg	3 mL	60	7096-00	$226.00
Proteins and Large Molecules[2]	500 mg	6 mL	15	7239-09	184.40

1. Contains 5 each of Octadecyl, Octyl, Phenyl, Silica, Cyano, Amino, Diol, Quaternary, Amine, Diamino, Aromatic Sulfonic Acid, Carboxylic Acid.

2. Contains 3 each of CBX, PEI, HI-Propyl, Butyl, Sephadex G-25.

Speedisk Polymer Columns

Description	Functional Mode	General Applications
H_2O-Philic DVB	Adsorption	Polar to non-polar analytes
H_2O-Philic SC-DVB	Cation Exchange (strong)	Ionic, basic analytes
H_2O-Phobic DVB	Adsorption	Slightly polar to non-polar analytes
H_2O-Phobic SC-DVB	Cation Exchange (strong)	Ionic, basic analytes
H_2O-Philic SA-DVB	Anion Exchange (strong)	Ionic, acidic analytes
H_2O-Phobic WA-DVB	Anion Exchange (weak)	Ionic, acidic analytes

Wide-Mouth Columns

For robotics or large sample volumes, we offer a 19 mL wide-mouth column with a wide inlet. Please inquire for the availability of sorbents in wide-mouth columns not listed in the product list.

EPA Method 525.2 Columns

We offer two versions of J.T.Baker BAKERBOND SPE Octadecyl (C_{18}) columns that are suitable for use in the above referenced EPA method for determination of organic compounds in drinking water. Our standard 6 mL column is packed with 1,000 mg of sorbent for this application. A wide-mouth 19 mL column packed with 500 mg of sorbent for robotic systems or larger sample volumes is also available.

Sorbent Selection Kits

J.T.Baker BAKERBOND SPE sorbent selection kits are available for small molecules and for proteins and large molecules. These kits are ideal for method development or optimization. Both kits contain a variety of sorbents in an appropriate column size.

Polymer Columns

J.T.Baker BAKERBOND polymer columns are packed with polymer resins, which are products of our ultra clean polymer microparticle technology. These resin particles have a large surface area, are highly rigid, are stable over pH range 1–14, are water-wettable and are not impacted by sorbent drying. Columns are available in hydrophobic, hydrophilic, and ion exchange forms. We recommend these columns when advanced detection methods will be used.

Analytical Methods

Speedisk Polymer Columns—Hydrophilic

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
H_2O-Philic DVB	20 mg	1 mL	100	8108-01	$295.40
	35 mg	1 mL	100	8108-02	302.30
	35 mg	3 mL	50	8108-03	192.40
	50 mg	3 mL	50	8108-04	206.10
	100 mg	3 mL	50	8108-06	224.20
	100 mg	6 mL	30	8108-08	185.80
	200 mg	6 mL	30	8108-09	208.70
Rimless	20 mg	1 mL	96	8108-11	295.40

Speedisk Polymer Columns—Hydrophobic

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
H_2O-Phobic DVB	20 mg	1 mL	100	8109-01	$291.30
	35 mg	3 mL	50	8109-03	189.20
	50 mg	3 mL	50	8109-04	203.90
	100 mg	3 mL	50	8109-06	218.50
	100 mg	6 mL	30	8109-08	169.90
	200 mg	6 mL	30	8109-09	194.30
Rimless	20 mg	1 mL	96	8109-11	291.30

Speedisk Polymer Columns—Ion Exchange

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
H_2O-Phobic SC-DVB (SO_3)	35 mg	1 mL	100	8196-02	$323.60
	35 mg	3 mL	50	8196-03	205.90
	50 mg	3 mL	50	8196-04	220.50
	100 mg	3 mL	50	8196-06	235.30
	100 mg	6 mL	30	8196-08	198.50
	200 mg	6 mL	30	8196-09	209.00
Rimless	20 mg	1 mL	96	8196-11	316.20
H_2O-Phobic WA-DVB (NH_2)	35 mg	1 mL	100	8115-02	323.60
	50 mg	3 mL	50	8115-04	220.50
Rimless	20 mg	1 mL	96	8115-11	309.80

Speedisk Polymer Columns—Mixed Mode

Description	Sorbent Weight	Column Size	Quantity Per Box	Product Number	Price
H_2O-Philic SC-DVB (SO_3)	20 mg	1 mL	100	8111-01	$316.20
	35 mg	1 mL	100	8111-02	323.60
	35 mg	3 mL	50	8111-03	201.70
	50 mg	3 mL	50	8111-04	220.50
	100 mg	3 mL	50	8111-06	235.30
	200 mg	6 mL	30	8111-09	209.00
Rimless	20 mg	1 mL	96	8111-11	316.20
H_2O-Philic SA-DVB (N^+)	35 mg	1 mL	100	8113-02	323.60
	35 mg	3 mL	50	8113-03	205.90
	50 mg	3 mL	50	8113-04	220.50
	100 mg	6 mL	30	8113-08	194.70
	200 mg	6 mL	30	8113-09	219.10
Rimless	20 mg	1 mL	96	8113-11	316.20

J.T.Baker *Speedisk* 96 Columns and *Speedisk* 96-Well Plates

For method development, you can place up to 96 rimless 1 mL, 20 mg *Speedisk* 96 columns in the *Speedisk* 96 column holder (Product Number 8150-00), and the disposable assembly is ready for placement on a microplate processor, such as our *Speedisk* 96 processor. You can remove unneeded columns from the holder and assemble custom trays for efficient method development.

Once method development is complete, you can use the *Speedisk* 96-well plate, a one-piece, molded plate that is pre-assembled with your sorbent of choice. The plate was designed with standard geometries to adapt to the most popular automated liquid handling systems. Inquire about more than 15 functionalities of silica and polymer-based sorbents for either *Speedisk* 96 columns or well plates.

Speedisk 96-Well Plates—Polymer Sorbents

Description	Functional Mode	General Applications	Product Number	Price
H_2O-Philic DVB	Adsorption	Polar to non-polar analytes	8077-96	$304.10
H_2O-Philic SC-DVB	Adsorption	Polar to non-polar analytes	8132-96	312.20

Speedisk 96 Polymer Columns

Description	Functional Mode	General Applications	Sorbent Mass	Product Number	Price
H_2O-Philic DVB	Adsorption	Polar to non-polar analytes	20 mg	8108-31	$397.00
H_2O-Phobic SC-DVB	Cation Exchange (strong)	Ionic, basic analytes	20 mg	8196-31	443.20
H_2O-Phobic WA-DVB	Anion Exchange (weak)	Ionic, acidic analytes	20 mg	8115-31	397.00
Speedisk 96 Column Holder	—	—	—	8150-00	56.30

Speedisk 96 Silica Columns

Description	Functional Mode	General Applications	Sorbent Mass	Product Number	Price
Octadecyl C_{18}	RP	Non-ionic, non-polar to moderately polar analytes	20 mg	7606-31	$322.50
Speedisk 96 Column Holder	—	—	—	8150-00	56.30

Analytical Methods

J.T.Baker BAKERBOND *Speedisk* Extraction Disks

Our 50 mm extraction disks are designed primarily for environmental samples. The laminar configuration provides filtration capacity and inlet characteristics that maximize access of analyte molecules to the microparticulate sorbent. The design resists clogging and ensures high throughput, even when samples contain solids. Capacity, recovery, and precision are high due to the unique disk configuration and the performance of our BAKERBOND sorbents. Products can be used with J.T.Baker extraction stations or inexpensive adapters are available for use with other brands of extraction stations.

For a complete list of EPA methods that our *Speedisk* extraction disks are suitable for, along with application notes for each method, please visit our web site at: www.avantormaterials.com

J.T.Baker BAKERBOND *Speedisk* 50 mm Extraction Disks

Product	General Applications	Quantity per Box	Product Number	Price
Disks for Manual Extraction Stations				
BAKERBOND *Speedisk* C_{18}	For use in EPA Methods 500 Series, 608, SW 846/3535 and with slightly polar to non-polar industrial samples	20	8055-06	$170.70
		20 (high capacity)	8055-07	191.60
BAKERBOND *Speedisk* C_{18} XF	For dirty samples: EPA Methods 608, 846, and slightly polar to non-polar industrial samples	20	8056-06	184.30
BAKERBOND *Speedisk* C_8	For diquat, paraquat, EPA Method 549.1	20	8057-06	167.50
BAKERBOND *Speedisk* SAX	For EPA Method 552.1, haloacetic acids and Dalapon	20	8058-06	237.30
BAKERBOND *Speedisk* DVB	For chlorinated acids, EPA Method 515.2. Slightly polar to non-polar analytes	20	8068-06	215.50
BAKERBOND *Speedisk* DVB	For SW846 H_2O-phobic to slightly H_2O-philic compounds	20	8072-06	220.20
		20 (high capacity)	8072-07	279.80
BAKERBOND *Speedisk* Oil & Grease	For use with slightly polar to non-polar hydrocarbons, EPA Method 1664, Rev. A	20	8060-06	196.30
BAKERBOND *Speedisk* PolarPlus C_{18}	For extraction of slightly polar to moderately polar compounds, such as sulfonylureas, phenols, chlorophenoxy acids, and urones	20	8061-06	170.90
Disks for Automated Extraction Stations				
BAKERBOND *Speedisk* C_{18}	For use in EPA Methods 500 Series, 608, SW 846/3535 and with slightly polar to non-polar industrial samples	32	8062-06	275.50
		32 (High Capacity)	8062-07	309.60
BAKERBOND *Speedisk* DVB	For chlorinated acids, EPA Method 515.2. Slightly polar to non-polar analytes	32	8069-06	339.20
BAKERBOND *Speedisk* Oil & Grease	For use with slightly polar to non-polar hydrocarbons, EPA Method 1664, Rev. A	32	8064-06	314.30

Processors and Accessories

We offer a variety of J.T.Baker processors for use with our sample preparation line of products. These include vacuum processors for use with standard SPE and *Speedisk* columns and *Speedisk* 50 mm disks. We also offer positive-pressure processors for use with *Speedisk* 96 columns and well plates in a configuration for processing 48 or 96 columns simultaneously.

SPE Column Processors

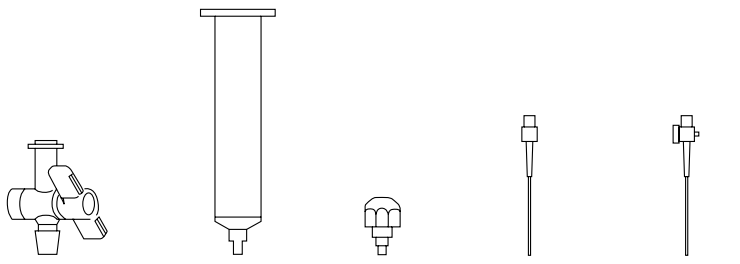
The J.T.Baker BAKER SPE-12G is a 12-port system for processing up to 12 SPE columns at the same time. The processor comes complete with a glass vacuum basin, a cover with luer fittings and gasket, individual flow control stopcocks, polypropylene needles, a sample collection rack, height-adjustable shelves, and a vacuum gauge/controller. The BAKER SPE-24G is a 24-port system with the same components as the SPE-12G.

Replacement parts and accessories for both processors are available as detailed in the adjacent table.

Extraction Column Processors

Description	Quantity per Box	Product Number	Price
BAKER SPE-12G Column Processor Complete—Includes 12-port vacuum manifold, sample collection rack, height adjustable shelves, vacuum gauge/controller	1	7018-00	$919.10
BAKER SPE-24G Column Processor Complete—Includes 24-port vacuum manifold, sample collection rack, height adjustable shelves, vacuum gauge/controller	1	7208-00	1254.90
Extraction Column Processor Replacement Parts and Accessories			
BAKER SPE-12G Glass Vacuum Chamber	1	7421-00	178.20
Lid (with luer connectors)	1	7424-00	271.00
Rack Set	1	7427-00	189.70
Polyethylene Gasket Seals	2	7430-00	27.30
Neoprene Gasket Seals	2	7433-00	25.30
Waste Liner	5	7237-00	106.00
BAKER SPE-24G Glass Vacuum Chamber	1	7423-00	209.60
Lid (with luer connectors)	1	7426-00	545.50
Rack Set	1	7429-00	230.40
Polyethylene Gasket Seals	2	7432-00	28.70
Neoprene Gasket Seals	2	7435-00	31.60
Polypropylene Needles	12	7436-00	23.00
Plugs for Female Luer	30	7327-00	64.30
Vacuum Gauge/Controller Assembly	1	7437-00	160.90
Stopcocks, T-turn, Nylon and PE	12	7166-00	54.90
Stopcocks	10	7241-00	63.00
Inert Needle Flowpath Liner[1]	12	7422-00	11.50
	150	7422-01	147.40
Inert Flow Control Valves[1]	12	7425-00	67.80
Reservoirs, 15 mL[1]	10	7119-01	37.80
Reservoirs, 75 mL[1]	10	7120-03	44.10
Luer Connector, Female	12	7145-00	58.40
Luer Connector, Male	12	7146-00	61.20
Adapter for Attaching Reservoir or Luer Tip[1,2]	10	7122-00	39.70
Support Posts, Processor Lid	4	7147-00	27.40
Stainless Steel Needles	12	7152-00	123.20

1. See illustration below for visual identification of these parts.
2. Syringe to extraction column.



Parts and accessories for 12 and 24 port processors

Analytical Methods

J.T.Baker *Speedisk* 50 mm Extraction Disk Processors

We offer three different configurations of vacuum processors for use with *Speedisk* extraction disks.

Replacement parts and accessories for all three processors are available as detailed in the below table.

J.T.Baker *Speedisk* 96 Positive-Pressure Processors

Positive-pressure processors have been shown to provide better reproducibility of results than vacuum manifolds. This is due in part to the constant applied pressure forcing the solvent through the sorbent in the columns. With vacuum manifolds, if a column runs dry, the flow of other columns will decrease, causing variability in the processing time, and ultimately, the analyte recovery.

The positive-pressure processor gasket seals the column opening to prevent any crossover between columns. Our processors are formatted for processing either 48 or 96 columns simultaneously and arrive complete with collection trays, sealing gasket, column holders, gas supply adapters, and tubing. Replacement parts and accessories for both processors are available as listed in the tables on the next page.

Processor	Product Number	Number of Ports	Footprint	1 L Sample Reservoir Capacity
Speedisk Single Extraction Station	8093-01	1	Square 4.5" × 5.65" × 2.20"	1
Speedisk Compact Extraction Station	8094-06	6	Hexagonal 17.5" × 5.65" × 2.20"	3
Speedisk Expanded Extraction Station	8095-06	6	Rectangular 25" × 5.65" × 2.20"	6
DISKMATE II Rotary Extraction Station	7463-06	6	Circular 15" Diameter	6

Manual Extraction Stations and Accessories for *Speedisk* Extraction Disks

Description	Quantity per Box	Product Number	Price
***Speedisk* Expanded Extraction Station:** Six-port processing system for direct sample loading. Rectangular footprint and inter-port spacing to accommodate six side-by-side 1 L sample reservoirs.	1	8095-06	$1146.90
***Speedisk* Compact Extraction Station:** Six-port processing system. Reduced inter-port spacing and footprint. Load samples through remote sample adapter or mount up to three 1 L reservoirs directly onto the disks.	1	8094-06	1208.10
***Speedisk* Single Extraction Station:** Single-port processing system. Vacuum platform for a *Speedisk* extraction disk and any sample loading technique.	1	8093-01	374.20
DISKMATE II Rotary Extraction Station: Six-port processing station. Vacuum manifold mounted on a convenient turntable with full spacing for direct mounting of six 1 L containers.	1	7463-06	1518.00
Remote Sample Adapter: For transfer of sample from remote container to BAKERBOND *Speedisk* extraction disk.	6	8099-06	194.60
Flask Adapter: Single port with #8 stopper. Accepts disk or collection chamber.	1	8070-01	42.10
Adapter Ring: For 40-35 tapered outer joint. Accepts disk or collection chamber.	6	8100-06	108.30
1 L Glass Reservoir: Fits directly into BAKERBOND *Speedisk* extraction disk.	1	8098-01	155.80
Collection Chamber	2	8096-02	283.80
185 mL Reservoir: Fits directly into BAKERBOND *Speedisk* extraction disk. Also supports inverted, 1 L sample bottle.	6	8097-06	55.80
Sample Tray: Holds up to four 1 L bottles at a tilt to ensure complete sample uptake by remote sample adapter suction tube.	1	8101-01	38.80
O-ring, Auto: Seals extraction disk base in disk holder of Horizon SPE-DEX Extractor.	3	8027-01	23.80
Oil and Grease Standards Kit: 51 mL/bottle mixture of 2 mg/mL Stearic Acid and 2 mg/mL n-Hexadecane in ULTRA RESI-ANALYZED Acetone. Bottles have a rubber stopper and are foil sealed.	4	8030-00	106.40
100 mm/EPA Sample Jar Adapter: Enables inverted feed directly to extraction disk from sample jar and eliminates need to transfer sample to another container.	4	8028-04	241.90
70 mm/Mason Jar Adapter: Enables inverted feed directly to extraction disk from sample jar and eliminates need to transfer sample to another container.	4	8102-04	247.70

Vacuum and Positive-Pressure Processors and Accessories for Extraction Columns

Speedisk 96 Processor and Accessories

Description	Quantity per pack	Product Number	Price
Speedisk 96 Positive-Pressure Processor Complete—includes 1 mL x 96 collection tray, 2 mL x 96 collection tray, 96-column sealing gasket, *Speedisk* 96 column holder, gas supply adapter and tubing.	1	8129-00	$4870.20
10 mL x 24-Well Collection Tray	1	8197-24	14.70
1 mL x 96-Well Collection Tray	1	8188-96	14.70
2 mL x 96-Well Collection Tray	1	8131-96	15.30
96-Column Sealing Gasket	1	8130-01	61.00
Gas Supply Adapter, 6 ft. length of ¼" tubing and ⅛"– ¼" adapter fittings.	1	8128-01	18.40

Speedisk 48 Processor and Accessories

Description	Quantity per pack	Product Number	Price
Speedisk 48 Positive-Pressure Processor Complete—Includes 3 mL SPE column rack, collection tube rack for 12 x 75 mm tubes, waste bin, gas supply adapter and tubing, 48-column sealing gasket.	1	8118-00	$5446.30
Speedisk 48 Positive Pressure Processor (with waste bin)	1	8118-20	2944.20
Rack for 1 mL SPE Columns	1	8122-01	294.40
Rack for 3 mL SPE Columns	1	8123-01	291.50
Rack for 6 mL SPE Columns	1	8124-01	288.70
Collection Tube Rack, 12 x 75 mm Tubes	1	8119-01	297.10
Collection Tube Rack, 13 x 100 mm Tubes	1	8120-01	291.50
Collection Tube Rack, 16 x 100 mm Tubes	1	8121-01	311.40
Collection Vial Rack, 12 x 32 mm Auto-Sampler	1	8125-01	297.10
Waste Bin	1	8126-01	329.60
48-Column Sealing Gasket	1	8127-01	90.50
Gas Supply Adapter, 6 ft. length of ¼" tubing and ⅛"– ¼" adapter fittings.	1	8128-01	18.40

Spectrophotometry/Element Analysis

Spectrophotometry applications are common in many laboratories across many industries. UV/Visible spectrophotometry is routinely used in the quantitative determination of elements and certain organic compounds in samples. Typical applications for IR spectrophotometry are as diverse as pharmaceutical research, medical diagnostics, food and agrochemical quality control, and combustion research.

Avantor has a reputation for offering high-purity acids and solvents for spectrophotometry applications based on years of quality, consistency, and innovation. In the 1970s, Avantor introduced the purest acids in the world with the J.T.Baker ULTREX product line and today, the ULTREX II product line represents the best purity available. Both the J.T.Baker and Macron Fine Chemicals acid product lines include products with three distinct levels of purity and characterization, allowing you to select the best value depending on your analysis. The three levels of acid purity are based on characterization of trace metals by flame atomic absorption and a product recommendation for usage is described below.

Our solvent lines continue to evolve with the technology, as shown by the recent introduction of J.T.Baker ULTRA LC/MS solvents designed specifically for use in UHPLC/MS applications.

We also offer a broad line of single element and multi-element standards for instrument calibration and standardization that are critical to spectrophotometry applications. Please see the Instrument Calibration and Standards section of this catalog starting on page 94 for more information about our standards.

Atomic Absorption Spectroscopy (AAS)

J.T.Baker BAKER ANALYZED ACS reagent and Macron Fine Chemicals AR ACS grades of acids are recommended for qualitative AAS applications, as well as general use.

Purity and consistency are key requirements for all reagent chemicals, but they are especially important with acids used for trace metal analysis by Atomic Absorption. J.T.Baker BAKER ANALYZED ACS reagent and Macron Fine Chemicals AR ACS grades of acids exceed American Chemical Society (ACS) specifications and are optimized for parts-per-million (ppm) detection of trace metals by flame atomic absorption. Wherever possible, products are packaged in poly or poly-coated glass bottles.

J.T.Baker BAKER ANALYZED ACS Reagent Acids

Product	Product Number
Acetic Acid, Glacial	9508
Acetic Acid, Glacial	9511
Ammonium Hydroxide, 28.0–30.0%	9721
Formic Acid, 88%	0128
Hydrobromic Acid, 47–49%	0160
Hydrochloric Acid, 36.5–38.0%	9535
Hydrofluoric Acid, 48.0–51.0 %	9560
Hydrogen Peroxide, 30%	2186
Lactic Acid, 85%	0194
Nitric Acid, 69.0–70.0%	9601
Nitric Acid, Fuming, 90%	9624
Perchloric Acid, 69–72%	9652
Perchloric Acid, 60–62%	9656
Phosphoric Acid	0260
Sulfuric Acid	9681
Sulfurous Acid	0370

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals AR ACS Acids

Product	Product Number
Acetic Acid, Glacial	V193
Ammonium Hydroxide (28.0–30.0% as NH_3)	3256
Formic Acid, 88%	2592
Hydrochloric Acid	H613
Hydrofluoric Acid, 48%	2640
Hydrogen Peroxide, 30% Solution	5240
Lactic Acid, 85%	2676
Nitric Acid	2704
Nitric Acid	1409
Nitric Acid, Fuming	2713
Perchloric Acid, 70%	2766
Perchloric Acid, 70%	3999
Perchloric Acid, 60%	2764
Phosphoric Acid, 85%	2796
Sulfuric Acid	2876
Sulfurous Acid	2920
Nitric Acid	2706

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Inductively Coupled Plasma—Optical Emission Spectrometry (ICP-OES/AES)

J.T.Baker BAKER INSTRA-ANALYZED and Macron Fine Chemicals AR Select grades of acids are recommended for use in ICP-OES/AES applications.

ICP—OES/AES has become one of the standards in trace metal analysis techniques due to its excellent limits of detection and linear dynamic range, multi-element capability, and reproducibility. J.T.Baker BAKER INSTRA-ANALYZED and Macron Fine Chemicals AR Select grades of acids were designed for routine trace metal analysis and EPA protocols by ICP-OES/AES. BAKER INSTRA-ANALYZED acids are analyzed for up to 35 metals in the low parts-per-billion (ppb) range. AR Select acids are analyzed for up to 32 metals in the low parts-per-billion (ppb) range.

J.T.Baker BAKER INSTRA-ANALYZED Acids

Product	Product Number
Acetic Acid, Glacial	9524
Ammonium Hydroxide, 30%	9733
Hydrochloric Acid, 36.5–38.0%	9530
Hydrofluoric Acid	9563
Nitric Acid, 69.0–70.0%	9598
Perchloric Acid, 69–72%	9653
Sulfuric Acid	9673

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals AR Select Acids

Product	Product Number
Acetic Acid, Glacial	8817
Ammonium Hydroxide	6665
Hydrochloric Acid	5587
Hydrogen Peroxide, 30% Solution	V340
Nitric Acid	6623
Perchloric Acid, 70%	8828
Sulfuric Acid	5557

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Inductively Coupled Plasma — Mass Spectrometry (ICP-MS)

J.T.Baker ULTREX II and Macron Fine Chemicals AR Select Plus grades are recommended for use in ICP-MS applications.

ICP-MS is highly sensitive and capable of the determination of a range of metals and several non-metals at very low (parts-per-trillion) concentrations. Unlike AAS, which can only measure a single element at a time, ICP-MS has the capability to scan for all elements simultaneously, allowing rapid sample processing.

J.T.Baker ULTREX II and Macron Fine Chemicals AR Select Plus grades are high-performance acids for your most demanding trace element analyses by ICP-MS, ICP-OES/AES and Graphite Furnace Atomic Absorption (GFAA). ULTREX II acids are analyzed for up to 65 trace elements in the ppt range, with specifications of less than 10 ppt for 50 elements, and total element impurities that typically do not exceed 500 ppt. AR Select Plus acids are tested for up to 45 elements in the low ppt range. AR Select Plus acids are produced by double sub-boiling distillation in quartz stills. Both ULTREX II and AR Select Plus acids are packaged in inert, pre-leached fluoropolymer bottles under Class 100 environment to protect the purity of the acids.

J.T.Baker ULTREX II Acids

Product	Product Number
Acetic Acid, Glacial	6903
Ammonium Hydroxide, 20%	4807
Hydrochloric Acid	6900
Hydrofluoric Acid	6904
Hydrogen Peroxide, 30%	5155
Nitric Acid	6901
Perchloric Acid, 70%	4806
Phosphoric Acid	6908
Sulfuric Acid	6902
Water	6906
ULTREX Bottle-Top Dispenser	6910
ULTREX Dispenser Base	6912

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals AR Select Plus Acids

Product	Product Number
Hydrochloric Acid	V078
Nitric Acid	V077

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Analytical Methods

ULTREX II Dispenser System

The J.T.Baker ULTREX II dispenser system was designed to reduce the risk of contamination and to maintain the purity of ULTREX II acids. The dispenser is made of fluoropolymer PFA or TFM (modified PTFE) and it will eliminate leaching and airborne contamination, minimize waste and enhance safe handling of these acids. The dispenser is pre-cleaned to maintain <0.1 ppb metal blank levels in routine use. All wet parts are made with fluoropolymer PFA to maintain product purity and each unit comes with a PTFE air filter to reduce the risk of airborne contamination. The unit dispenses 0 to 5 mL in 0.5 mL increments with an accuracy of ±0.02 mL (water at 20 °C) and a precision of ±3% at 3 mL.

J.T.Baker ULTREX II Dispenser System

ULTREX Dispenser Specifications	
Volume:	0–5 mL in 0.5 mL increments
Accuracy:	± 0.02 mL (water at 20 °C)
Precision	± 3% at 3 mL

UV/Visible/IR Spectrophtometry

J.T.Baker PHOTREX grade solvents are recommended for use in UV, visible, and IR spectrophotometry applications. Macron Fine Chemicals ChromAR and UltimAR grades are recommended for use in UV spectrophotometry applications.

The principle of spectrophotometry is fairly straightforward—that the identification and concentration of a species in solution can be determined by measuring the transmittance or absorbance of radiation passed through the solution. A simple concept, but to make it work, you need a solvent that doesn't interfere with the measurement at the specific wavelength being measured.

Avantor solvents for spectrophotometry are manufactured to minimize lot-to-lot variability and contaminants that can interfere with UV, and in some cases IR, spectra, including residue after evaporation, and acid and base concentrations. Function testing confirms maximum absorbance in selected wavelengths, and for PHOTREX solvents, 50% to 100% transmittance windows in IR wavelengths are reported. ChromAR solvents meet ACS specifications. UltimAR solvents meet ACS specifications for UV spectrophotometry applications

For more information on Macron Fine Chemicals ChromAR and UltimAR solvents, please see the Analytical Chromatography section of this catalog starting on page 22.

Fluorescence Spectrophotometry

J.T.Baker HPLC and LC/MS solvents and Macron Fine Chemicals UltimAR solvents are recommended for use in fluorescence spectrophotometry applications.

Fluorescence spectrophotometry applications have expanded rapidly in areas as diverse as trace metal analysis, environmental applications, and medicine. Fluorescence spectrophotometry has some significant advantages over absorption spectroscopy, including that two wavelengths (excitation and emission) are used, that the technique by its nature has a low signal to noise ratio, and that fluorescence methods have linearity over a broader range. These advantages make the sensitivity of fluorescence spectrophotometry much greater than absorption spectrophotometry. Also, many more compounds exhibit UV absorption than strong fluorescence, making fluorescence much more selective.

Fluorescence spectrophotometry techniques are very sensitive to pH changes, and any suspended particles can cause false signals due to light scattering. Interference by contamination of trace levels of organic chemicals require that the highest quality solvents be used.

J.T.Baker PHOTREX Solvents

Product	Product Number
Acetone	9010
Alcohol, Anhydrous, Reagent	9229
1-Butanol	9189
n-Butyl Acetate	9191
Chloroform	9183
1,2-Dichloroethane	9302
Dimethyl Sulfoxide	9194
Dimethylformamide	9222
p-Dioxane	9196
Methanol, Absolute	9069
Methyl iso-Butyl Ketone	9212
Methylene Chloride	9329
Paraffin Oil	9388
Petroleum Ether, 35–60 °C	9270
2-Propanol	9083
Tetrachloroethylene	9218
Toluene	9456
2,2,4-Trimethylpentane	9479
Xylenes	9516

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Avantor offers a range of products for use in fluorescence spectrophotometry applications. J.T.Baker HPLC solvents are controlled for high assay and low UV absorption, fluorescence, residue, and water. Selected J.T.Baker LC/MS solvents are also controlled for fluorescence and residue and are filtered through a 0.2 µm filter. Macron Fine Chemicals UltimAR solvents also are tested for fluorescence interferences and controlled for residue.

For more information on these products, please see the Analytical Chromatography section of this catalog starting on page 22.

Wet Chemical Analysis

Wet chemical analysis refers to classical chemistry-based analytical methods that exclude the use of instrumentation. These methods are generally done in the liquid phase using relatively larger quantities of reagents than required by many instrumental techniques. Many wet chemical analysis applications are widely used today across all types of industries and have been effectively automated and computerized for efficiency.

Avantor offers a broad range of general reagents and specialty products for use in wet chemical analysis applications. Our products are sometimes designed with a specific application in mind, such as Karl Fischer titrations. Other products take a more generalized approach, such as our volumetric solutions, which aren't for a specific application, but are traceable to NIST standards to assure reliability in all applications. Whatever your wet chemistry application, you can have confidence that J.T.Baker and Macron Fine Chemicals brand products are of the highest purity and lot-to-lot consistency, and are among the finest chemicals available for wet chemical analysis in the market today.

Water Determination (Karl Fischer)

Water determination by Karl Fischer titration is a technique used in many industries in both research and quality control applications. The Karl Fischer

method has several major advantages over alternative methods, including speed, accuracy, and reliability. The method is highly selective for water, requires small sample sizes, has a short analysis time, and is suitable for automation.

The J.T.Baker HYDRA-POINT product line was developed with a pyridine-free formulation specifically for use in Karl Fischer volumetric and coulometric titrations. In comparison studies with other brands of Karl Fischer Reagents, HYDRA-POINT titers have been shown to be more stable and have less drift, helping to save time and reduce reagent usage.

HYDRA-POINT Karl Fischer Reagents

J.T.Baker HYDRA-POINT Karl Fischer reagents make water determination easy and trouble-free. Products are formulated to give you consistent and reliable results for all types of samples. HYDRA-POINT products reach endpoint quickly, accurately, and with reproducibility, allowing you to perform more titrations in less time.

Volumetric Reagents

HYDRA-POINT volumetric reagents are pyridine-free, eliminating the hazards and unpleasant odor of pyridine-based solvents in the laboratory. These products are available as two-component systems with the reactants in two separate solutions, or as a one-component system where all reactants are in a single reagent, and the sample is placed in a methanol solution. We also offer dry methanol and a buffer solution for use in volumetric determinations.

J.T.Baker HYDRA-POINT Volumetric Reagents

One-Component Systems

Product	Product Number
HYDRA-POINT Comp 5	8890
HYDRA-POINT Comp 2	8891
HYDRA-POINT Comp 5K	8892
HYDRA-POINT Methanol Dry	8898
HYDRA-POINT Comp Buffer	8899

Two-Component Systems

Product	Product Number
HYDRA-POINT Titrant 5	8844
HYDRA-POINT Titrant 2	8845
HYDRA-POINT Solvent G	8855

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Analytical Methods

Coulometric Reagents

HYDRA-POINT coulometric reagents are designed to deliver faster analyses, lower detection limits, and increased accuracy. These products feature lower background noise that gives a better signal/noise ratio, resulting in a significant increase in the lower detection limit—to as low as 1 ppm. High imidazole concentration assures faster reaction kinetics, and therefore faster analyses. HYDRA-POINT coulometric Gen and Oven reagents are also halogen-free to help protect the environment.

J.T.Baker HYDRA-POINT Coulometric Reagents

Product	Product Number
HYDRA-POINT Coulometric Gen	8860
HYDRA-POINT Coulometric Oven	8861
HYDRA-POINT Coulometric Anode	8862
HYDRA-POINT Cathode Solution	8863

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Titrimetry

Titrimetry, also known as titration or volumetric analysis, is a common laboratory method of quantitative chemical analysis. In this method, measured volumes of a titrant are added to a vial containing a known reactant to determine the concentration of the reactant. The endpoint of the reaction can be determined by color change, pH change, precipitation, or a variety of other means.

Avantor offers a range of J.T.Baker and Macron Fine Chemicals products for titrimetric applications, including volumetric solutions that are traceable to NIST, volumetric concentrates that are diluted to create fresh standard solutions, primary standards, indicators, and general ACS reagents that are suitable for use in testing products using USP/NF or PhEur monographs.

J.T.Baker Titrimetry Products

Product	Product Number
Acetate Buffer pH 4.5 DILUT-IT Dissolution Media Concentrate	D017
Ammonia, T.S.	5905
Ammonia-Ammonium Chloride Buffer, T.S.	5904
Ammonium Hydroxide, 5N Volumetric Solution	5604
Ammonium Hydroxide, 5N Volumetric Solution	5604
Ammonium Oxalate, T.S.	5906
Ammonium Sulfate, 3% (w/v) Solution	0332
Ammonium Sulfate, 38% (w/w) Solution	0791
Ammonium Sulfate, 6% (w/v) Solution	0333
Ammonium Thiocyanate, 0.1N Volumetric Solution	5627
Barium Chloride, T.S.	5907
Bromine (Bromide-Bromate), 0.1N Volumetric Solution	5625
Bromocresol Green, T.S.	5908
Bromocresol Purple, T.S.	5909
Bromophenol Blue, T.S.	5910
Buffer Concentrate (Biphthalate), pH 4, DILUT-IT	4795
Buffer Concentrate (Carbonate), pH 10, DILUT-IT	4797
Buffer Concentrate (Phosphate), pH 7, DILUT-IT	4796
Buffer Solution (Biphthalate), pH 4	5606
Buffer Solution (Biphthalate), pH 4 (Color Coded Red)	5657
Buffer Solution (Borate), pH 10	5609
Buffer Solution (Borate), pH 10 (Color Coded Blue)	5655
Buffer Solution (Phosphate), pH 7	5608
Buffer Solution (Phosphate), pH 7 (Color Coded Yellow)	5656
Calcium Chloride, T.S.	5912
Ceric Sulfate, 0.1N Volumetric Solution	5626

J.T.Baker Titrimetry Products

Product	Product Number
Congo Red, T.S.	5914
Cresol Red, T.S.	5916
Crystal Violet, 0.1% Aqueous Solution	0399
Crystal Violet, T.S.	5917
Decalcifying Solution, Krajian	G161
EDTA Standard Solution (1 mL = 1 mg $CaCO_3$)	5648
EDTA, Disodium Salt, Dihydrate, 0.1M Volumetric Solution	5632
EDTA, Disodium Salt, DILUT-IT Analytical Concentrate, 0.1M	4653
Eriochrome Black, T.S.	5920
Fehling's Solution (A), T.S.	5918
Fehling's Solution (B), T.S.	5919
Ferric Ammonium Sulfate, T.S.	5930
Ferric Chloride, T.S.	5921
Formalin, 10% w/v Solution	M518
Giemsa Blood Staining Solution, Stock	M708
Hydrochloric Acid 0.01N DILUT-IT Dissolution Media Concentrate	D010
Hydrochloric Acid 0.1N DILUT-IT Dissolution Media Concentrate	D011
Hydrochloric Acid, 0.01N Volumetric Solution	5611
Hydrochloric Acid, 0.02N Volumetric Solution	5614
Hydrochloric Acid, 0.1N Volumetric Solution	5621
Hydrochloric Acid, 0.2N Volumetric Solution	5612
Hydrochloric Acid, 0.5N Volumetric Solution	5622
Hydrochloric Acid, 1N Volumetric Solution	5620
Hydrochloric Acid, 2N Volumetric Solution	5616
Hydrochloric Acid, 5N Volumetric Solution	5618
Hydrochloric Acid, 6N Volumetric Solution	5619
Hydrochloric Acid, DILUT-IT Analytical Concentrate, 0.1N	4655
Hydrochloric Acid, DILUT-IT Analytical Concentrate, 0.5N	4654
Hydrochloric Acid, DILUT-IT Analytical Concentrate, 1N	4657
Iodine (Iodine-Iodide), 0.01N Volumetric Solution	5689
Iodine (Iodine-Iodide), 0.1N Volumetric Solution	5623
Iodine (Iodine-Iodide), 1N Volumetric Solution	5688
Iodine (Iodine-Iodide), DILUT-IT Analytical Concentrate, 0.01N	4660
Iodine (Iodine-Iodide), DILUT-IT Analytical Concentrate, 0.1N	4662
Iodine and Potassium Iodide, T.S.	5923
Iodine Monochloride, T.S.	5922
Iodochloride, T.S.	5924
Lanthanum, 1% w/v	6947
Lanthanum, 1% w/v	6948
m-Cresol Purple, T.S.	5915
Methyl Orange, T.S.	5925
Methyl Red, T.S.	5926

Product	Product Number
New Methylene Blue N, Brecher Formula	R769
Nitric Acid, 0.1N Volumetric Solution	5600
Nitric Acid, 2N Volumetric Solution	5639
Nitric Acid, DILUT-IT Analytical Concentrate, 0.1N	4712
Oxalic Acid, 0.1N Volumetric Solution	5628
Oxalic Acid, DILUT-IT Analytical Concentrate, 0.1N	4665
Perchloric Acid, 0.1N in Glacial Acetic Acid Volumetric Solution	5624
Phenolphthalein, T.S.	5927
Phosphate Buffer, M/15, pH 6.8	U033
Platinum Chloride Solution	2896
Potassium Bromate, 0.1N Volumetric Solution	5629
Potassium Dichromate, DILUT-IT Analytical Concentrate, 0.1N	4671
Potassium Hydroxide, 0.1N in Ethanol Volumetric Solution	5645
Potassium Hydroxide, 0.1N in Methanol Volumetric Solution	5650
Potassium Hydroxide, 0.1N Volumetric Solution	5603
Potassium Hydroxide, 0.1N Volumetric Solution	5603
Potassium Hydroxide, 0.5N in Ethanol Volumetric Solution	5644
Potassium Hydroxide, 0.5N in Methanol Volumetric Solution	5631
Potassium Hydroxide, 1N Volumetric Solution	5602
Potassium Hydroxide, 1N Volumetric Solution	5602
Potassium Hydroxide, DILUT-IT Analytical Concentrate, 0.1N	4673
Potassium Hydroxide, DILUT-IT Analytical Concentrate, 1N	4674
Potassium Iodate, DILUT-IT Analytical Concentrate, 0.1N	4676
Potassium Iodide, T.S.	5931
Potassium Permanganate, 0.1N Volumetric Solution	5651
Potassium Permanganate, DILUT-IT Analytical Concentrate, 0.1 N	4677
Potassium Phosphate pH 5.8 DILUT-IT Dissolution Media Concentrate	D012
Potassium Phosphate pH 6.0 DILUT-IT Dissolution Media Concentrate	D013
Potassium Phosphate pH 6.8 DILUT-IT Dissolution Media Concentrate	D014
Potassium Phosphate pH 7.2 DILUT-IT Dissolution Media Concentrate	D015
Potassium Phosphate pH 7.4 DILUT-IT Dissolution Media	D019
Potassium Phosphate pH 7.5 DILUT-IT Dissolution Media Concentrate	D016
Schiff Reagent, Hotchkiss and McManus	U973
Silver Nitrate Standard Solution (1 mL = 1 mg Chloride)	5652
Silver Nitrate Standard Solution (1 mL = 1 mg Chloride)	5652
Silver Nitrate, 0.1 N Volumetric Solution	5630
Silver Nitrate, DILUT-IT Analytical Concentrate, 0.1N	4681
Simulated Gastric Fluid (without enzyme)	D020

Analytical Methods

J.T.Baker Titrimetry Products

Product	Product Number
Sodium Carbonate, 1N Volumetric Solution	5646
Sodium Carbonate, DILUT-IT Analytical Concentrate, 0.1N	4683
Sodium Chloride, DILUT-IT Analytical Concentrate, 0.1N	4684
Sodium Hydroxide, 0.01N Volumetric Solution	5663
Sodium Hydroxide, 0.02N Volumetric Solution	5653
Sodium Hydroxide, 0.05N Volumetric Solution	5664
Sodium Hydroxide, 0.1N Volumetric Solution	5636
Sodium Hydroxide, 0.25N Volumetric Solution	5638
Sodium Hydroxide, 0.2N Volumetric Solution	5665
Sodium Hydroxide, 0.5N Volumetric Solution	5634
Sodium Hydroxide, 0.6N Volumetric Solution	5667
Sodium Hydroxide, 10N Volumetric Solution	5674
Sodium Hydroxide, 1N Volumetric Solution	5635
Sodium Hydroxide, 2.5N Volumetric Solution	5666
Sodium Hydroxide, 25% (w/w) Solution	5661
Sodium Hydroxide, 2N Volumetric Solution	5633
Sodium Hydroxide, 4N Volumetric Solution	5669
Sodium Hydroxide, 5N Volumetric Solution	5671
Sodium Hydroxide, 6N Volumetric Solution	5672
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.02N	4715
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.1N	4687
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.5N	4691
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 1N	4689

Product	Product Number
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 5N	4690
Sodium Lauryl Sulfate 0.50% DILUT-IT Dissolution Media Concentrate	D018
Sodium Phosphate pH 6.8 DILUT-IT Dissolution Media Concentrate	D021
Sodium Thiosulfate, 0.1N Volumetric Solution	5637
Sodium Thiosulfate, 1N Volumetric Solution	5654
Sodium Thiosulfate, DILUT-IT Analytical Concentrate, 0.01N	4693
Sodium Thiosulfate, DILUT-IT Analytical Concentrate, 0.1N	4695
Sulfuric Acid, 0.02N Volumetric Solution	5693
Sulfuric Acid, 0.125N Volumetric Solution	5692
Sulfuric Acid, 0.1N Volumetric Solution	5641
Sulfuric Acid, 0.2N Volumetric Solution	5690
Sulfuric Acid, 0.5N Volumetric Solution	5640
Sulfuric Acid, 1N Volumetric Solution	5642
Sulfuric Acid, 3.5N Volumetric Solution	5951
Sulfuric Acid, 50% (w/w) Solution	9696
Sulfuric Acid, 5N Volumetric Solution	5691
Sulfuric Acid, DILUT-IT Analytical Concentrate, 0.02N	4704
Sulfuric Acid, DILUT-IT Analytical Concentrate, 0.1N	4699
Sulfuric Acid, DILUT-IT Analytical Concentrate, 1N	4700
Thymol Blue, T.S.	5929
Thymolphthalein, T.S.	5932

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals Titrimetry Products

Product	Product Number
Ammonium Chloride - Hydroxide Buffer (APHA)	H004
BuffAR pH 10.00 Reference Solution	0032
BuffAR pH 10.00 Reference Solution	0099
BuffAR pH 4.01 Reference Solution	0029
BuffAR pH 4.01 Reference Solution	0097
BuffAR pH 7.0 Reference Solution	0031
BuffAR pH 7.0 Reference Solution	0098
Decalcifying Solution, Krajian	E068
EDTA Titrant (Disodium), 0.0575 Molar Volumetric Solution	H109
EDTA Titrant, 0.01 Molar (M/100) Volumetric Solution (APHA)	H105
EDTA Titrant, 0.05 Molar (M/20) Volumetric Solution	H115
EDTA Titrant, 0.1 Molar (M/10) Volumetric Solution	H100
Fehling's Solution A	H118
Fehling's Solution B	H125
Ferroin Indicator	H119

Product	Product Number
Formaldehyde Solution, 10% (w/v) in Aqueous Phosphate Buffer	H121
Giemsa Blood Staining Solution, Stock	E052
Hydrochloric Acid 10%	H151
Hydrochloric Acid, 0.1 Normal (N/10) Volumetric Solution	2853
Hydrochloric Acid, 1.0 Normal Volumetric Solution	6388
Hydrochloric Acid, 6.0 Normal Volumetric Solution	H168
Iodine, 0.01 Normal (N/100) Volumetric Solution	H175
Iodine, 0.0282 Normal Volumetric Solution (APHA)	H169
Iodine, 0.10 Normal (N/10) Volumetric Solution	2962
Iodine, 1.0 Normal Volumetric Solution	H185
Iodine-Monochloride Solution	H180
Lead Acetate Cotton	H220
Nessler Reagent	H261
New Methylene Blue N, Brecher Formula	E069
Nitric Acid, 10%	H262

Macron Fine Chemicals Titrimetry Products

Product	Product Number
Oxalic Acid, 10% (w/v) Aqueous (APHA)	H281
Perchloric Acid, 0.10 Normal (in Glacial Acetic Acid) Volumetric Solution	H301
Phenol Red, 0.04% (w/v) Aqueous, pH 6.8-8.2	H308
Phenol Solution (1 ml = 1 mg Phenol)	H302
Phenolphthalein, 0.5% in 50% Alcohol (APHA), pH 8.0-10.0	H297
Phenolphthalein, 1.0% in 50% Alcohol	H295
Phenolphthalein, 1.0% in 95% Alcohol (APHA), pH 8.0-10.0	H306
Platinum Cobalt Color Standard (APHA 500)	H296
Potassium Chloride, Saturated Aqueous	H300
Potassium Hydroxide, 10% (w/v) Aqueous	H320
Potassium Hydroxide, 45% Solution	6671
Potassium Permanganate, 1.0 Normal Volumetric Solution	6139
Schiff Reagent, Hotchkiss and McManus	E070
Silver Nitrate, 0.0141 Normal Volumetric Solution (APHA)	H383
Silver Nitrate, 0.0171 Normal Volumetric Solution	H394
Silver Nitrate, 0.10 Normal (N/10) Volumetric Solution	6142
Silver Nitrate, 0.171 Normal Volumetric Solution	H391
Sodium Hydroxide, 0.10 Normal (N/10) Volumetric Solution	6146
Sodium Hydroxide, 0.5 Normal (N/2) Volumetric Solution	H380
Sodium Hydroxide, 1.0 Normal Volumetric Solution	4693
Sodium Hydroxide, 10.0 Normal Volumetric Solution	H385
Sodium Thiosulfate, 0.01 Normal (N/100) Volumetric Solution	H362
Sodium Thiosulfate, 0.025 Normal (N/40) Volumetric Solution	H371
Sodium Thiosulfate, 0.1 Normal (N/10) Volumetric Solution	4682
Sodium Thiosulfate, 0.20 Normal (N/5) Volumetric Solution	5531
Sodium Thiosulfate, 1.0 Normal Volumetric Solution	6840
Starch Indicator, 0.5% (w/v) Aqueous (APHA)	H365
Sulfuric Acid, 1.0 Normal Volumetric Solution	7610
Sulfuric Acid, 10% (w/v) R.S.	H378
Sulfuric Acid, 10.0 Normal Volumetric Solution	H379
Sulfuric Acid, 18 Normal	2878
Sulfuric Acid, 2.0 Normal Volumetric Solution	H381

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Ion Determination

The determination of specific ions in a sample is an analytical method done in a wide variety of industries. From field testing of water or other liquid samples to checking for peroxide levels in laboratory reagents, there is often a need for a fast, semi-quantitative determination of ion presence.

J.T.Baker BAKER TESTRIPS are the viable alternative to time-consuming and costly wet chemical methods in these cases. These strips or kits are suitable for testing solvents, acids, bases, and aqueous solutions in the lab or the field. If sample preparation is required, the BAKER TESTRIP kit contains the necessary reagents. Strips are dipped in the solution for up to 30 seconds and the results are read by comparing the strips to the color scale printed on the package.

J.T.Baker BAKER TESTRIPS

Product	Range	Product Number
BAKER TESTRIPS For Ammonium (NH_4^+)	10–400 mg/L (ppm)	4408
BAKER TESTRIPS For Ascorbic Acid	50–2000 mg/L (ppm)	4409
BAKER TESTRIPS For Copper (Cu^+,Cu^{2+})	10–1000 mg/L (ppm)	4412
BAKER TESTRIPS For Nickel (Ni^{2+})	10–1000 mg/L (ppm)	4414
BAKER TESTRIPS For Nitrite (NO_2^-)	1–80 mg/L (ppm)	4415
BAKER TESTRIPS For Peroxide (H_2O_2)	1–100 mg/L (ppm)	4416
BAKER TESTRIPS for Potassium (K^+)	200–1500 mg/L (ppm)	4417
BAKER TESTRIPS For Sulfite (SO_3^{2-})	10–1000 mg/L (ppm)	4418
BAKER TESTRIPS For Water Hardness	90–450 mg $CaCO_3$/L (ppm)	4420

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Analytical Methods

pH Measurement

J.T.Baker BAKER-pHIX pH test strips, BAKER-pHIX indicator sticks and DUAL-TINT pH papers all provide fast, easy, accurate results with a broad selection of pH ranges. Each type of indicator has different performance features, as indicated below. We also offer prepared J.T.Baker and Macron Fine Chemicals pH buffer solutions and J.T.Baker DILUT-IT buffer concentrates that make it easy to prepare fresh solutions whenever needed.

BAKER-pHIX pH Paper with Color Scale

The color scale is printed right on the pH paper for quick, accurate readings without referring to a separate scale. This is useful where pH papers are shared, and it also has other advantages. Both the indicator and color scale are wetted at the same time and are side-by-side, making comparison easier and more accurate. This is especially important when testing colored solutions. Each box contains 200 strips.

BAKER-pHIX pH Papers with Color Scale

pH Range	pH Gradation	Product Number
1–12	1	4399-01
1.8–3.8	0.2/0.3	4400-01
2.8–4.6	0.2/0.3	4401-01
3.8–5.5	0.2/0.3	4402-01
4.0–9.0	0.5	4403-01
5.2–6.8	0.2/0.3	4404-01
6.0–8.1	0.3	4405-01
7.2–8.8	0.2/0.3	4406-01
8.0–9.7	0.2/0.3	4407-01

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

BAKER-pHIX pH Indicator Sticks

These pH indicator sticks feature up to four color-fixed test zones on a durable plastic strip. Additionally, these indicator sticks contain a larger scale and well-separated dyes to make them easier to read. They are made with color-fixed, non-bleeding dyes that will not contaminate your samples. Solutions do not need to be buffered before testing. Each box contains 100 sticks, four boxes per case.

BAKER-pHIX Indicator Sticks

pH Range	pH Gradation	Product Number
0–14	1	4390-01
0.0–6.0	0.5	4391-01
1.7–3.8	0.3	4392-01
2.0–9.0	0.5	4393-01
3.6–6.1	0.3/0.5	4394-01
4.5–10	0.5	4395-01
6.0–7.7	0.3/0.4	4396-01
7.0–14	0.5	4397-01
7.5–9.5	0.2/0.4	4398-01

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

DUAL-TINT pH Papers

This pH paper is in a rolled 17-foot strip, 3/8" wide in a refillable dispenser complete with color scale. DUAL-TINT pH papers offer easy-to-read, precise pH indication. Two different indicator zones on one strip separated by a white center division guarantees clear color gradations and reliable pH values. The papers are also available as refills for the dispenser in packs of three rolls.

J.T.Baker DUAL-TINT pH Papers

pH Range	pH Gradation	Product Number	Price Box*
1–12	1	2867-01	$35.10
3.5–6.8	0.3	2871-01	33.55
5.0–8.0	0.3	2869-01	33.55
7.0–10.0	0.3	2868-01	33.55
9.5–14.0	0.3	2880-01	33.55

*A rolled 17-foot strip, 3/8" wide in a refillable dispenser.

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

J.T.Baker DUAL-TINT Refills

pH Range	pH Gradation	Product Number	Price Box*
1–12	1	2873-01	$61.20
1.0–4.3	0.3	2879-01	57.25
3.5–6.8	0.3	2876-01	57.25
5.0–8.0	0.3	2875-01	57.25

*Each box contains 3 rolls.

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

pH Buffer Solutions and Concentrates

You can eliminate the time and expense of preparing and standardizing solutions with our pH buffer solutions and concentrates. J.T.Baker buffer solutions are manufactured

J.T.Baker pH Buffer Solutions

Description	Product Number
Buffer Solution (Biphthalate), pH 4	5606
Buffer Solution (Biphthalate), pH 4 (Color-coded Red)	5657
Buffer Solution (Phosphate), pH 7	5608
Buffer Solution (Phosphate), pH 7 (Color-coded Yellow)	5656
Buffer Solution (Borate), pH 10	5609
Buffer Solution (Borate), pH 10 (Color-coded Blue)	5655

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

J.T.Baker DILUT-IT Buffer Concentrates

Description	Size	Product Number
Buffer Solution Biphthalate, pH 4	Ampoule for dilution to 500 mL	4795
Buffer Solution Phosphate, pH 7	Ampoule for dilution to 500 mL	4796
Buffer Concentrate Carbonate, pH 10	Ampoule for dilution to 500 mL	4797

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals pH Buffer Solutions

Description	Product Number
BuffAR pH 4.01 Reference Solution	0029
BuffAR pH 4.01 Reference Solution	0097
BuffAR pH 7.0 Reference Solution	0031
BuffAR pH 7.0 Reference Solution	0098
BuffAR pH 10.00 Reference Solution	0032
BuffAR pH 10.00 Reference Solution	0099

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

in large lots certified traceable to NIST Standard Reference Buffers. Solutions are available in clear and color-coded versions in a variety of sizes. J.T.Baker DILUT-IT buffer concentrates make it easy to create fresh solutions whenever needed by diluting the ampoule contents with water to a volume of 500 mL. Diluted solutions are accurate to ±0.01 pH units.

Macron Fine Chemicals ready-to-use pH buffers are manufactured to stringent specifications and utilize quality control procedures to reduce lot-to-lot variability. Products are available in clear or color-coded versions in a variety of sizes. Inquire for customized solutions and packaging sizes.

Other Wet Chemical Analyses

Avantor offers a broad line of reagents for other wet chemical analysis methods, such as gravimetry, anion/cation determination, alkalinity, and others. In general, Macron Fine Chemicals reagents are the universal brand, where you'll find good quality versatile reagents at reasonable prices. J.T.Baker reagents are the highly characterized brand with quality products for the most demanding applications. Whichever brand you choose, you'll find that you're buying a product that Avantor stands behind with over 100 years of experience, service, and dedication to providing the finest quality products available to the chemical marketplace.

Please refer to the A to Z section of this catalog or our online catalog at www.avantormaterials.com for a full listing of available products, specifications, and pricing. Please contact our Technical Service department at 1-800-669-8230 if you need additional information about our products or services, or go to ASKAVANTOR.com, our online question and answer center.

Products by Application

Products by Application
Drug Discovery

We have entered into an unprecedented age of discovery and development of pharmaceutical therapeutics. Over the last decade, we have seen rapid advances in disease diagnosis, treatment, and prevention. In today's environment, the difficult task of deciding on a drug target to pursue must be followed up with fast and efficient development and scale up. Avantor can help, with time-tested consistently produced products that are used in drug discovery, development, and manufacturing processes every day. In addition, Avantor provides the optimized choice for sample analysis and quality control at every phase.

Pharmaceutical Discovery

Pharmaceutical discovery is the life blood of pharmaceutical companies and Avantor understands this fact. Drug discovery begins by focusing on specific diseases and patient needs that will support a new commercially viable medicine. The task of generating potential new drugs and analyzing these small molecules is a daunting task; researchers have been using Avantor products for decades to optimize the process.

Biopharmaceutical Discovery

Macron Fine Chemicals and J.T.Baker brand products were founded over a century ago on the belief that the more pure and the more consistent chemicals are, the better your results will be. That's also the basic premise behind our products for molecular biology and biotechnology applications. These chemicals expand your control and help you reduce variables in the experimental process and optimize your workflow on large molecules.

Beaker-to-Bulk Packaging for Easy Scale-Up

Our products are designed to make scale-up easy with Beaker to Bulk packaging—sizes of the identical product available for the laboratory, pilot plant/core facility, or full scale manufacturing. Avantor has worked closely with our customers over the years to ensure that we provide a clear solution at each step during the scale up process. We are continuously adding new package sizes, configurations, and materials of construction options to optimize scale-up. Our total quality solution allows you to use the same products in the discovery workflow all the way through grand scale production.

Products that Enable Drug Discovery

Below are descriptions of our high-quality products for drug discovery. Avantor is continuously updating specifications, adding additional sizes and new products for drug discovery to meet the changing needs of our customers. Visit our web site at www.avantormaterials.com for the latest updates.

J.T.Baker ULTRAPURE BIOREAGENTS for Molecular Biology Applications

The J.T.Baker line of ULTRAPURE BIOREAGENTS delivers crucial parameters to molecular biologists, including assay purity ranging from 98% to above 99.9%, with no detectable DNase, RNase and Protease, low heavy metal content, and low insolubles.

ULTRAPURE BIOREAGENT biological buffers are non-toxic to cells and are not absorbed through cell membranes. Due to their zwitterionic nature, they contribute negligible ionic strength while providing high buffering capacity. These products feature high assay, low insolubles, and the

absence of DNase, RNase and protease. These products are also designed to make your workflow as efficient and reliable as possible.

New products and additional specifications are being added to this product group due to the rapidly changing requirements of the market. For the most current product specifications, packaging, and prices, please visit our web site at www.avantormaterials.com

ULTRAPURE BIOREAGENT Biological Buffer Selection Guide for Molecular Biology Applications

Description	pKa @25 °C	ΔpKa/ΔT(°C)	pH Range	Product Number
CAPS, ULTRAPURE BIOREAGENT	10.4	-0.018	9.7–11.1	4118
CHES, ULTRAPURE BIOREAGENT	9.3	-0.018	8.6–10.0	4146
CHES, Sodium Salt, ULTRAPURE BIOREAGENT	9.3	-0.018	8.6–10.0	4147
HEPES, Free Acid, ULTRAPURE BIOREAGENT	7.5	-0.014	6.8–8.2	4018
HEPES, Sodium Salt, ULTRAPURE BIOREAGENT	7.5	-0.014	6.8–8.2	4153
MES, Monohydrate, Free Acid, Crystalline, ULTRAPURE BIOREAGENT	6.1	-0.011	5.5–6.7	4014
MOPS, ULTRAPURE BIOREAGENT	7.2	-0.011	6.5–7.9	4004
MOPS, Sodium Salt, ULTRAPURE BIOREAGENT	7.2	-0.011	6.5–7.9	4163
PIPES, ULTRAPURE BIOREAGENT	6.8	-0.0085	6.1–7.5	4265
PIPES, Sodium Salt, ULTRAPURE BIOREAGENT	6.8	-0.0085	6.1–7.5	4266
Tris, ULTRAPURE BIOREAGENT	8.1	-0.028	7.0–9.0	4109
Tris, Biochemical Reagent	8.1	-0.028	7.0–9.0	4099
Tris Hydrochloride, ULTRAPURE BIOREAGENT	8.1	-0.028	7.0–9.0	4103

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

J.T.Baker ULTRAPURE BIOREAGENT Products

Product	Product Number
Acrylamide	4081
Acrylamide/Bis, 37.5:1, 40% Solution	4970
Acrylamide/Bis, 29:1, 40% Solution	4969
Acrylamide/Bis, 19:1, 40% Solution	4968
8% Premix Acrylamide Solution	4170
6% Premix Acrylamide Solution	4169
Agarose, Low Melting	4090
Agarose, PFGE	4063
Agarose, Standard, Low Electroendosmosis (EEO)	A426
Ammonium Persulfate	4030
Ammonium Sulfate	4027
Boric Acid, Granular	4035
CAPS	4118
Cesium Chloride	4042
CHAPS	4145
CHES	4146
CHES, Sodium Salt	4147

Product	Product Number
1,4-Dithiothreitol (DTT, Cleland's Reagent)	F780
EDTA, Disodium Salt, Dihydrate, Crystal	4040
Ethidium Bromide	4007
Formamide	4028
Glycerol, Anhydrous	4043
Glycine	4059
HEPES, Free Acid	4018
HEPES, Sodium Salt	4153
Lithium Chloride, Granular	4002
Magnesium Chloride, 6-Hydrate, Crystal	4003
2-Mercaptoethanol	4049
MES, Monohydrate, Free Acid, Crystalline	4014
N,N'-Methylenebisacrylamide	4031
MOPS	4004
MOPS, Sodium Salt	4163
Phenol, White Fused Crystal	4056
PIPES	4265
PIPES, Sodium Salt	4266

Product	Product Number
Potassium Acetate, Crystal	2915
Potassium Chloride, Crystal	4001
Potassium Phosphate, Monobasic, Crystal	4008
Potassium Phosphate, Dibasic, Powder	4012
Sodium Acetate, Trihydrate, Crystal	4009
Sodium Chloride, Crystal	4058
Sodium Citrate, Dihydrate, Granular	4093
Sodium Dodecyl Sulfate (SDS)	4095
Sodium Phosphate, Monobasic, Monohydrate, Crystal	4011
Sodium Phosphate, Dibasic, Anhydrous, Powder	4062
Sucrose	4097
TEMED	4098
TRIS (Base)	4109
TRIS Hydrochloride	4103
Urea	4111
Water, Sterile	4221

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Products By Application

DNA and Peptide Synthesis

J.T.Baker BAKER BIO-ANALYZED solvents are specifically designed, manufactured, and tested to maximize coupling efficiencies and deliver the highest yields in synthesis applications. These solvents are purified and distilled to control amine, acid, base, and residue after evaporation levels, which can limit yields and coupling efficiencies. They are dried to produce the lowest water levels in the industry. Extensive testing for important contaminants, including peroxides, ensures optimum performance and consistency. Packaging is done in closed systems blanketed with inert gas to ensure the highest quality and lowest water content right to the point of use.

Solvents for Biotechnology Applications

Product	Product Number
Acetonitrile, Low Water	9018
Acetonitrile, Ultra Low Water	9019
Dimethylformamide	9344
Methanol	9098
Methylene Chloride	9348
NMP (1-Methyl-2-pyrrolidinone)	9261
Pyridine, Low Water	9393
Tetrahydrofuran, Low Water	9439
Triethylamine	9111

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Organic Synthesis or Other Moisture Sensitive Reactions

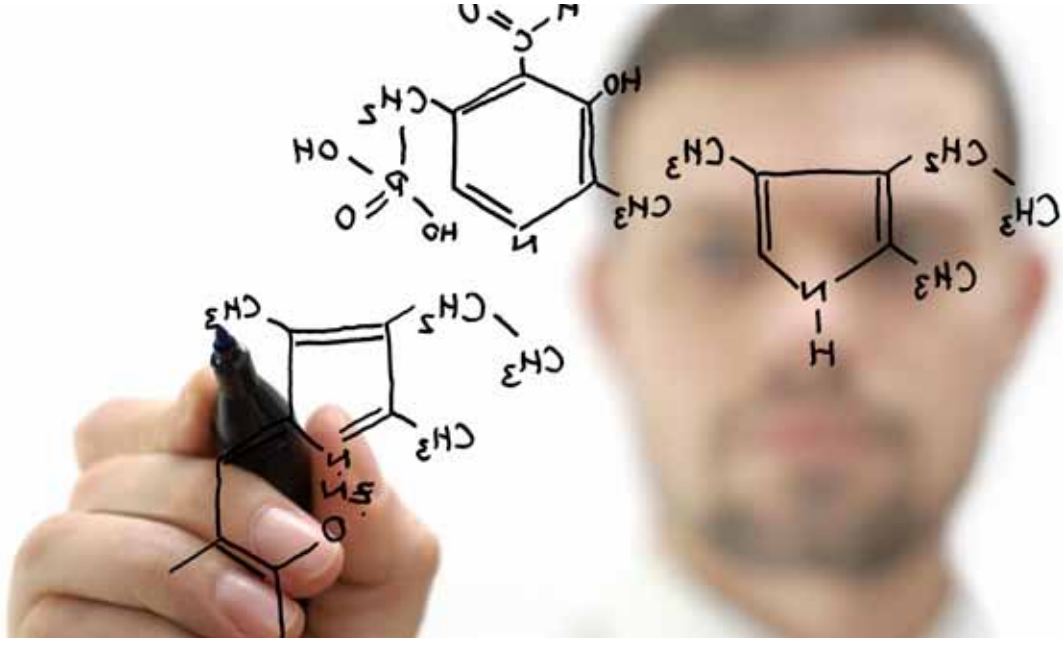
Many laboratories would like to eliminate the potentially hazardous, costly, and time-consuming purification operations needed to prepare solvents for moisture-sensitive applications such as organic synthesis. J.T.Baker BakerDRY low-water solvents are manufactured to deliver low-levels of water, dissolved oxygen, and maintain less than 10 ppm peroxides, while meeting ACS specifications for reagent chemicals. Solvents arrive ready-to-use in your application without further purification.

Most BakerDRY solvents contain no preservatives, which could interfere with synthesis reactions. Products are packaged in 100 mL or 1 L septum-seal bottles or our CYCLE-TAINER solvent delivery system for repeated use, while minimizing the introduction of contaminants.

BakerDRY Anhydrous Solvents

Product	Product Number
Acetonitrile, Ultra Low Water	9035
Bis(2-methoxyethyl) Ether	9296
Dimethylformamide	9213
Ether, Ultra Low Water	9250
Heptane, Low Water	9365
Hexanes, Low Water	9277
Methanol, Low Water	9097
Methylene Chloride, Low Water	9295
Tetrahydrofuran, Ultra Low Water	9446
Tetrahydrofuran, Ultra Low Water	9447
Toluene, Low Water	9364

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com



Biological Stains and Dyes

J.T.Baker and Macron Fine Chemicals stains and dyes include stains for molecular biology and microbiology applications.

Macron Fine Chemicals Certified OR stains are certified by the Biological Stain Commission.

J.T.Baker Stains and Dyes

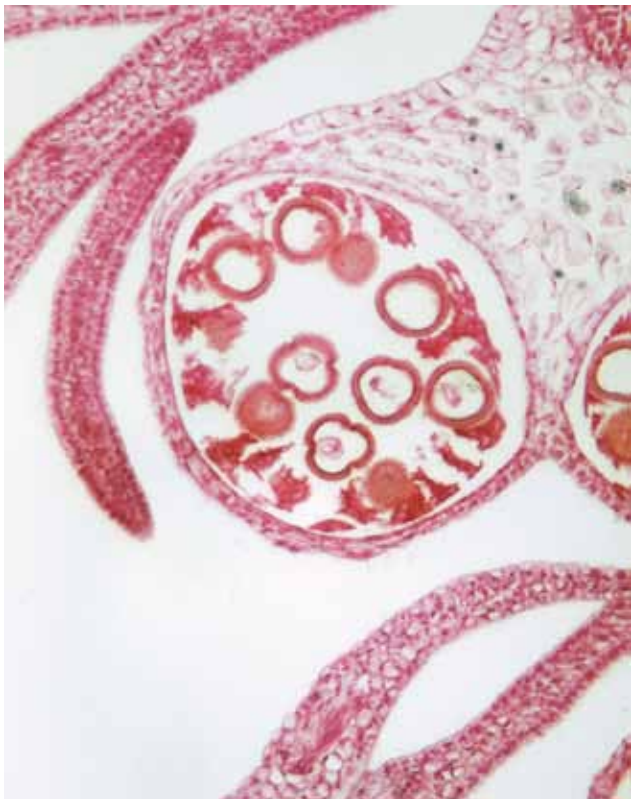
Description	Use	Product Number
Acid Fuchsin	Histology stain	A355
Alizarin Red S	Histology stain	A475
Amido Black 10 B	Protein stain	A586
Aniline Blue WS	Histology stain	B362
Auramine O	Fluorescence microscopy stain	B604
Basic Fuchsin Hydrochloride	Histology and bacteriology stain	B660
Biebrich Scarlet, Water Soluble	Histology stain	C242
Bismarck Brown Y	Histology and bacteriology stain	C548
Coomassie Blue G-250	Protein staining after electrophoretic separation	F789
Coomassie Blue R-250	Protein staining after electrophoretic separation	F792
Crystal Violet	Gram staining	F906
Erythrosin B	Histology stain	L146
Eosin B	Histology stain	L083
Eosin Y	Histology and blood stain	L088
Ethidium Bromide	Nucleic acids	4007
Fast Green FCF	Protein stain	M377
Giesma Stain	Blood stain	M702
Hematoxylin	Histology and cytology stain	M906
Light Green SF Yellowish	Histology and cytology stain	P399
Malachite Green Oxalate	Histology and bacteriology stain	P450
Methylene Blue	Histology, bacteriology, and blood stain. DNA Staining after electrophoretic separation	Q473
Neutral Red	Supravital staining	R746
New Methylene Blue N, Brecher Formula	Reticulocyte staining	R769
Orange G	Histology stain	S752
Phloxine B	Histology stain	U029
Rhodamine B	Fluorescence microscopy, Conjugation to antibodies	U872
Safranine O	Histology, cytology, and bacteriology staining	U926
Wright's Stain	Blood stain	X492

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals Stains and Dyes

Description	Use	Product Number
Aniline Blue WS	Collogen staining	H179
Basic Fuchsin Hydrochloride	Microbial staining	H181
Eosin Y (Yellowish)	Histological stain	0460
Gentian Violet (Crystal Violet)	Gram staining	E518
Hematoxylin	Histological stain	E106
Methylene Blue Indicator	DNA Staining after electophoretic separation	5891
Orange G	Histological stain	2619
Reactive Blue #4 (Procion Brilliant Blue MR)	Fiber staining	8132
Safranin O	Gram staining	E008
Wright's Stain	Blood staining	E209

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.



Products By Application

Electrophoresis Gel Products and Chemicals

ExplorER, Agarose, and Acrylamide Gels

J.T.Baker ULTRAPURE BIOREAGENT and Macron Fine Chemicals GenAR grades are recommended for use in Electrophoresis applications.

Avantor offers a high performance family of J.T.Baker products for fast, high resolution separations of nucleic acids and proteins. ExplorER gel solution is a special matrix designed for superior separation of DNA sequencing products, low molecular weight DNA, and proteins. ExplorER gels consist of a blend of modified acrylamides and a novel crosslinker that provides extended reads for DNA sequencing applications of up to 40%. These gels resist tearing, and when used with Silver Stain, provide virtually no background.

ExplorER gel solution is available as a 40% concentrate or in convenient 6% and 8% PreMix solutions containing 7M urea and 1X TBE. With the PreMix form, you simply add ammonium persulfate and TEMED to the bottle, mix and pour the gel—the ultimate in convenience for busy sequencing labs.

We also offer five types of Agarose designed for various electrophoresis applications. See the below chart for information on the use and characteristics of these products.

Our prepared acrylamide solutions can eliminate the hazards associated with the neurotoxic dust of acrylamide powder. These solutions are available as 40% mixtures of acrylamide/bis in ratios of 37.5 to 1, 29 to 1, and 19 to 1.

See the above chart for typical applications and information about our products for Electrophoresis.

Electrophoresis Products—Typical Applications

	Gels	Chemicals	Stains
DNA Sequencing	PreMix Acrylamide/Bis, 6%, 8%; 40% Acrylamide/Bis Solution 19:1; ExplorER Gel Solution	APS; TEMED; Urea; Formamide; SafetyCoat	—
Nucleic Acid Analysis	40% Acrylamide/Bis Solution 19:1	APS; TEMED; Urea; SafetyCoat	Ethidium Bromide
PCR Fragment Analysis	Agarose	—	Ethidium Bromide
DNA Fragment Analysis	40% Acrylamide/Bis Solution 29:1	APS; TEMED	Ethidium Bromide
Restriction Fragment Analysis	Agarose; Agarose Low Melting; Agarose for Northern and Southern Blotting	—	Ethidium Bromide
Blotting	Agarose for Northern and Southern Blotting	—	—
Pulsed Field Gel Electrophoresis	Agarose for PFGE Analysis	—	—
Protein Separations	40% Acrylamide/Bis Solution 37.5:1	APS; TEMED	Coomassie Brilliant Blue, G-250

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Agarose Product Information

	J.T.Baker brand			Macron Fine Chemicals brand	
	A426	4090	4063	7720	7735
Use	Routine Nucleic Acid & Protein Electrophoresis, Blotting	Low Melting for DNA & RNA Recovery	Pulsed Field Gel Electrophoresis, Rapid Runs	Low Melting for DNA & RNA Recovery	Routine Nucleic Acid and Protein Electrophoresis
Application	Analytical	Preparative	Analytical	Preparative	Analytical
Separation Range	>1 kb	>1 kb	1 kb–2 mb	>1 kb	> 1kb
Grade	Biochemical Reagent	ULTRAPURE BIOREAGENT	ULTRAPURE BIOREAGENT	GenAR	GenAR
Melting Temp.	N/A	<65 °C @ 1.5%	N/A	N/A	85.5–88.5 °C @ 1.5%
Gelling Temp.	35.5–36.5 °C	26–30 °C @ 1.5%	41–43 °C	24–28 °C	40.5–43.5 °C
Moisture	<10%	<10%	<7.0%	< 10%	< 10%
Sulfate	<0.35%	<0.10%	<0.20%	< 0.15%	< 0.2%
EEO (–mr)	0.10–0.15	<0.10	0.04–0.08	< 0.15	< 0.1
Gel Strength @ 1% (g/cm^2)	>800	>200	>2,000	N/A	> 900
DNase and RNase Activity	N/A	None Detected	None Detected	N/A	N/A

For product specifications, packaging, and prices, please see the A to Z section (pages 107-568) of this catalog or visit our web site at www.avantormaterials.com

J.T.Baker Acrylamide, Agarose, and ExplorER Gels

Description	Product Number
Acrylamide Powder and Solutions	
Acrylamide	4081
Acrylamide Solution, 6% Premix	4169
Acrylamide Solution, 8% Premix	4170
Acrylamide/Bis, 19:1, 40% Solution	4968
Acrylamide/Bis, 29:1, 40% Solution	4969
Acrylamide/Bis, 37.5:1, 40% Solution	4970
Agarose	
Agarose, Low Melting	4090
Agarose, PFGE	4063
Agarose, Standard, Low Electroendosmosis (EEO)	A426
ExplorER Gel Products	
ExplorER Gel Solution 40% Concentrate	4015
6% PreMix ExplorER Gel Solution	4019
8% PreMix ExplorER Gel Solution	4020

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Stains, Tracking Dyes, and SafetyCoat

In addition to gel products, we offer a variety of stains and tracking dyes for use with electrophoresis gels.

SafetyCoat non-toxic glass plate coating is an alternative to typical silanizing reagents, which are toxic, highly flammable, and require handling in a fume hood. SafetyCoat prevents gels from sticking to the treated surface when the plates are separated. The product may be applied safely at the bench and a single application lasts for several electrophoresis runs. SafetyCoat may also be used for coating microfuge tubes and other surfaces.

Stains, Tracking Dyes, and SafetyCoat

Description	Grade	Product Number
Stains		
Coomassie Blue G-250	Baker	F789
Coomassie Blue R-250	Baker	F792
Ethidium Bromide	ULTAPURE BIOREAGENT	4007
Methylene Blue	BAKER ANALYZED Reagent	Q473
Electrophoresis Tracking Dyes		
Bromocresol Green	BAKER ANALYZED ACS Reagent	C948
Bromophenol Blue	BAKER ANALYZED ACS Reagent	D293
Bromophenol Blue, Sodium Salt	BAKER ANALYZED ACS Reagent	D294
Bromophenol Blue, Sodium Salt	GenAR	7754
Methyl Red Hydrochloride	BAKER ANALYZED ACS Reagent	2696
Methyl Red Sodium Salt	BAKER ANALYZED ACS Reagent	R086
Methyl Red, Water Soluble	AR (ACS)	2578
SafetyCoat		
SafetyCoat Non-toxic Glass Plate Coating	ULTRAPURE BIOREAGENT	4017

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Products for Fermentation and Cell Culture

Avantor offers a large number of products suitable for use in fermentation and cell culture. These products represent multiple grades, most of which are cGMP manufactured. The products fall into three major categories—amino acids, vitamins and minerals, and sugars. For complete information on these products, please see the Drug Development and Manufacturing section of this catalog starting on page 64.

Products for Sample Analysis and Other Products for Drug Discovery

In addition to the products shown above, Avantor offers a wide range of products that are suitable for and used in the area of Drug Discovery. These products include a wide array of high purity solvents that are optimized for use on cutting edge instrumentation and are detailed in other sections of this catalog. The table below identifies these products and the location where full details of the product line can be found in this catalog.

Products for Drug Discovery Sample Analysis

Product Line	Full Description Location
HPLC Solvents	Analytical Chromatography section starting on page 22
LC/MS Solvents	Analytical Chromatography section starting on page 22
UHPLC Solvents	Analytical Chromatography section starting on page 22
HPLC Columns	Analytical Chromatography section starting on page 22
Standards	Instrument Calibration and Standards section starting on page 94
GC Solvents	Analytical Chromatography section starting on page 22
Solid Phase Extraction	Analytical Chromatography section starting on page 22

Drug Development and Manufacturing

Avantor is an established global supplier of production chemicals, bulk pharmaceutical excipients, and purification products to pharmaceutical and biopharmaceutical companies. As a partner who understands our customers' needs for reliable quality, product consistency, and increasing regulatory support, we offer a broad range of performance enabling products that are suitable for use from pre-clinical to commercialization.

With our FDA-registered* manufacturing facilities, cGMP compliant quality systems, and experienced team of experts, Avantor is committed to being a valued global supplier of high purity products for drug development and manufacturing. Our Beaker to Bulk packaging flexibility offers ease and speed of scale-up by providing identical product in sizes appropriate for the laboratory, pilot plant, or full scale manufacturing. As our product lines continue to expand, we are here to enable our customers with product development speed, risk mitigation, and the assurance of regulatory compliance.

*Registration does not denote FDA approval of a firm or its products.

Pharmaceutical Applications

Avantor is an established global supplier of critical performance chemicals with over 150 years of expertise in bulk pharmaceutical development and manufacturing. We manufacture and supply acids, solvents, salts, and solutions for various pharmaceutical applications. Our expertise in surface chemistry and crystal morphology helps our pharmaceutical customers optimize chemicals for demanding performance applications to improve manufacturing efficiency and speed to market. From operational excellence tools like Six Sigma and Lean Manufacturing to risk mitigation strategies such as our Management of Change program, Avantor is uniquely positioned to provide pharmaceutical customers with the systems, products, and tools they need to stay ahead of the competition.

Formulation

Formulation is the process in which excipients and other chemical substances are combined to produce a final medicinal product or drug. Excipients facilitate formulation design and perform a wide variety of functions to achieve the desired properties for the finished drug product. The choice of the right excipients is critical to the final product's effectiveness, as well as its cost and time to market. Avantor offers products that can help in this stage of the manufacturing process.

Excipients

Avantor excipients are used during the formulation process in a wide range of applications. Avantor provides high purity and performance excipients that serve as fillers, binders, disintegrants, lubricants, flavors, emulsifiers, and preservatives. All the products are cGMP-produced and meet USP grade standards.

Production

The selection of products for the initial production of a pharmaceutical therapeutic is critical to the success of the operation. For synthesis, our products with low water and minimal impurities are designed and manufactured to maximize yields. For the new challenges of advanced drug delivery nanotechnology manufacturing, our particle characterization capabilities at nanoscale levels have prepared us to conquer them. Purity and consistency are always critical attributes, and Avantor has a proven record in these areas.

USP/NF Products

Both Macron Fine Chemicals and J.T.Baker USP/NF products have been used in pharmaceutical applications for many years. Both brands offer the consistency, high purity, and regulatory compliance that these applications demand.

Global Pharma and USP/GenAR Multicompendial-tested Products

The J.T.Baker USP/NF product line has evolved into the Global Pharma multi-compendial line of chemicals that can help customers meet their regulatory requirements as they prepare for production or clinical trials in Europe or Asia.

Macron Fine Chemicals USP/GenAR products are also multi-compendial. Both lines are produced in cGMP facilities and are endotoxin-tested, where appropriate.

Salts Flow Freely in the Flowmor Packaging System

Hygroscopic salts naturally cake and turn rock-hard over time. The patented Flowmor packaging system combined with our GMP production and packaging processes, results in virtually free-flowing hygroscopic salts. The Flowmor packaging system prevents outside moisture from entering the container, while desiccant bags in the interior of the container absorb moisture from the product through the permeable liner. Available for products in sizes 12 kg and greater, this innovative packaging will eliminate the need for tedious and sometimes hazardous manual techniques required to break up caked product.

External Barrier—HDPE drum with gasket-sealed lid prevents moisture from entering.

Interior Liner—Permeable liner allows moisture to migrate out of the salt.

Desiccant Bags—Absorb moisture migrating out of the salt without coming in contact with the product.

Labeling—indicates clearly that desiccant bags are included inside the drum.

J.T.Baker Partial List of Excipients

ANTI-OXIDANTS

Description	Compendial Testing	Source Material Origin	cGMP	Product Number
Ascorbic Acid, Crystalline Powder (20–200 mesh)	USP, FCC	Synthetic	•	0936
Ascorbic Acid, Fine Granular (20–80 mesh)	USP, FCC	Synthetic	•	0938
Ascorbic Acid, Fine Powder (200–325 mesh)	USP, FCC	Synthetic	•	0937
Citric Acid, Anhydrous, Powder	USP	Vegetable derived	•	0122
Citric Acid, Monohydrate, Granular*	USP, EP, BP, JP	Vegetable derived	•	0115
Citric Acid, Monohydrate	USP, FCC	Vegetable derived	•	0119

BULKING AGENTS

Description	Compendial Testing	Source Material Origin	cGMP	Product Number
Glycine**	USP, EP, BP, JP	Synthetic	•	0582
Glycine	USP, FCC	Synthetic	•	0581
Mannitol**	USP, EP, BP, JP	Mannose	•	2553
Mannitol	USP	Mannose	•	2555

*Endotoxin Testing: Max. 0.5 IU/mg
**Endotoxin Testing: Max. 2.5 EU/g

For additional excipients, product specifications, packaging and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals Partial List of Excipients

ANTI-OXIDANTS

Description	Compendial Testing	Source Material Origin	cGMP	Product Number
Ascorbic Acid USP	USP	Synthetic	•	1852
Ascorbic Acid, Very Fine Powder	USP	Synthetic	•	8829
Citric Acid, Monohydrate, Granular	USP	Vegetable derived	•	0616
Citric Acid, Monohydrate, Granular	USP, BP, EP	Vegetable derived	•	7788

BULKING AGENTS

Description	Compendial Testing	Source Material Origin	cGMP	Product Number
Glycine	USP	Synthetic	•	5104
Mannitol, Powder	USP	Vegetable derived	•	6208
Mannitol, Powder*	USP, BP, EP	Vegetable derived	•	7781

*Endotoxin Testing: Max. 10 IU/mg

For additional excipients, product specifications, packaging and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Products By Application

J.T.Baker USP, NF, and FCC Products

Description	Compendial Testing	Endotoxin Testing	Product Number
Acacia	NF, FCC		0430
L-Alanine	USP, FCC, EP, BP	•	2065
Aluminum Sulfate, n-Hydrate, Granular	USP		0566
Ammonium Carbonate, Powder	NF, FCC		0650
Ammonium Sulfate, Granular	FCC, ACS	•	0793
Ammonium Sulfate, Granular	FCC, ACS		0795
Ammonium Sulfate, Granular	FCC		0800
Ammonium Sulfate	NF	•	0798
Antimony Potassium Tartrate, Trihydrate, Powder	USP		0864
L-Arginine, USP, Multi-Compendial	EP, BP	•	2066
L-Arginine Hydrochloride	USP, EP, BP, JP		2067
Ascorbic Acid, Crystalline Powder	USP, FCC		0936
Ascorbic Acid, Fine Powder	USP, EP, BP, JP		0939
Ascorbic Acid, Fine Granular	USP, FCC		0938
Ascorbic Acid, Fine Powder	USP, FCC		0937
L-Asparagine, Monohydrate	FCC	•	2068
Barium Sulfate	USP, EP, BP		1041
Barium Sulfate	USP		1040
Benzocaine, Fine Powder	USP		1080
Benzoic Acid, Crystal	USP, FCC		0080
Boric Acid, Granular	NF, EP, BP, JP	•	0092
Boric Acid, Granular	NF		0091
Calcium Carbonate, Light Powder	USP, FCC		1301
Calcium Carbonate Powder	USP, FCC		1300
Calcium Chloride, Dihydrate, Granular	USP,EP, BP, JP	•	1335
Calcium Chloride, Dihydrate, Granular	USP, FCC		1336
Calcium Gluconate, Anhydrous, Powder	USP, FCC		1272
Calcium Hydroxide, Powder	USP, EP,BP, JP		1375
Calcium Hydroxide, Powder	USP		1374
Calcium Lactate, 5-Hydrate	USP, EP, BP, JP		1391
Calcium Lactate, 5-Hydrate	USP, FCC		1390
Calcium Pantothenate	USP		1443
Charcoal, Activated, Powder	USP		1560
Citric Acid, Anhydrous, Powder	USP, EP, BP, JP	•	0127
Citric Acid, Anhydrous, Powder	USP, ACS		0122
Citric Acid, Monohydrate, Granular	USP, EP, BP, JP	•	0115
Citric Acid, Monohydrate, Crystalline Powder	USP, FCC		0120
Citric Acid, Monohydrate, Granular	USP, FCC		0119
Collodion	USP		9202
Collodion, Flexible	USP		9204
Cupric Sulfate, 5-Hydrate	USP, EP, BP	•	1846
Cupric Sulfate, 5-Hydrate	USP		1844
L-Cysteine Hydrochloride, Monohydrate	USP, EP, BP	•	2071
L-Cystine	FCC, EP, BP	•	2073
Dextrose, Anhydrous	USP, EP, BP, JP	•	1920
Dextrose, Anhydrous	USP		1919
Dextrose, Monohydrate	USP, EP, BP	•	1913
Dextrose, Monohydrate, Powder	USP		1912
Edetate Disodium	USP, EP, BP, JP	•	8995
Edetate Disodium	USP		8994
Ethylene Dichloride	FCC		9301
Ferric Ammonium Citrate, Brown, Powder	FCC		1980
Ferric Ammonium Citrate, Green, Powder	FCC		1977
Ferrous Sulfate, 7-Hydrate, Crystal	USP, EP,BP, JP		2063
Ferrous Sulfate, 7-Hydrate, Crystal	USP, FCC		2074
Gelatin, Powder	NF		2124
L-Glutamic Acid	FCC, EP, BP	•	2077
L-Glutamine	USP, FCC	•	2078
Glycine	USP, EP, BP, JP	•	0582
Glycine	USP, FCC		0581
L-Histidine	USP, EP, BP		2080
L-Histidine Monohydrochloride	FCC, EP, BP		2081
Iodine	USP		2211
Iron, Reduced, Powder	FCC		2228
L-Isoleucine	USP, EP, BP, JP	•	2082
Kaolin, Powder	USP, FCC		2242
DL-Lactic Acid	USP, FCC		0196
Lactose, Monohydrate, Powder	NF, EP, BP, JP	•	2250
Lactose, Monohydrate, Powder	NF		2249
Lanolin	USP		2252
L-Leucine	USP, EP, BP, JP	•	2083
L-Lysine Hydrochloride	USP, EP, BP, JP	•	2084
Magnesium Carbonate, Powder	USP, EP,BP, JP		2437
Magnesium Carbonate, Powder	USP		2436
Magnesium Chloride, 6-Hydrate, Crystal	USP, EP, BP	•	2449
Magnesium Chloride, 6-Hydrate, Crystal	USP, FCC		2448
Magnesium Oxide, Light Powder	USP, FCC		2480
Magnesium Oxide, Heavy Powder	USP, FCC		2484
Magnesium Sulfate, Anhydrous	USP		2507
Magnesium Sulfate, 7-Hydrate, Crystal	USP, EP, BP	•	2504
Magnesium Sulfate, 7-Hydrate, Crystal	USP	•	2505
Mannitol, Powder	USP, EP, BP, JP	•	2553
Mannitol, Powder	USP		2555
L-Methionine	USP, EP, BP, JP	•	2085
Methyl Salicylate, Synthetic	NF, FCC		2700
Niacin	USP, FCC		2745
Oleic Acid	NF, FCC		0224
Pancreatin	USP		2840
Phenol, Fused	USP		2862
Phenol, Liquefied	USP		2864
L-Phenylalanine	USP, EP, BP, JP	•	2086
Polysorbate 20	NF, EP, BP	•	4116
Polysorbate 20	NF		4034
Polysorbate 80	NF, EP, BP, JP	•	4117

J.T.Baker USP, NF, and FCC Products

Description	Compendial Testing	Endotoxin Testing	Product Number
Polysorbate 80	NF		2903
Potassium Acetate, Granular	USP, EP, BP	•	2917
Potassium Acetate, Granular	USP, ACS		2914
Potassium Carbonate, Anhydrous, Granular	FCC		3014
Potassium Chloride, Crystal	USP, EP, BP, JP	•	3045
Potassium Chloride, Crystal	USP, FCC		3046
Potassium Chloride, Powder	USP, FCC		3052
Potassium Citrate, Monohydrate, Granular	USP, FCC		3068
Potassium Hydroxide, Pellets	NF, EP,BP, JP		3152
Potassium Hydroxide, Pellets	NF, FCC		3146
Potassium Iodide, Granular	USP,EP, BP		3167
Potassium Iodide, Granular	USP, FCC		3168
Potassium Nitrate, Granular	USP, FCC, EP, BP, JP		3193
Potassium Nitrate, Granular	USP, FCC		3192
Potassium Permanganate, Crystal	USP		3232
Potassium Phosphate, Monobasic, Crystal	NF, EP, BP	•	3248
Potassium Phosphate, Monobasic, Crystal	NF, FCC		3247
Potassium Phosphate, Dibasic	USP, EP, BP	•	3250
Potassium Phosphate, Dibasic	USP		3251
Potassium Phosphate, Dibasic	FCC		3254
Potassium Sorbate	NF, FCC		3273
L-Proline	USP, EP, BP	•	2087
Pyridoxine Hydrochloride	USP, FCC		3343
Resorcinol, Powder	USP		3366
Saccharin Sodium	USP, FCC		3875
Salicylic Acid, Powder	USP		0303
L-Serine	USP, EP, BP	•	2088
Silver Nitrate, Crystal	USP		3429
Sodium Acetate, Anhydrous	USP, FCC	•	3474
Sodium Acetate, Anhydrous	USP, FCC		3473
Sodium Acetate, Trihydrate, Crystal	USP, EP, BP, JP	•	3461
Sodium Acetate, Trihydrate, Crystal	USP, FCC		3462
Sodium Benzoate	NF, EP, BP		3501
Sodium Benzoate	NF, FCC		3500
Sodium Bicarbonate, Powder	USP, EP, BP, JP	•	3510
Sodium Bicarbonate, Powder	USP, FCC		3509
Sodium meta-Bisulfite	NF, EP,BP, JP		3551
Sodium Borate, 10-Hydrate	NF, EP, BP, JP	•	3575
Sodium Borate, 10-Hydrate	NF		3574
Sodium Carbonate, Anhydrous	NF, EP, BP, JP		3606
Sodium Carbonate, Anhydrous, Granular	NF, FCC		3605
Sodium Carbonate, Monohydrate, Crystal	NF, EP, BP	•	3603
Sodium Carbonate, Monohydrate, Crystal	NF, FCC		3600
Sodium Chloride, Granular	USP, EP, BP, JP	•	3627
Sodium Chloride, Granular	USP, FCC	•	3629
Sodium Chloride, Granular	USP, FCC		3628
Sodium Citrate, Dihydrate, Granular	USP, EP, BP, JP	•	3647
Sodium Citrate, Dihydrate, Powder	USP, FCC		3650
Sodium Citrate, Dihydrate, Granular	USP, FCC		3649
Sodium Fluoride, Powder	USP		3689
Sodium Hydroxide, Pellets	NF, EP, BP, JP		3718
Sodium Hydroxide, Pellets	NF, FCC		3728
Sodium Nitrite	USP		3782
Sodium Nitrite, Granular	FCC		3771
Sodium Phosphate, Monobasic, Monohydrate	USP, EP, BP	•	3802
Sodium Phosphate, Monobasic, Monohydrate, Crystal	USP, FCC	•	3821
Sodium Phosphate, Monobasic, Monohydrate, Crystal	USP, FCC		3820
Sodium Phosphate, Dibasic, Anhydrous	USP, EP, JP	•	3804
Sodium Phosphate, Dibasic, Anhydrous	USP, FCC, ACS	•	3826
Sodium Phosphate, Dibasic, Anhydrous	USP, FCC		3827
Sodium Phosphate, Dibasic, 7-Hydrate	USP, EP	•	3803
Sodium Phosphate, Dibasic, 7-Hydrate, Crystal	USP	•	3816
Sodium Phosphate, Dibasic, 7-Hydrate, Crystal	USP		3817
Sodium Salicylate	USP		3872
Sodium Thiosulfate, 5-Hydrate, Crystal	USP, EP, BP, JP		3945
Stearic Acid, Powder (Triple Pressed)	NF		0340
Sucrose, Crystal	NF, EP, BP, JP	•	4074
Sulfur, Precipitated, Powder	USP		4084
Sulfur, Sublimed, Powder	USP		4088
Talc, Powder	FCC		4115
Talc, Powder	USP		4100
Tannic Acid, Powder	FCC		0380
Tartaric Acid, Granular	NF, EP, BP, JP	•	4105
Tartaric Acid, Granular	NF, FCC		4104
Thiamine Hydrochloride	USP, FCC		4110
L-Threonine	USP, EP, BP, JP	•	2089
Thymol, Crystal	NF		4128
Tromethamine	USP, EP, BP	•	4102
L-Tryptophan	USP, EP, JP	•	2092
L-Tyrosine	USP, EP, BP	•	2093
Urea	USP, EP, BP, JP	•	4203
Urea	USP	•	4208
Urea	USP		4206
L-Valine	USP, EP, BP, JP	•	2095
Zinc Chloride, Granular	USP, EP, BP, JP	•	4326
Zinc Oxide, Powder	USP		4360
Zinc Stearate	USP		4375
Zinc Sulfate, 7-Hydrate Granular	USP, EP, BP		4383
Zinc Sulfate, 7-Hydrate, Granular	USP, FCC		4384

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Products By Application

Macron Fine Chemicals USP, NF, and FCC Products

Description	Compendial Testing	Endotoxin Testing	Product Number
Acetic Acid, 36%	NF		2488
Acetic Acid, Glacial	USP, FCC, ACS		2504
Acetic Acid, Glacial	USP, FCC, ACS		3121
Acetone	NF		2432
Ammonia Solution, Strong	NF		3248
Ammonium Chloride, Granular	USP, FCC		3364
Ammonium Sulfate, Granular, Purified	FCC		3496
Antimony Potassium Tartrate, Trihydrate, Powder	USP		2388
Ascorbic Acid	USP		1852
Ascorbic Acid, Very Fine Powder	USP		8829
Barium Sulfate	USP		8821
Barium Sulfate, For Formulation	USP		4518
Benzoic Acid, Crystal	USP		0108
Benzyl Alcohol	NF		1403
Bismuth Subgallate, Powder	USP		0304
Bismuth Subsalicylate	USP		4240
Boric Acid, Granular	EP, BP, JP, NF	•	7779
Boric Acid, Granular	NF		1394
Butylparaben	EP, BP, JP, NF		7558
Calamine, Powder	USP		4032
Calamine, Special	USP		4069
Calcium Acetate Dried Powder	USP		1660
Calcium Acetate	BP, USP		1658
Calcium Acetate	BP, EP, USP		2003
Calcium Acetate, Agglomerate	FCC		3754
Calcium Carbonate, Precipitated Light Powder	USP, FCC		4052
Calcium Chloride, Dihydrate, Granular	EP, BP, JP, USP, FCC	•	7722
Calcium Chloride, Dihydrate, Granular	USP, FCC		4616
Calcium Hydroxide, Powder	FCC		4188
Calcium Oxide	FCC		4268
Calcium Phosphate, Dibasic, Anhydrous, Powder	USP, FCC		4264
Calcium Phosphate, Tribasic, Powder	NF, FCC		4280
CalPlus (Brand of Calcium Chloride Dihydrate)	EP, JP, USP		4842
CALTAC	FCC		4880
Charcoal, Activated, Powder	USP		4394
Citric Acid, Monohydrate, Granular	EP, BP, USP	•	7788
Citric Acid, Monohydrate, Granular	USP		0616
Collodion	USP		4560
Collodion, Flexible	USP		4580
Cupric Sulfate, 5-Hydrate	EP, BP, USP	•	7790
Cupric Sulfate, 5-Hydrate, Granular	USP		4752
Dextrose, Anhydrous, Granular	EP, BP, JP, USP	•	7730
Dextrose, Anhydrous, Granular	USP	•	4908

Description	Compendial Testing	Endotoxin Testing	Product Number
Edetate Disodium	EP, BP, USP, FCC, NF	•	7727
Edetate Disodium	USP		1395
Ether	USP		0812
Ether, For Anesthesia	USP		0804
Ethylparaben	EP, BP, JP, USP		6882
Ferrous Sulfate	FCC		5098
Ferrous Sulfate, 7-Hydrate, Granular	USP, FCC		5572
Ferrous Sulfate, Dried, Fine Powder	USP, FCC		5051
Ferrous Sulfate, Dried, Fine Powder	USP, FCC		5075
Glycine	USP		5104
Hydrochloric Acid (HCl 36.5%-38.0%)	NF, FCC, ACS		2612
Hydrochloric Acid	NF, FCC, ACS		2062
Hydrochloric Acid	BP,EP, JP, NF,		2515
Hydrochloric Acid	BP, EP, JP, NF		2626
Hydrochloric Acid, Diluted	NF		2608
Hydrocortisone, Micronized	USP		8830
Hydrogen Peroxide, Topical Solution	USP		5232
Hypophosphorous Acid, 30%	NF		2660
Iodine, Crystal	EP, USP		0975
Iodine, Crystals	USP		0984
Iron Reduced, Extra Fine Powder	FCC		4348
Isopropyl Alcohol	USP		3031
Kaolin, Colloidal, Powder	USP		5645
Lactic Acid, 88%	USP, FCC		2672
Lactose, Monohydrate, Powder	NF		6270
Magnesium Carbonate, Heavy Powder	USP		5946
Magnesium Carbonate, Powder	USP, FCC		5942
Magnesium Chloride, 6-Hydrate	USP		5956
Magnesium Chloride, Flakes	FCC		5954
Magnesium Hydroxide, Powder	USP, FCC		5984
Magnesium Oxide, Heavy Powder	USP		6010
Magnesium Oxide, Powder	USP		6018
Magnesium Stearate, Hyqual, Vegetable Source	EP, BP, JP, NF		5712
Magnesium Stearate, Hyqual, Vegetable Source	BP, EP, JP, NF		2257
Magnesium Sulfate, 7-Hydrate	USP, FCC		6046
Magnesium Sulfate, 7-Hydrate	USP	•	7778
Magnesium Sulfate, 7-Hydrate	USP, FCC		4200
Magnesium Sulfate, 7-Hydrate, (For Parenteral Use)	EP, BP, USP		5691
Magnesium Sulfate, Anhydrous, Powder	USP		5053
Magnesium Sulfate, Dried Powder	USP, FCC		6050
Mannitol, Powder	USP		6208
Mannitol, Powder	EP, BP, USP	•	7781
Menthol, Crystal	USP		6222

Macron Fine Chemicals USP, NF, and FCC Products

Description	Compendial Testing	Endotoxin Testing	Product Number
Methenamine, Granular	USP		5180
Methyl Alcohol	NF		8814
Methyl Salicylate	NF, FCC		2064
Methylparaben	EP, BP, JP, NF		6215
Mineral Oil, White, Heavy	USP		6357
Mineral Oil, White, Light	NF		6358
Phenol Liquefied	USP		0610
Phenol, Crystal	USP		0605
Phenol, Liquefied	USP		0221
Phosphoric Acid	NF, FCC		2788
Polysorbate 80	NF	•	7091
Potassium Acetate, Crystal	USP		6696
Potassium Acetate, Crystal	USP	•	7797
Potassium Bicarbonate, Granular	USP, FCC		6732
Potassium Bicarbonate, Powder	USP, FCC		6736
Potassium Chloride Dialysate	USP		6841
Potassium Chloride, Crystal	USP		6845
Potassium Chloride, Granular	USP, FCC		6838
Potassium Citrate, Monohydrate, Granular	USP, FCC		0714
Potassium Hydroxide, Pellets	NF, FCC		6976
Potassium Hydroxide, Pellets	EP, BP, NF, FCC	•	7815
Potassium Iodide, Powder	EP, BP, USP		1115
Potassium Metabisulfite, Granular	NF, FCC		7000
Potassium Phosphate, Dibasic, Anhydrous	EP, BP, USP	•	7787
Potassium Phosphate, Monobasic, Crystal	NF, FCC		7096
Potassium Phosphate, Monobasic, Crystal	NF	•	7746
Potassium Sodium Tartrate, 4-Hydrate, Powder	USP		2370
Potassium Sulfate	FCC		7132
Potassium Sulfate, Granular	FCC		7128
Propylene Glycol	USP, FCC		6263
Propylparaben	EP, BP, JP, FCC		7624
Resorcinol, Fine Powder	USP		7232
Saccharin Sodium, Soluble	USP, FCC		7260
Sodium Acetate, Trihydrate	EP, BP, JP, USP, FCC		7768
Sodium Acetate, Trihydrate, Granular	USP, FCC		7356
Sodium Benzoate	NF, FCC		0168
Sodium Benzoate, Dense	NF, FCC		1331
Sodium Benzoate, Dust Free	NF, FCC		1454
Sodium Bicarbonate, Powder	USP, FCC		7396
Sodium Bicarbonate, Powder	EP, BP, JP, USP, FCC	•	7749
Sodium Bisulfite	FCC		7444
Sodium Borate, 10-Hydrate	NF		7418
Sodium Borate, 10-Hydrate	EP, BP, JP, NF		7792
Sodium Chloride, Granular	USP, FCC		7532
Sodium Chloride, Granular	EP, BP, JP, USP, FCC	•	7713
Sodium Chloride, Granular	USP, FCC		4577
Sodium Chloride, Powder	EP, BP, JP, USP	•	7540
Sodium Citrate Dihydrate Crystalline	EP, JP, USP		0634
Sodium Citrate, Dihydrate, Crystal	EP, BP, USP	•	7773
Sodium Citrate, Dihydrate, Crystal	USP, FCC		0734
Sodium Fluoride, Powder	USP		5325
Sodium Hydroxide, Pellet	USP, FCC		7680
Sodium Hydroxide, Pellet	EP, BP, JP, NF, FCC	•	7772
Sodium Metabisulfite, Granular	NF, FCC		7776
Sodium Phosphate, Dibasic, 7-Hydrate, Granular	USP	•	7393
Sodium Phosphate, Dibasic, 7-Hydrate, Granular	USP		7896
Sodium Phosphate, Dibasic, Anhydrous	USP	•	7771
Sodium Phosphate, Monobasic, Monohydrate	EP, BP, USP, FCC	•	7774
Sodium Phosphate, Monobasic, Monohydrate, Granular	USP, FCC		7868
Sodium Salicylate, Powder	USP		2094
Sodium Sulfate, Anhydrous	USP		8028
Sodium Sulfate, Anhydrous, Powder	EP, BP, USP		7803
Sodium Thiosulfate, 5-Hydrate, Crystal	USP, FCC		7763
Stearic Acid 50, Powder	BP, EP, NF, FCC		2216
Stearic Acid, 92%	NF		2025
Stearic Acid, Powder	BP, EP, JP, NF		2236
Sucrose	EP, BP, NF	•	7723
Sulfuric Acid Babcock	FCC		3780
Talc	USP		8476
Tannic Acid	FCC		1674
Tartaric Acid, Fine Granular	NF, FCC		2307
Thiamine Hydrochloride	USP		2722
Thymol, Crystal	NF		8528
Tricalcium Phosphate, Micronized	FCC		3599
Urea	EP, BP, USP	•	7816
Urea	USP		8642
Zinc Chloride, Granular	USP		8772
Zinc Oxide, Powder	USP		8824
Zinc Sulfate, 7-Hydrate, Granular	USP, FCC		8872

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Products By Application

Quality Control

In pharmaceutical manufacturing, quality control plays an extremely important role in ensuring the drug produced meets required standards. For pharmaceutical quality control and analysis, Avantor offers a broad range of high quality products, including a full line of reagents and solutions specifically for compendial testing, salts, solvents, acids, chromatography products, and products for wet chemical and instrumental analysis. See the A to Z section of this catalog for the broad range of products offered.

PharmaTest Reagents and Solutions for Compendial Testing

The USP/NF Official Compendia of Standards contains a section titled, "Reagents, Indicators, and Solutions" that lists the quality requirements of chemicals to be used in compendial testing. PharmaTest reagents are tested according to these requirements, relieving you of the need to do additional testing on your reagents. Products may be reagent or other grade, but are labeled as "Meets reagent specifications for testing USP/NF monographs". Test solutions are labeled as PharmaTest.

PharmaTest Reagents and Solutions

Description	Product Number
Acetic Acid	9508
Acetic Anhydride	0018
Acetone	9006
Acetonitrile	9011
Acetylcholine Chloride	A261
Acrylic Acid	A397
Aluminum Ammonium Sulfate, 12-Hydrate	0484
Aluminum Potassium Sulfate, 12-Hydrate	0546
Ammonia, TS	5905
Ammonia-Ammonium Chloride Buffer, TS	5904
Ammonium Acetate	0596
Ammonium Bromide	0636
Ammonium Carbonate	0642
Ammonium Chloride, Granular	0660
Ammonium Citrate, Dibasic, Crystal	0682
Ammonium Fluoride, Crystal	0698
Ammonium Hydroxide	9721
Ammonium Molybdate, 4-Hydrate, Crystal	0716
Ammonium Nitrate	0729
Ammonium Oxalate, Monohydrate, Crystal	0746
Ammonium Oxalate, TS	5906
Ammonium Persulfate, Crystal	0762
Ammonium Phosphate, Dibasic, Crystal	0784
Ammonium Phosphate, Monobasic	0776
Ammonium Sulfate, Granular	0792
Ammonium Thiocyanate, Crystal	0818
Ammonium meta-Vanadate	0715
iso-Amyl Alcohol	9038
ANHYDRONE	0828
Aniline	9110
Aniline Blue WS (C.I. 42755)	B362
Anthrone	B529
Antimony Trichloride, Crystal	0878
Arsenic Trioxide	0061
Barium Chloride, Dihydrate, Crystal	0970
Barium Chloride, TS	5907
Barium Hydroxide, 8-Hydrate, Crystal	1006
Barium Nitrate, Crystal	1018
Benzoic Acid, Crystal	0076
Benzoyl Chloride	1066
Boric Acid, Granular	0084
Brilliant Green	C710
Bromine	9760
Bromocresol Green, TS	5908
Bromocresol Purple, TS	5909
Bromophenol Blue, TS	5910
Brucine Sulfate, 7-Hydrate	D545
1-Butanol	9054
Calcium Acetate, Monohydrate, Powder	1266
Calcium Carbonate, Powder	1288
Calcium Chloride, Anhydrous	1311
Calcium Chloride, Dihydrate, Granular	1332
Calcium Chloride, TS	5912
Calcium Hydroxide, Powder	1372
Calcium Nitrate, 4-Hydrate, Granular	1395
Calcium Pantothenate	1443
Calcium Sulfate, Dihydrate, Powder	1452
Carbon Disulfide	9172
Ceric Ammonium Nitrate, Crystal	1534
Chloroform	9180
Chloroplatinic Acid, 6-Hydrate, Crystal	2890
Chromium Trioxide, Crystal	1638
Citric Acid, Anhydrous	0122
Cobalt Chloride, 6-Hydrate, Crystal	1670
Cobalt Nitrate, 6-Hydrate	1680
Congo Red, TS	5914
Copper, Wire, (0.020")	1736
m-Cresol Purple, TS	5915
Cresol Red, TS	5916
Crystal Violet, TS	5917
Cupric Acetate, Monohydrate, Crystal	1766
Cupric Sulfate, 5-Hydrate, Fine Crystal	1843
Cyclohexane	9206
Cyclohexanol	9208
L-(-)-Cystine	G123
1-Decanol	G136
Devarda's Alloy, Granular	2680
Dextrose, Anhydrous, Powder	1916
Dibutylamine	G680
Dibutyl Phthalate	G811
o-Dichlorobenzene	9217
1,2-Dichloroethane	H076
2,6-Dichloroindophenol, NA Derivative	H116
Diethylenetriamine	H768
1,2-Dimethoxyethane	J331
p-(Dimethylamino)benzaldehyde	J418
Dimethylformamide	9221
Dimethyl Sulfoxide	9224
p-Dioxane	9231
Diphenylamine, Crystal	1944
1,5-Diphenylcarbohydrazide, Powder	K620
EDTA, Disodium Salt, Dihydrate, Crystal	8993
Eriochrome Black, TS	5920
Ether	9240
Ether, Anhydrous	9244
2-Ethoxyethanol	L210
Ethyl Acetate	9280
Fehling's Solution (A), TS	5918
Fehling's Solution (B), TS	5919
Ferric Ammonium Citrate, Brown, Powder	1980
Ferric Ammonium Sulfate, 12-Hydrate	1988
Ferric Ammonium Sulfate, TS	5930
Ferric Chloride, TS	5921
Ferric Nitrate, 9-Hydrate, Crystal	2018
Ferrous Ammonium Sulfate, 6-Hydrate, Fine Crystal	2054
Ferrous Sulfate, 7-Hydrate, Granular	2070
Formic Acid, 88%	0128
Glycerol, Anhydrous	2136
Gold Chloride, Trihydrate, Crystal	2146
Guaiacol	M840

PharmaTest Reagents and Solutions

Description	Product Number
Hematoxylin (C.I. 75290)	M906
1,1,1,3,3,3-Hexamethyldisilazane	N152
Hydrazine Dihydrochloride	N368
Hydrazine Sulfate, Crystal	2177
Hydriodic Acid	0152
Hydrochloric Acid	9535
Hydrofluoric Acid	9563
Hydrofluoric Acid	9560
Hydrogen Peroxide, 30%	2186
Hydroxylamine Hydrochloride, Crystal	2195
Imidazole	N811
Iodine, Sublimed	2208
Iodine Monochloride, TS	5922
Iodine and Potassium Iodide, TS	5923
Iodochloride, TS	5924
Isobutyl Alcohol	9044
Lead Acetate, Trihydrate, Granular	2271
Lead Nitrate, Crystal	2322
Lithium meta-Borate	2382
Lithium Hydroxide, Monohydrate	P406
Lithium Nitrate	2384
Lithium Perchlorate, Anhydrous	2385
Lithium Sulfate, Monohydrate, Granular	2388
Magnesium, Ribbon	2418
Magnesium Acetate, 4-Hydrate, Crystal	2424
Magnesium Chloride, 6-Hydrate, Crystal	2444
Magnesium Nitrate, 6-Hydrate, Crystal	2468
Magnesium Oxide, Powder	2476
Magnesium Sulfate, 7-Hydrate, Crystal	2500
Magnesium Sulfate, Anhydrous, Powder	2506
Manganous Sulfate, Monohydrate, Powder	2550
Mercuric Acetate, Powder	2584
Mercuric Chloride	2594
Mercuric Nitrate, Monohydrate	2614
Mercuric Oxide, Yellow, Powder	2630
Mercuric Sulfate	2640
Mercuric Thiocyanate	P651
Mercurous Nitrate, Dihydrate, Crystal	2660
Mercury, Triple Distilled	2564
Methanol	9070
Methanol, Absolute	9069
2-Methoxyethanol	P784
p-(Methylamino)phenol Sulfate	Q067
Methyl iso-Butyl Ketone	9322
Methylene Chloride	9324
Methyl Ethyl Ketone	9319
Methyl Orange, TS	5925
Methyl Red, TS	5926
Molybdic Acid, 85% Powder	0206

Description	Product Number
Monoethanolamine	9314
Morpholine	R357
2-Naphthol	2742
N-1-Naphthylethylenediamine 2HCl	R701
Niacin	2745
Nitric Acid, 69.0-70.0%	9601
Nitric Acid, Fuming, 90%	9624
Nitrobenzene	9325
1-Octanesulfonic Acid, Sodium Salt	2818
Oxalic Acid, Dihydrate, Crystal	0230
2,2'-Oxydiethanol	S856
n-Pentane	T007
Periodic Acid	T146
1,10-Phenanthroline, Monohydrate	T170
Phenol, Crystal	2858
Phenolphthalein, TS	5927
Phenol Red	T254
Phosphomolybdic Acid, x-Hydrate, Crystal	0247
Phosphoric Acid	0260
Phosphorus Pentoxide, Powder	9374
Phosphotungstic Acid, n-Hydrate, Crystal	2891
Phthalic Anhydride	0272
Potassium Acetate	2912
Potassium Bicarbonate, Granular	2940
Potassium Biphthalate, Crystal	2958
Potassium Bromate	2992
Potassium Bromide, Crystal	2998
Potassium Carbonate, Anhydrous, Granular	3012
Potassium Chlorate, Crystal	3024
Potassium Chloride, Crystal	3040
Potassium Chromate, Crystal	3058
Potassium Cyanide	3080
Potassium Dichromate, Crystal	3090
Potassium Ferricyanide, Crystal	3104
Potassium Ferrocyanide, Trihydrate, Crystal	3114
Potassium Hydroxide, Pellets	3140
Potassium Iodate	3156
Potassium Iodide, Granular	3162
Potassium Iodide, TS	5931
Potassium Nitrate, Crystal	3190
Potassium Nitrite, Crystal	3202
Potassium Perchlorate, Crystal	3220
Potassium meta-Periodate, Crystal	3224
Potassium Permanganate, Crystal	3228
Potassium Persulfate	3239
Potassium Phosphate, Dibasic, Powder	3252
Potassium Phosphate, Monobasic, Crystal	3246

Description	Product Number
Potassium Sodium Tartrate, 4-Hydrate, Crystal	3262
Potassium Sulfate, Fine Crystal	3278
Potassium Thiocyanate, Crystal	3326
2-Propanol	9083
2-Propanol	9084
Pyridine	3348
Pyrogallol	0288
8-Quinolinol	2198
Sand	3382
Silver Diethyldithiocarbamate	H739
Silver Nitrate, Crystal	3426
Sodium, Lump	9410
Sodium Acetate	3460
Sodium Bicarbonate, Powder	3506
Sodium meta-Bisulfite, Granular	3552
Sodium Borate, 10-Hydrate, Crystal	3568
Sodium Borohydride (98%)	V023
Sodium Carbonate, Anhydrous, Granular	3604
Sodium Carbonate, Anhydrous, Powder	3602
Sodium Chloride, Crystal	3624
Sodium Chromate	3640
Sodium Cobaltinitrite, Powder	3656
Sodium Cyanide, Granular	3662
Sodium Dichromate, Dihydrate, Crystal	3672
Sodium Diethyldithiocarbamate, Trihydrate	8624
Sodium Dithionite, Powder	3712
Sodium Fluoride, Powder	3688
Sodium Hydroxide, Pellets	3722
Sodium Molybdate, Dihydrate	3764
Sodium Nitrate, Crystal	3770
Sodium Nitrite	3780
Sodium Nitroferricyanide, Dihydrate, Crystal	3792
Sodium Oxalate, Powder	3800
Sodium meta-Periodate	3756
Sodium Phosphate, Monobasic, Monohydrate, Crystal	3818
Sodium Phosphate, Dibasic, 7-Hydrate, Crystal	3824
Sodium Phosphate, Dibasic, Anhydrous	3828
Sodium Phosphate, Tribasic, 12-Hydrate, Crystal	3836
Sodium Pyrophosphate, 10-Hydrate, Crystal	3850
Sodium Pyruvate	3354
Sodium Sulfide, 9-Hydrate, Crystal	3910
Sodium Sulfite, Anhydrous	3922
Sodium Tartrate, Dihydrate, Crystal	3930
Sodium Tetraphenylboron, Powder	V038

Products By Application

PharmaTest Reagents and Solutions

Description	Product Number
Sodium Thiosulfate, 5-Hydrate, Crystal	3946
Stannous Chloride, Dihydrate, Crystal	3980
Starch, Soluble Potato, Powder	4006
Sulfamic Acid	V145
Sulfosalicylic Acid, Dihydrate, Crystal	0364
Sulfur, Precipitated, Powder	4084
Sulfuric Acid	9681
Sulfurous Acid	0370
d-Tartaric Acid, Crystal	0386
Tetrabutylammonium Hydrogen Sulfate (98%)	V360
Tetrabutylammonium Phosphate	V375
Tetrahydrofuran	9450
Tetramethylammonium Chloride	V636
Tetramethylammonium Hydroxide (10% in H_2O)	V643
Tetramethylammonium Hydroxide (25% in H_2O)	V649
Tetramethylammonium Hydroxide (23% in Methanol)	V645
Tetramethylammonium Hydroxide, 5-Hydrate	V642
Thymol, Crystal	4128
Thymol Blue, TS	5929
Thymolphthalein, TS	5932
Tin, Shot	4144
Toluene	9460
Tributyl Phosphate	W432
Trichloroacetic Acid, Crystal	0414
Triethylene Glycol	W660
Trifluoroacetic Acid	W729
Trifluoroacetic Anhydride	W732
2,2,4-Trimethylpentane	9478
2,3,5-Triphenyl-2H-tetrazolium Chloride	X135
Tris (Base)	X171
Urea	4204
Vanadium Pentoxide	4207
Xylenes	9490
Zinc, Granular (10 Mesh)	4240
Zinc, Granular (20 Mesh)	4244
Zinc, Granular (30 Mesh)	4248
Zinc, Granular (40 Mesh)	4252
Zinc, Mossy	4260
Zinc, Shot	4270
Zinc, Sticks	4274

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Dissolution Testing

In oral medications, the rate of dissolution of the tablet or capsule is crucial to ensuring the effectiveness of the drug. Dissolution testing is a standardized method for measuring the rate of drug release from a tablet or capsule. Preparation of solutions for dissolution testing can be a time-intensive and sometimes frustrating process, so Avantor developed a line of concentrates to make the process easy and trouble-free.

J.T.Baker DILUT-IT Dissolution Media Concentrates

With J.T.Baker dissolution media, we've reduced average prep time for these solutions by more than 75%, freeing up chemists for more constructive activities. Just add purified water and you're ready to begin testing. Raw materials used are in accordance with USP guidelines and containers are filled to +/- 0.5% of target fill volumes using specially designed filling equipment to ensure consistent, reproducible results every time. DILUT IT dissolution media can also be used for disintegration media preparation.

These products are available in three convenient sizes to accommodate dissolution testing needs for the most frequently used batch sizes of 6 L, 25 L, and 50 L.

DILUT-IT Dissolution Media Volume

DILUT-IT Bottle Size	Final Dissolution Media Volume
250 mL	6 L
500 mL (Sodium Lauryl Sulfate 0.50% Only)	6 L
1 L	25 L
2 L	50 L

J.T.Baker DILUT-IT Dissolution Media Concentrates

Product	Product Number
Acetate Buffer pH 4.5 DILUT-IT Dissolution Media Concentrate	D017
Hydrochloric Acid 0.01N DILUT-IT Dissolution Media Concentrate	D010
Hydrochloric Acid 0.1N DILUT-IT Dissolution Media Concentrate	D011
Potassium Phosphate pH 5.8 DILUT-IT Dissolution Media Concentrate	D012
Potassium Phosphate pH 6.0 DILUT-IT Dissolution Media Concentrate	D013
Potassium Phosphate pH 6.8 DILUT-IT Dissolution Media Concentrate	D014
Potassium Phosphate pH 7.2 DILUT-IT Dissolution Media Concentrate	D015
Potassium Phosphate pH 7.4 DILUT-IT Dissolution Media Concentrate	D019
Potassium Phosphate pH 7.5 DILUT-IT Dissolution Media Concentrate	D016
Simulated Gastric Fluid (without enzyme)	D020
Sodium Lauryl Sulfate 0.50% DILUT-IT Dissolution Media Concentrate	D018
Sodium Phosphate pH 6.8 DILUT-IT Dissolution Media Concentrate	D021

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

pH Strips

J.T.Baker BAKER-pHIX pH Test Strips, BAKER-pHIX Indicator Sticks and DUAL-TINT pH Papers all provide fast, easy, accurate results with a broad selection of pH ranges. Each type of indicator has different performance features. For complete information on these products, please refer to the Wet Chemical Analysis section of this catalog, starting on page 49.

Additional Products for Quality Control

In addition to the above products, Avantor offers a wide range of products that are suitable for and used in the area of quality control. These products are detailed in other sections of this catalog. The below table lists the products and indicates the location where full details can be found in this catalog. Please refer to the A to Z section of this catalog for specific product listings, specifications, and pricing information, or visit our web site at www.avantormaterials.com.

Other Products for Pharmaceutical Quality Control

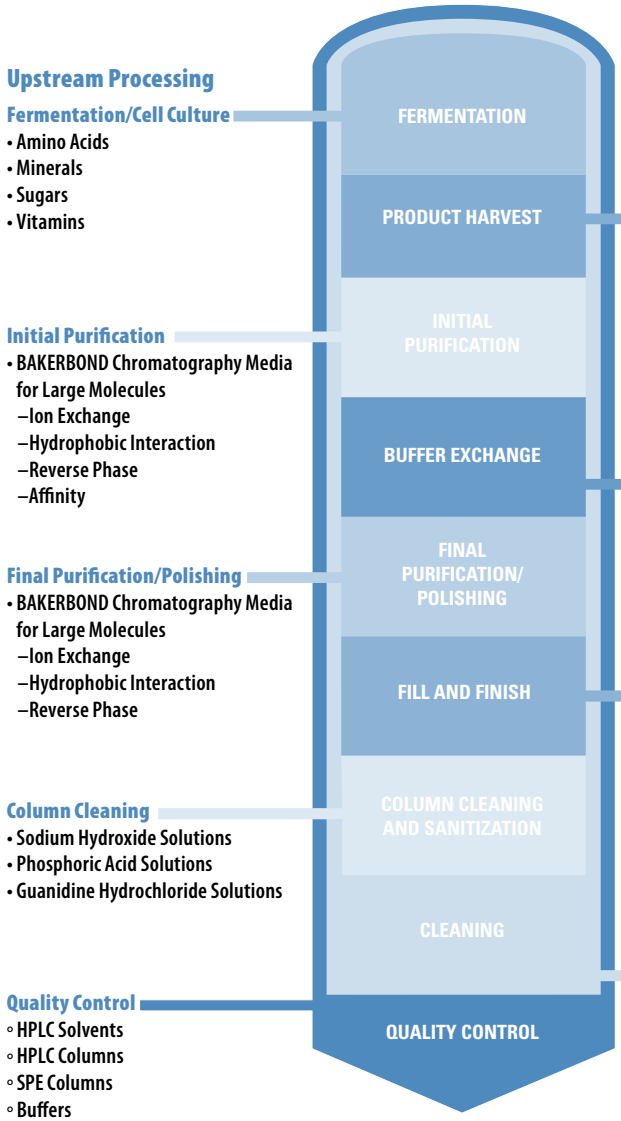
Product Line	Full Description Location
HPLC Solvents	Analytical Chromatography section starting on page 22
LC/MS Solvents	Analytical Chromatography section starting on page 22
UHPLC Solvents	Analytical Chromatography section starting on page 22
HPLC Columns	Analytical Chromatography section starting on page 22
Standards	Instrument Calibration and Standards section starting on page 94
Solid Phase Extraction	Analytical Chromatography section starting on page 22
Volumetric Solutions	Wet Chemical Analysis section starting on page 49
ACS Grade Reagents	Academic Section starting on page 91

Biopharmaceutical Applications

The rapidly growing and tremendously demanding biopharmaceutical industry has consistently turned to Avantor to provide reliable solutions. Avantor products provide the traceability, reliability, and innovation to ensure the production process produces consistent product every time. From upstream fermentation and cell culture to downstream purification, you can always rely on Avantor.

Upstream Fermentation and Cell Culture

Purity and consistency are critical attributes of the raw materials used in fermentation and cell culture. Avantor has a proven record in these areas and offers a number of products with specific roles, such as cGMP-produced amino acids, minerals, vitamins, buffers, and salts. We also have extensive technical, quality, and regulatory information to aid customers preparing for production or clinical trials anywhere in the world.



Upstream Processing

Fermentation/Cell Culture
- Amino Acids
- Minerals
- Sugars
- Vitamins

Initial Purification
- BAKERBOND Chromatography Media for Large Molecules
  - –Ion Exchange
  - –Hydrophobic Interaction
  - –Reverse Phase
  - –Affinity

Final Purification/Polishing
- BAKERBOND Chromatography Media for Large Molecules
  - –Ion Exchange
  - –Hydrophobic Interaction
  - –Reverse Phase

Column Cleaning
- Sodium Hydroxide Solutions
- Phosphoric Acid Solutions
- Guanidine Hydrochloride Solutions

Quality Control
- ◦ HPLC Solvents
- ◦ HPLC Columns
- ◦ SPE Columns
- ◦ Buffers
- ◦ Volumetric Solutions
- ◦ PharmaTest Reagents and Solutions
- ◦ ACS Grade Reagents

Downstream Processing

Product Harvest
- Ammonium Sulfate Biotech Reagents
- Urea USP ULTRAPURE BIOREAGENTS
- Guanidine Hydrochloride
- Sodium Hydroxide
- Polysorbate 20, vegetable derived
- Polysorbate 80, vegetable derived
- Buffer Component Salts
- ◦ Sodium Dodecyl Sulfate

Buffer Exchange
- Tromethamine (Tris)
- Tris Hydrochloride
- Buffer Component Salts
- ◦ Biological Buffers
- ◦ ULTRAPURE BIOREAGENTS (UPR)

Fill and Finish
- Ammonium Sulfate Biotech Reagent
- Polysorbate 20, vegetable derived, low peroxide
- Polysorbate 80, vegetable derived, low peroxide
- Mannitol, low endotoxin
- Tromethamine (Tris)
- Tris Hydrochloride
- Amino Acids

Facility Cleaning
- Sterile Cleansers
- Custom aqueous solutions can be made to your specifications. Ask your sales person for details.

Products with a solid bullet are manufactured under cGMP conditions

Products By Application

Amino Acids

J.T.Baker amino acids are part of the Global Pharma family of products. Many are cGMP-manufactured and meet the requirements for USP/NF, as well as EP, BP, and JP specifications. Actual endotoxin test results are reported on the Certificate of Analysis. These products are available in our Beaker to Bulk packaging—identical product in sizes from laboratory scale through pilot plant to full manufacturing scale. They are available in large lots for production applications.

J.T.Baker Amino Acids

Description	cGMP	Product Number
L-Arginine, USP, Multi-Compendial	•	2066
L-Arginine Hydrochloride, USP, Multi-Compendial	•	2067
L-(+)-Arginine Monohydrochloride, Biochemical Reagent		B577
L-Asparagine Monohydrate, FCC		2068
DL-Aspartic Acid, Biochemical Reagent		B601
Creatine, Monohydrate		F812
L-(+)-Cysteine, BAKER		G122
L-(+)-Cysteine Hydrochloride, Monohydrate, Biochemical Reagent		G121
L-Glutamic Acid, FCC, Multi-Compendial	•	2077
L-Glutamic Acid, Biochemical Reagent		M756
L-(+)-Glutamic Acid, Monosodium Salt, Monohydrate, BAKER		M746
L-Glutamine, USP, FCC	•	2078
L-Glutathione, Reduced		M770
Glycine, USP, Multi-Compendial	•	0582
Glycine, USP, FCC	•	0581
Glycine, ULTRAPURE BIOREAGENT		4059
Glycine, Biochemical Reagent		4057
Glycylglycine, Biochemical Reagent	•	2079
L-Histidine, USP, Multi-Compendial	•	2080

Description	cGMP	Product Number
L-(+)-Histidine, Biochemical Reagent		N327
L-Histidine Monohydrochloride, FCC, Multi-Compendial	•	2081
L-Isoleucine, USP, Multi-Compendial	•	2082
L-Leucine, USP, Multi-Compendial	•	2083
L-Lysine Hydrochloride, USP, Multi-Compendial	•	2084
DL-Lysine Monohydrochloride, BAKER		P448
L-(+)-Lysine, Monohydrate, BAKER		P432
L-Methionine, USP, Multi-Compendial	•	2085
DL-Methionine, Biochemical Reagent		P725
L-Ornithine, Monohydrate		S762
L-Phenylalanine, USP, Multi-Compendial	•	2086
L-Proline, USP, Multi-Compendial	•	2087
L-Serine, USP, Multi-Compendial	•	2088
L-Threonine, USP, Multi-Compendial	•	2089
L-Tryptophan, USP, Multi-Compendial	•	2092
L-Tyrosine, USP, Multi-Compendial	•	2093
L-Tyrosine Disodium Salt, 2-Hydrate, Biochemial Reagent		2094
L-(-)-Tyrosine, Biochemical Reagent		X260
L-Valine, USP, Multi-Compendial	•	2095

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Minerals and Vitamins

Minerals and vitamins are needed to foster optimal growth environments for cells. We offer both J.T.Baker and Macron Fine Chemicals cGMP-produced products for use in fermentation and cell culture applications.

J.T.Baker Minerals and Vitamins

Description	cGMP	Product Number
Ascorbic Acid, Crystalline Powder, USP, FCC	•	0936
Ascorbic Acid, Fine Granular, USP, FCC	•	0938
Ascorbic Acid, Fine Powder, USP, FCC	•	0937
L-(+)-Ascorbic Acid, Powder, Biochemical Reagent		B581
D-Biotin, BAKER		C272
Calcium Chloride, Dihydrate, Granular, USP, FCC	•	1336
Cupric Sulfate, 5-Hydrate, USP	•	1844
Ferric Nitrate, 9-Hydrate, Crystal, BAKER ANALYZED ACS Reagent		2018
Ferrous Sulfate, 7-Hydrate, Crystal, USP, FCC	•	2074
Magnesium Chloride, 6-Hydrate, Crystal, USP, FCC	•	2448
Magnesium Sulfate, 7-Hydrate, Crystal, USP, Multi-Compendial	•	2504
Niacin, USP, FCC	•	2745
Potassium Chloride, Crystal, USP, FCC	•	3046
Potassium Phosphate, Monobasic, Crystal, NF, FCC	•	3247
Pyridoxine Hydrochloride, USP, FCC	•	3343
Sodium Acetate, Trihydrate, Crystal, USP, FCC	•	3462
Sodium Chloride, Granular, USP, FCC	•	3628
Sodium Nitrate, Crystal, ACS		3770
Sodium Phosphate, Dibasic, Anhydrous, USP, FCC	•	3827
Sodium Phosphate, Monobasic, Monohydrate, Crystal, USP, FCC	•	3820
Thiamine Hydrochloride, USP, FCC	•	4110
Zinc Sulfate, 7-Hydrate, Granular, USP, FCC	•	4384

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals Minerals and Vitamins

Description	cGMP	Product Number
Ascorbic Acid, USP	•	1852
Ascorbic Acid, USP, Very Fine Powder	•	8829
Calcium Chloride, Dihydrate, Granular, USP, FCC	•	4616
Calcium Chloride, Dihydrate, Granular, USP, GenAR	•	7722
Cupric Sulfate, 5-Hydrate, USP, GenAR	•	7790
Cupric Sulfate, 5-Hydrate, Granular USP	•	4752
Ferrous Sulfate, Dried, Monohydrate, Fine Powder, USP, FCC	•	5051
Ferrous Sulfate, 7-Hydrate, Granular, USP, FCC	•	5572
Magnesium Chloride, 6-Hydrate, USP	•	5956
Potassium Chloride, Granular, USP, FCC	•	6838
Potassium Chloride, Crystal, USP	•	6845
Potassium Phosphate, Monobasic, Crystal, NF, GenAR	•	7746
Potassium Phosphate, Monobasic, Crystal, NF, FCC	•	7096
Sodium Acetate, Anhydrous, GenAR	•	7800
Sodium Acetate, Trihydrate, USP, GenAR	•	7768
Sodium Chloride, Granular, USP, GenAR	•	7713
Sodium Chloride, Granular, USP, FCC	•	4577
Sodium Chloride, Granular, USP, FCC	•	7532
Sodium Chloride, Powder, USP-GenAR	•	7540
Sodium Nitrate, Granular, FCC, Purified	Food GMP	7796
Sodium Phosphate, Monobasic, Monohydrate, USP, GenAR	•	7774
Sodium Phosphate, Monobasic, Monohydrate, Granular, USP, FCC	•	7868
Sodium Phosphate, Dibasic, Anhydrous, USP, GenAR	•	7771
Sodium Phosphate, Dibasic, 7-Hydrate, Granular, USP, GenAR	•	7393
Sodium Phosphate, Dibasic, 7-Hydrate, Granular, USP	•	7896
Thiamine Hydrochloride, USP	•	2722
Zinc Sulfate, 7-Hydrate, Granular, USP, FCC	•	8872

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Sugars

Sugars are used as a carbon and energy source in upstream processing steps.

J.T.Baker Sugars

Description	cGMP	Product Number
L-(+)-Arabinose, Biochemical Reagent		B544
Dextrose, Anhydrous, USP, Multi-Compendial	•	1920
Dextrose, Anhydrous, USP	•	1919
Dextrose, Anhydrous, Powder, BAKER ANALYZED ACS Reagent		1916
Dextrose, Monohydrate, USP, Multi-Compendial	•	1913
Dextrose, Monohydrate, Powder, USP	•	1912
Dextrose, Monohydrate, Powder, BAKER ANALYZED Reagent		1910
D-(-)-Fructose, Biochemical Reagent		M556
D-(+)-Galactose, Biochemical Reagent		M672
D-(+)-Galactose Biotech Reagent	•	2100
Galactose, Biotech Reagent	•	2102
D-(+)-Glucose, see Dextrose		
Lactose, Monohydrate, Powder, NF, Multi-Compendial	•	2250
Lactose, Monohydrate, Powder, NF	•	2249
D-(+)-Lactose, Monohydrate, Powder, BAKER ANALYZED ACS Reagent		2248
D-(+)-Lactose, BAKER		P347
Maltose High Purity, Hydrate, USP	•	2115
D-(+)-Maltose, Monohydrate, Biochemical Reagent		P533
Mannitol, Powder, USP, Multi-Compendial	•	2553
Mannitol, Powder, USP	•	2555
Mannitol, Powder, BAKER ANALYZED ACS Reagent		2554
Raffinose, 5-Hydrate, Biochemical Reagent		U826
Sorbitol, Biochemical Reagent		V045
Sucrose, Crystal, NF, Multi-Compendial	•	4074
Sucrose, ULTRAPURE BIOREAGENT		4097
Sucrose, Crystal, BAKER ANALYZED, ACS Reagent		4072
Sucrose, NF, Multi-Compendial High Purity (Low Endotoxin)	•	4005
α,α-Trehalose, Dihydrate Biotech Reagent High Purity (Low Endotoxin)	•	4226

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals Sugars

Description	cGMP	Product Number
D(+)-Galactose, Anhydrous, OR		5094
Lactose, Monohydrate, Powder, AR (ACS)		5652
Lactose, Monohydrate, Powder, NF	•	6270
Mannitol, Powder, USP	•	6208
Mannitol, Powder, AR (ACS)		6209
Mannitol, Powder, USP, GenAR	•	7781
Sucrose, NF, GenAR	•	7723
Sucrose, Crystal, AR (ACS)		8360
Maltose, Monohydrate, OR		1881
D-Glucose, Anhydrous, Granular, AR (ACS)		4912
Fructose, Low Glucose, GenAR		7756
Dextrose, Anhydrous, Granular, USP	•	4908
Dextrose, Anhydrous, Granular, USP, GenAR	•	7730

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Products By Application

Downstream: Purification

The purification step in the biopharmaceutical process is typically the most important. The key challenge is to maintain an acceptable and high level of purity and recovery of the protein in a cost effective manner. The selection of materials used is especially critical to maintaining the safety and efficacy of the biologically active ingredient. Process scale liquid chromatography is widely used in the purification of biomolecules due to the speed of separations, reproducibility, and well-defined methods for scale-up. In many cases, liquid chromatography is the only practical solution for removal of problematic impurities. With our broad experience and expertise, Avantor is uniquely qualified to support and supply the purification chromatography media and process chemicals for your purification needs. BAKERBOND chromatography media are specifically designed for the purification and analysis of proteins, peptides, and polynucleotides, and have been used in the manufacturing of marketed biopharmaceuticals for many years, demonstrating our strict adherence to robust manufacturing and quality controls. Our buffer solutions and process chemicals are manufactured under cGMP and provide the level of quality and regulatory documentation required for downstream purification.

BAKERBOND Process Chromatography Products

Avantor is a basic manufacturer of BAKERBOND chromatography media for Preparative and Process Liquid Chromatography. Combining chromatographic properties of wide-pore silica or stable polymeric beads with proprietary surface chemistries has created a versatile family of products for a wide range of applications. Strict attention has been given to optimizing particle and pore size and size distributions to maximize efficiency and retain capacity and selectivity over a broad range of operating conditions. Scale-up is further facilitated by providing the same surface chemistry on multiple particle sizes and materials.

We offer a wide range of chromatography media that provides unique selectivity, high efficiency, scalability, and various cleaning options, including sodium hydroxide. From capture to polish, we offer a variety of ion exchangers, hydrophobic interaction media, and both normal and reverse phase media for all your purification needs.

Ion Exchange Media

Ion exchange chromatography is a precise and effective method of separation of biomolecules. Separation in ion exchange chromatography is based upon the selective, reversible adsorption of charged molecules to an immobilized ion exchange group of the opposite charge.

When you need to separate biomolecules or small molecules by anion and cation exchange chromatography, Avantor has a media to meet your needs. MAb's, oligonucleotides, peptides, and proteins can be separated on either polymethacrylate or silica base media. BAKERBOND media is designed to operate at high efficiency with unique selectivity to provide high resolution results. Operational flexibility makes it ideal for use in various chromatographic environments from lab to process scale. Media based on a wide range of base matrices have been developed to address different aspects of downstream purification.

BAKERBOND Ion Exchange Process Chromatography Media

Description	Functionality	Active groups	Backbone Material	Particle Shape	Particle Size	Pore Size	Product Number
ABx Plus Silica	ABX	COOH, N	Silica Gel	Irregular	40 µm	275 Å	7254
ABx Silica	ABX	COOH, N	Silica Gel	Irregular	40 µm	275 Å	7269
ABx Silica	ABX- Weak cation exchanger with capacity of 0.12 meq/mL	COOH, N	Silica Gel	Spherical	15 µm	300 Å	7157
Carboxy-Sulfon Silica	CARBOXY-SULFON	COOH, SO_3H	Silica Gel	Spherical	15 µm	300 Å	7184
Carboxy-Sulfon Silica	CARBOXY-SULFON	COOH, SO_3H	Silica Gel	Irregular	40 µm	275 Å	7252
CBx Silica	CBX	COOH	Silica Gel	Irregular	40 µm	275 Å	7263
CBx Silica	CBX	COOH	Silica Gel	Spherical	15 µm	300 Å	7181
DEAM Silica	Diethylaminomethyl	$-CH_2-CH_2-N(CH_3)-CH_2-CH_2-$	Silica Gel	Spherical	15 µm	300 Å	7472
DEAM Silica	Diethylaminomethyl	$-CH_2-CH_2-N(CH_3)-CH_2-CH_2-$	Silica Gel	Irregular	40 µm	275 Å	7473
PEI Silica	Polyethyleneimine	CH_2CH_2NH	Silica Gel	Spherical	15 µm	300 Å	7180
PEI Silica	Polyethyleneimine	CH_2CH_2NH	Silica Gel	Irregular	40 µm	275 Å	7264
QUAT Silica	Polyethyleneimine	$-CH_2-CH_2-N^+(CH_3)_2-CH_2-CH_2-$	Silica Gel	Spherical	15 µm	300 Å	7183
QUAT Silica	Polyethyleneimine	$-CH_2-CH_2-N^+(CH_3)_2-CH_2-CH_2-$	Silica Gel	Irregular	40 µm	275 Å	7251
Sulfonic Silica	Sulfon	$-SO_3H$	Silica Gel	Irregular	40 µm	275 Å	7489
PolyABx	Primarily weak cation exchange with weak anion exchange sites.	COOH, N	Polymethacrylate	Spherical	35 µm	500 Å	7586
PolyCSx	Primarily a strong cation exchanger with weak cation and anion exchange sites.		Polymethacrylate	Spherical	35 µm	500 Å	7587
PolyPEI	Primary Weak anion exchanger	CH_2CH_2NH	Polymethacrylate	Spherical	35 µm	500 Å	7585
PolyQUAT	Primarily a strong anion exchanger with weak anion exchange sites.		Polymethacrylate	Spherical	35 µm	500 Å	7603
ABx Silica	ABX- Weak cation exchanger with capacity of 0.12 meq/mL	COOH, N	Silica Gel	Irregular	40 µm	500 Å	7369
PEI Silica	Polyethyleneimine	CH_2CH_2NH	Silica Gel	Irregular	40 µm	500 Å	7368
DEAM Silica	Diethylaminomethyl	$-CH_2-CH_2-N(CH_3)-CH_2-CH_2-$	Silica Gel	Spherical	10 µm	120 Å	7316
DEAM Silica	Diethylaminomethyl	$-CH_2-CH_2-N(CH_3)-CH_2-CH_2-$	Silica Gel	Spherical	20 µm	120 Å	7317
DEAM Silica	Diethylaminomethyl	$-CH_2-CH_2-N(CH_3)-CH_2-CH_2-$	Silica Gel	Spherical	5 µm	300 Å	7471
Carboxylic Acid Silica	Strong anion exchange	COOH	Silica Gel	Irregular	40 µm	60 Å	7044
CBx Silica	Weak cation exchanger	COOH	Silica Gel	Irregular	40 µm	275 Å	7263
Sulfonic Silica	Strong cation exchange	$-SO_3H$	Silica Gel	Irregular	40 µm	60 Å	7046
Propyl-Sulfonic Silica	Strong cation exchange	$-SO_3H$	Silica Gel	Irregular	40 µm	60 Å	7045
QUAT Silica	Strong anion exchange	$-CH_2-CH_2-N^+(CH_3)_2-CH_2-$	Silica Gel	Irregular	40 µm	60 Å	7043

Contact a Avantor Sales Representative for pricing, additional sizes and functional groups

Products By Application

BAKERBOND Ion Exchange Analytical to Preparative Columns

Description	Type	Column Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
ABx (antibody exchanger)	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7272-00	$1123.00
	Prep	21.2 x 250 mm	15 µm	Spherical	300 Å	7272-43	2009.00
WP PEI (weak anion exchanger)	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7278-00	1123.00
WP DEAM (weak anion exchanger)	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7475-39	1123.00
WP QUAT (strong anion exchanger)	Scout	4.6 x 50 mm	5 µm	Spherical	300 Å	7158-05	1262.30
	Versa-Ten	7.75 x 100 mm	5 µm	Spherical	300 Å	7158-06	1506.80
	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7275-00	1123.00
WP CBX (weak cation exchanger)	Standard	4.6 x 250 mm	5 µm	Spherical	300 Å	7114-00	1108.00
WP CARBOXY-SULFON	Standard	4.6 x 250 mm	5 µm	Spherical	300 Å	7159-00	1113.70
	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7274-00	1160.00

When you are faced with difficult separations, use one of our unique multimode ion exchangers. The multimode functionality of our ion exchange media is the result of its surface chemistry and bead properties and offers unique selectivity that is not often achieved by traditional ion exchange chromatography media. In addition to standard silica, we offer multimode ion exchange media on our polymer media.

Hydrophobic Interaction Media

Hydrophobic Interaction Chromatography (HIC) separates proteins based on surface hydrophobicity. HIC is an especially good follow-up step to ion exchange chromatography, as it requires high salt concentrations for protein binding. The protein is typically in a buffered salt solution and elution is accomplished by lowering the salt concentration of the mobile phase. Avantor offers a range of HIC media, including a mixed mode product that provides unique selectivity with its hydrophobic interaction and ion exchange functionalities.

BAKERBOND Multimode Ion Exchange Process Chromatography Media

Description	Particle Size	Particle Shape	Pore Size	Product Number
ABx Silica	15 µm	Spherical	300 Å	7157
PEI Silica	15 µm	Spherical	300 Å	7180
QUAT Silica	15 µm	Spherical	300 Å	7183
Carboxy-Sulfon Silica	15 µm	Spherical	300 Å	7184
Carboxy-Sulfon Silica	40 µm	Irregular	275 Å	7252
DEAM Silica	15 µm	Spherical	300 Å	7472
PolyABx-35	35 µm	Spherical	500 Å	7586
PolyCSX-35	35 µm	Spherical	500 Å	7587
PolyQUAT	35 µm	Spherical	500 Å	7603
PolyPEI	35 µm	Spherical	500 Å	7585

Contact a Avantor Sales Representative for pricing, additional sizes and functional groups

BAKERBOND Mixed-Mode HIC Process Chromatography Media

Description	Functionality	Active Groups	Backbone Material	Particle Shape	Particle Size	Pore Size	Product Number
HI-Propyl Silica	C_3	C_3	Silica Gel	Spherical	5 µm	300 Å	7291
HI-Propyl Silica	C_3	C_3	Silica Gel	Spherical	15 µm	300 Å	7182
HI-Propyl Silica	C_3	C_3	Silica Gel	Irregular	40 µm	275 Å	7285
Poly HiPropyl	C_3	C_3	Polymethacrylate	Spherical	35 µm	500 Å	7588

Contact a Avantor Sales Representative for pricing, additional sizes and functional groups

J.T.Baker HIC Analytical to Preparative Columns

Description	Column Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
WP Hi-Propyl (C^3)	10.0 x 250 mm	15 µm	Spherical	300 Å	7277-00	$1123.00

Reverse Phase Media

Reverse phase separations refer generally to any separation done using a non-polar stationary phase and water and water-miscible solvents. Polar molecules in the mobile phase are eluted first in high aqueous mobile phases with non-polar molecules being retained on the column and eluted with high organic mobile phases. Compounds are separated based on their hydrophobic character.

For your downstream polishing needs, Avantor offers both tri-functional and mono-functional bonded phases.

BAKERBOND Reverse Phase Process Chromatography Media

Description	Functionality	Active Groups	Backbone Material	Particle Shape	Particle Size	Pore Size	Product Number
Butyl (C_4) Silica	C_4	C_4	Silica Gel	Spherical	15 µm	300 Å	7179
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Spherical	15 µm	300 Å	7191
Octyl (C_8) Silica	C_8	C_8	Silica Gel	Spherical	15 µm	300 Å	7190
Butyl (C_4) Silica	C_4	C_4	Silica Gel	Spherical	15 µm	300 Å	7179
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Spherical	40 µm	300 Å	7207
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Irregular	40 µm	275 Å	7248
Butyl (C_4) Silica	C_4	C_4	Silica Gel	Irregular	40 µm	275 Å	7283
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Spherical	50 µm	300 Å	7247
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Spherical	10 µm	120 Å	7484
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Spherical	15–30 µm	120 Å	7485
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Spherical	40–60 µm	120 Å	7488
Octyl (C_8) Silica	C_8	C_8	Silica Gel	Spherical	20 µm	120 Å	7902
Octyl (C_8) Silica	C_8	C_8	Silica Gel	Spherical	50 µm	120 Å	7901
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Spherical	50 µm	120 Å	7579
Octyl (C_8) Silica	C_8	C_8	Silica Gel	Spherical	5 µm	120 Å	7068
Octyl (C_8) Silica	C_8	C_8	Silica Gel	Spherical	50 µm	120 Å	7637
Butyl (C_4) Silica	C_4	C_4	Silica Gel	Spherical	10 µm	120 Å	7479
Phenyl Silica	Phenyl	C_6H_5-C_2H_4	Silica Gel	Spherical	5 µm	120 Å	7076
Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Irregular	40 µm	60 Å	7025
Polar Plus Octadecyl (C_{18}) Silica	C_{18}	C_{18}	Silica Gel	Irregular	40 µm	60 Å	7465
Octadecyl (C_{18}) Non-endcapped Silica	C_{18}	C_{18}	Silica Gel	Irregular	130 µm	150 Å	7403
Octyl (C_8) Silica	C_8	C_8	Silica Gel	Irregular	40 µm	60 Å	7026
Butyl (C_4) Silica	C_4	C_4	Silica Gel	Irregular	40 µm	60 Å	7037
Ethyl (C_2) Silica	C_2	C_2	Silica Gel	Irregular	40 µm	60 Å	7199
Phenyl Silica	Phenyl	C_6H_5-C_2H_4	Silica Gel	Irregular	40 µm	60 Å	7040

Contact a Avantor Sales Representative for pricing, additional sizes and functional groups

Products By Application

BAKERBOND Reverse Phase Analytical to Preparative Columns

Description	Type	Column Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
WP Butyl (C_4)	Standard	4.6 x 250 mm	5 µm	Spherical	300 Å	7116-00	$786.20
	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7280-00	1123.00
WP Octyl (C_8)	Standard Ten	4.6 x 100 mm	5 µm	Spherical	300 Å	7105-01	863.70
	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7296-39	1123.00
WP Octadecyl (C_{18})	Standard Ten	4.6 x 100 mm	5 µm	Spherical	300 Å	7104-01	845.10
	Standard	4.6 x 250 mm	5 µm	Spherical	300 Å	7104-00	789.40
	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7297-00	1144.00
WP Butyl (C_4)	Prep	21.2 x 250 mm	15 µm	Spherical	300 Å	7280-43	1945.00
WP Octyl (C_8)	Semi-Prep	10.0 x 250 mm	15 µm	Spherical	300 Å	7296-39	1123.00
WP Octadecyl (C_{18})	Prep	21.2 x 250 mm	15 µm	Spherical	300 Å	7297-43	1982.00
	Prep	50.8 x 250 mm	15 µm	Spherical	300 Å	7297-47	8369.00

Normal Phase Media

Normal phase or adsorption chromatography separates analytes based on adsorption to a polar stationary phase with a non-polar, non-aqueous mobile phase and works effectively for separating analytes readily soluble in non-polar solvents.

When you need to separate polar molecules for drug discovery and biomolecules from non-polar sample impurities, use BAKERBOND normal phase media to retain the polar compounds of interest while the non-polar material elutes through the column. There are particle and pore sizes available to fit both your small and large molecule applications and to optimize both selectivity and throughput.

Following is our Biochromatography Media Selection Guide with key information about our media.

BAKERBOND Normal Phase Process Chromatography Media

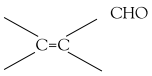
Description	Functionality	Active groups	Backbone material	Particle shape	Particle size	Pore size	Product Number
Amino Silica	Amino (NH_2)	NH_2	Silica Gel	Spherical	5 µm	120 Å	7070
Silica Gel	-OH	Hydroxyl	Silica Gel	Spherical	50 µm	70 Å	7295
Silica Gel	-OH	Hydroxyl	Silica Gel	Spherical	15 µm	300 Å	7624
Amino Silica	Amino (NH_2)	-NH_2	Silica Gel	Irregular	40 µm	60 Å	7028
Amino Non-endcapped Silica	Amino (NH_2)	-NH_2	Silica Gel	Irregular	40 µm	60 Å	7440
Cyano Silica	Cyano (CN)	-CN	Silica Gel	Irregular	40 µm	60 Å	7027
Diol Silica	Diol	COHCOH	Silica Gel	Irregular	40 µm	60 Å	7047
Silica Gel	-OH	Hydroxyl	Silica Gel	Irregular	63 µm	60 Å	7605
Silica Gel	-OH	Hydroxyl	Silica Gel	Irregular	40 µm	1000 Å	7315
Silica Gel	-OH	Hydroxyl	Silica Gel	Irregular	90–130 µm	1000 Å	7187
Cyanopropyl Silica	Cyanopropyl (CN)	CN	Silica Gel	Spherical	5 µm	300 Å	7129
Cyano Silica	Cyano	CN	Silica Gel	Irregular	40 µm	60 Å	7027

Contact a Avantor Sales Representative for pricing, additional sizes and functional groups

BAKERBOND Normal Phase Analytical Columns

Description	Column Size	Particle Size	Particle Shape	Pore Size	Product Number	Price
Cyano (CN)	4.6 x 250 mm	5 µm	Spherical	120 Å	7111-00	$1024.20

Biochromatography Media Selection Guide

	Binding Group	Particle Sizes	Capacity [1, 2] (mg protein/ g packing)	pH Operating Range	pH Stability	Suggested Binding Mobile Phase (A Buffer)	Suggested Elution Mobile Phase (B Buffer)
ABx	COOH, N	5 m, 15 m, 40 m	150–200	4.5–10	2–10	25 mM MES, pH 5.6	500 mM $(NH_4)_2SO_4$ plus 20 mM KH_2PO_4, pH 7.0 or 1M NaOAc, pH 7.0
ABx Plus	COOH, N	40 m	150–200	4.5–10	2–10	25 mM MES, pH 5.6	500 mM $(NH_4)_2SO_4$ plus 20 mM KH_2PO_4, pH 7.0 or 1M NaOAc, pH 7.0
PEI	CH_2CH_2NH	5 m, 15 m, 40 m	150–200	2–7.5	2–10	10 mM KH_2PO_4, pH 6.5 or 25 mM Tris-OAc pH 6.5	500 mM KH_2PO_4, pH 6.0 or 2M NaOAc, ph 6.0
DEAM	$-CH_2-CH_2-N(CH_3)-CH_2-CH_2-$	5 m, 15 m, 40 m	150–200	2–9.0	2–10	25 mM Tris-OAc, pH 5-9	25 mM Tris-OAc, pH 5-9 plus 1M NaCl
QUAT	$-CH_2-CH_2-N^+(CH_3)_2-CH_2-CH_2-$	5 m, 15 m, 40 m	150–200	2–10	2–10	25 mM Tris-OAc, pH 5-8 or 25 mM CAPS, pH 8-10	25 mM Tris-OAc, pH 5-8 plus 1M NaCl or 25 mM CAPS, pH 8-10 plus 1 M NaCl
CBX	COOH	5 m, 15 m, 40 m	150–200	4.5–10	2–10	25 mM MES, pH 5.6 or 10 mM KH_2PO_4, pH 5.6	500 mM $(NH_4)_2SO_4$ plus 20 mM KH_2PO_4, pH 7.0 or 1 MNaOAc, pH 7.0 or 500 mM KH_2PO_4, pH 6.0
CARBOXY-SULFON	COOH, SO_3H	5 m, 15 m, 40 m	150–200	4.5–10	2–10	25 mM MES, pH 5.6 or 10 mM KH_2PO_4, pH 5.6	500 mM $(NH_4)_2SO_4$ plus 20 mM KH_2PO_4, pH 7.0 or 1 MNaOAc, pH 7.0 or 500 mM KH_2PO_4, pH 6.0
Sulfonic	$-SO_3H$	5 m, 15 m, 40 m	150–200	2–10	2–10	25 mM MES, pH 5.6 or 10 mM KH_2PO_4, pH 5.6	500 mM $(NH_4)_2SO_4$ plus 20 mM KH_2PO_4, pH 7.0 or 1 MNaOAc, pH 7.0 or 500 mM KH_2PO_4, pH 6.0
HI-Propyl	C_3	5 m, 15 m, 40 m	150–200	2–10	2–10	2M $(NH_4)_2SO_4$ plus 25 mM KH_2PO_4, pH 7.0	25 mM KH_2PO_4, pH 7.0
HI-Phenyl	$-CH_2CH(OH)CH_2O-C_6H_5$	40 m	100	2–10	2–10	2M $(NH_4)_2SO_4$ plus 25 mM KH_2PO_4, pH 7.0	25 mM KH_2PO_4, pH 7.0
Glutaraldehyde-P		40 m	70–100 (Con A)	2–10	2–10	Variable	Variable
WP C_4, C_8, C_{18}	C_4, C_8, C_{18}	5 m, 15 m, 40 m	150 (MW>15,000) 50 (MW<15,000)	2–8	2–8	0.1% TFA in water	0.1% TFA in acetonitrile

1. Capacity by frontal analysis at 50% breakthrough
2. To convert grams to ml packed bed volume: 5 m, 1 g = 1.6 ml packed bed volume; 15 m, 1 g = 2.0 ml packed bed volume; 40 m, 1 g = 3.0 ml packed bed volume

Products By Application

Water for Injection (WFI)

Generally the largest raw material in solution preparations is water. The validated USP purified water systems in our Phillipsburg, NJ and Paris, KY facilities provide the water for Avantor's cGMP-produced solutions. Our water also meets EP and JP specifications.

We offer J.T.Baker USP Purified Water (Product Number 4216) and J.T.Baker Water for Injection Quality Water (Product Number 4212) in 19 L and 200 L containers. Water for Injection Quality Water meets the requirements of the tests for bacterial endotoxin for Water for Injection and the requirements of all tests for Sterile Purified Water.

For product specifications, packaging, and prices, please see the A to Z section of this catalog or visit our web site at www.avantormaterials.com.

Denaturants

Denaturants are used to penetrate and disrupt cell membranes and to release the protein. The denaturants must be of high purity and maintain low and known levels of microbial contaminants. Avantor offers a comprehensive portfolio of denaturants.

Guanidine hydrochloride is a hazardous, corrosive material. Avantor has extensive experience in managing the risks associated with handling and mixing large volumes of corrosive materials, so consider letting us make your custom solutions. You'll find improved consistency of product performance in your applications due to our process-controlled cGMP manufacturing, while eliminating risks. We also have 2 qualified manufacturing sites to produce these products, resulting in exceptional risk management and logistics.

We offer a complete line of other denaturants besides guanidine

J.T.Baker Denaturants

Description	Compendial Testing	Endotoxin Testing	cGMP	Product Number
Ammonium Sulfate	FCC, ACS	•		0793
Ammonium Sulfate, ULTRAPURE BIOREAGENT				4027
Brij 35				C704
Chaps, ULTRAPURE BIOREAGENT				4145
1,4-Dithiothreitol, ULTRAPURE BIOREAGENT				F780
Glycerin	USP, EP, BP, JP	•	•	2143
Glycerin	USP, EP, BP		•	2140
Glycerol, Anhydrous, ULTRAPURE BIOREAGENT				4043
Guanidine Hydrochloride, Technical				4077
Guanidine Thiocyanate, Biotech Reagent			•	4083
Lithium Chloride, Granular, ULTRAPURE BIOREAGENT				4002
1-Octanesulfonic Acid, Sodium Salt				2818
Sodium Dodecyl Sulfate (SDS), ULTRAPURE BIOREAGENT				4095
Sucrose	NF, EP, BP, JP	•	•	4074
Sucrose, ULTRAPURE BIOREAGENT				4097
Tributyl Phosphate				W432
Triton X-100				X198
Urea	USP, EP, BP, JP	•	•	4203
Urea	USP		•	4206
Urea, ULTRAPURE BIOREAGENT				4111

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals Denaturants

Description	Compendial Testing	Endotoxin Testing	cGMP	Product Number
Ammonium Sulfate, GenAR		•		7725
Guanidine Hydrochloride, GenAR			•	0506
Guanidine Hydrochloride, GenAR			•	0507
Guanidine Hydrochloride, GenAR			•	0072
Guanidine Hydrochloride, GenAR			•	V660
Guanidine Hydrochloride, GenAR				7716
Sucrose, GenAR	NF, BP/Ph. Eur.	•	•	7723
Urea, GenAR				7729
Urea, GenAR	USP	•	•	7816
Urea	USP		•	8642

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com

hydrochloride, including guanidine thiocyanate, a new tool in biopharm processing that is used in RNA purification and other applications where a strong denaturant is required.

Biological Buffers and Reagents

Buffers are used during purification to minimize pH fluctuations that can cause denaturization, or unfolding, of the protein of interest, which would render it useless as a therapeutic. The buffer selected must work in the desired pH range, must be inert or have minimal effects on the chromatographic separation, must contain low and known levels of contaminants, and must perform consistently.

J.T.Baker biological buffers are non-toxic to cells, are not absorbed through cell membranes, and feature pKa values at or near physiological pH to help stabilize the product as it goes through the many steps required in the purification process. These buffers are part of the ULTRAPURE BIOREAGENT family and are characterized by high assay, low insolubles and heavy metals, and the absence of DNase, RNase, and Protease.

TRIS (tromethamine) is a commonly used buffer that many suppliers just test to USP specifications. J.T.Baker tromethamine is cGMP-manufactured at a commercial scale in an FDA registered facility* and meets USP requirements, EP specifications, and additional stringent ULTRAPURE BIOREAGENT criteria. TRIS hydrochloride is also manufactured under cGMP processes using our USP tromethamine as a starting material. Custom solutions using USP purified water are also available for your convenience.

*Registration does not denote FDA approval of a firm or its products.

J.T.Baker cGMP-produced TRIS Products

Description	pKa @ 25 °C	ΔpKa/ΔT(C°)	PH Range	Product Number
TRIS Hydrochloride, Biotech Reagent	8.1	-0.028	7.0–9.0	4106
Tromethamine, USP, Multi-Compendial	8.1	-0.028	7.0–9.0	4102

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

pH Adjusters

pH adjusters are used to adjust the pH of formulations. This category includes acids that are notoriously difficult to source as truly cGMP-produced and amino acids that most companies do not fully test for EP, BP, and JP. Avantor provides all that and more with our cGMP-produced acids and multi-compendial amino acids (See table on page 74 for amino acids.)

Sugars

In downstream processing, sugars are used to protect and stabilize proteins during lyophilization and storage. Sucrose and mannitol have exceptional physical properties that improve freezing processes and subsequent storage conditions. Other sugars are also used in these processes.

J.T.Baker pH Adjusters

Description	Compendial Testing	Endotoxin Testing	Source Material Origin	cGMP	Product Number
Acetic Acid, Glacial	USP, EP, BP, JP		Synthetic	•	9526
Acetic Acid, Glacial	USP, FCC		Synthetic	•	9522
Acetic Acid 30% (w/v), BAKER ANALYZED Reagent	*USP, EP, BP, JP for acetic acid raw material		Synthetic	•	0320
Acetic Acid 80% (w/v), BAKER ANALYZED Reagent	*USP, EP, BP, JP for acetic acid raw material		Synthetic	•	0321
Acetic Acid 4.0N, BAKER ANALYZED Reagent	*USP, EP, BP, JP for acetic acid raw material		Synthetic		0330
Hydrochloric Acid	NF, EP, BP, JP		Synthetic	•	9544
Hydrochloric Acid 25% (w/v), BAKER ANALYZED Reagent	*NF, EP, BP, JP for hydrochloric acid raw material		Synthetic	•	0323
Hydrochloric Acid 2.0N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for hydrochloric acid raw material		Synthetic	•	0336
Hydrochloric Acid 6.0N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for hydrochloric acid raw material		Synthetic	•	0327
Hydrochloric Acid 1.0N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for hydrochloric acid raw material		Synthetic	•	0325
Hydrochloric Acid 0.5N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for hydrochloric acid raw material		Synthetic	•	0335
Hydrochloric Acid 0.1N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for hydrochloric acid raw material		Synthetic	•	0326
Hydrochloric Acid, 30%, BAKER ANALYZED Reagent	*NF, EP, BP, JP for hydrochloric acid raw material		Synthetic	•	0365

Products By Application

J.T.Baker pH Adjusters

Description	Compendial Testing	Endotoxin Testing	Source Material Origin	cGMP	Product Number
Phosphoric Acid, Diluted	NF, EP, BP		Synthetic	•	5683
Phosphoric Acid Solution, 30%, BAKER ANALYZED Reagent	*NF, EP, BP, JP for phosphoric acid raw material		Synthetic	•	0334
Sodium Acetate, Anhydrous	USP, FCC	•	Synthetic	•	3474
Sodium Acetate, Trihydrate, Crystal	USP, EP, BP, JP	•	Synthetic	•	3461
Sodium Acetate, Trihydrate, Crystal	USP, FCC		Synthetic	•	3462
Sodium Carbonate Solution, 20%, BAKER ANALYZED Reagent	*NF, FCC for sodium carbonate raw material		Synthetic	•	0360
Sodium Hydroxide	NF, EP, BP, JP		Synthetic	•	3718
Sodium Hydroxide	NF, FCC		Synthetic	•	3728
Sodium Hydroxide 10% (w/v), BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0337
Sodium Hydroxide 25% (w/v), BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0338
Sodium Hydroxide 40% (w/v)	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0896
Sodium Hydroxide 50% (w/v), BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0339
Sodium Hydroxide 50% (w/v)	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0897
Sodium Hydroxide 10.0N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	5000
Sodium Hydroxide 5.0N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	5668
Sodium Hydroxide 2.0N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0390
Sodium Hydroxide 1.0N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0328
Sodium Hydroxide 1.0N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0389
Sodium Hydroxide 0.5N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0329
Sodium Hydroxide 0.5N, BAKER ANALYZED Reagent	*NF, EP, BP, JP for sodium hydroxide raw material		Synthetic	•	0388
Sodium Phosphate, Monobasic, Monohydrate	USP, Meets BP, and EP chemical specifications for sodium dihydrogen phosphate dihydrate (with LOD specification exception)		Synthetic	•	3802
Sodium Phosphate, Monobasic, Monohydrate	USP	•	Synthetic	•	3821
Sodium Phosphate, Monobasic, Monohydrate	USP		Synthetic	•	3820
Sodium Phosphate, Dibasic, Anhydrous	USP, FCC, ACS	•	Synthetic	•	3826
Sodium Phosphate, Dibasic, Anhydrous	USP, FCC		Synthetic	•	3827
Sodium Phosphate, Dibasic, 7-Hydrate	USP, Meets EP chemical specifications for disodium phosphate dodecahydrate and disodium phosphate dihydrate (with LOD specification exception)		Synthetic	•	3803
Sodium Phosphate, Dibasic, 7-Hydrate	USP	•	Synthetic	•	3816
Sodium Phosphate, Dibasic, 7-Hydrate	USP		Synthetic	•	3817
Sulfuric Acid 10.0 N BAKER ANALYZED Reagent	*NF, EP for sulfuric acid raw material		Synthetic	•	0331

*Non-risk materials as defined in 97/543/EC guideline

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals pH Adjusters

Description	Compendial Testing	Endotoxin Testing	Product Number
Acetic Acid, 36%	NF		2488
Acetic Acid, Glacial	USP, FCC, ACS		2504
Acetic Acid, Glacial	USP, FCC, ACS		3121
Ammonia Solution, Strong	NF		3248
Hydrochloric Acid, GenAR	NF, BP/Ph.Eur., JP		2515
Hydrochloric Acid, GenAR	NF, BP/Ph.Eur., JP		2626
Hydrochloric Acid	NF, FCC, ACS		2612
Hydrochloric Acid	NF, FCC, ACS		2062
Hydrochloric Acid, Diluted	NF		2608
Phosphoric Acid	NF, FCC		2788
Sodium Acetate, Anhydrous, GenAR		•	7800
Sodium Acetate, Trihydrate, GenAR	USP, BP/Ph.Eur., JP		7768
Sodium Acetate, Trihydrate, Granular	USP, FCC		7356
Sodium Hydroxide, Pellet, GenAR	NF, BP/Ph.Eur., JP		7772
Sodium Hydroxide, Pellet	NF, FCC		7680
Sodium Phosphate, Monobasic, Monohydrate, GenAR	USP		7774
Sodium Phosphate, Monobasic, Monohydrate	USP, FCC		7868
Sodium Phosphate, Dibasic, Anhydrous, GenAR	USP	•	7771
Sodium Phosphate, Dibasic, 7-Hydrate, Granular, GenAR	USP		7393
Sodium Phosphate, Dibasic, 7-Hydrate, Granular	USP		7896

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com

Cleaning

In biopharmaceutical manufacturing, cleaning is a highly important process. Removal of chemical, viral, and microbial contaminants is critical to ensure the purity and safety of the drug.

Column Cleaning

Chromatography columns and media have direct contact with all solutions used in biotechnology manufacturing and require special cleaning attention. The most commonly used cleaning solutions for columns and media include dilute acetic acid, phosphoric acid, sodium hydroxide, urea, and guanidine hydrochloride. Avantor offers the most common cleaning solutions under the J.T.Baker biotech reagent grade and can manufacture custom solutions upon request.

J.T.Baker Biotech Reagents for Column Cleaning

Description	Raw Materials	Water Quality	cGMP	Product Number
Acetic Acid, 80% Solution	Multi-Compendial	USP Purified	•	0321
Acetic Acid, 30% Solution	Multi-Compendial	USP Purified	•	0320
Hydrochloric Acid, 6.0N Solution	Multi-Compendial	USP Purified	•	0327
Hydrochloric Acid, 1.0N Solution	Multi-Compendial	USP Purified	•	0325
Hydrochloric Acid, 0.5N Solution	Multi-Compendial	USP Purified	•	0335
Hydrochloric Acid, 0.1N Solution	Multi-Compendial	USP Purified	•	0326
Hydrochloric Acid, 25%	Multi-Compendial	USP Purified	•	0323
Phosphoric Acid, Diluted *	NF	USP Purified	•	5683
Sodium Hydroxide, 10N Solution	Multi-Compendial	USP Purified	•	5000
Sodium Hydroxide, 5N Solution	Multi-Compendial	USP Purified	•	5668
Sodium Hydroxide, 1.0N Solution	Multi-Compendial	USP Purified	•	0328
Sodium Hydroxide, 0.5N Solution	Multi-Compendial	USP Purified	•	0329
Sodium Hydroxide, 10% (w/v) Solution	Multi-Compendial	USP Purified	•	0337

* NF, Multi-Compendial grade

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Products By Application

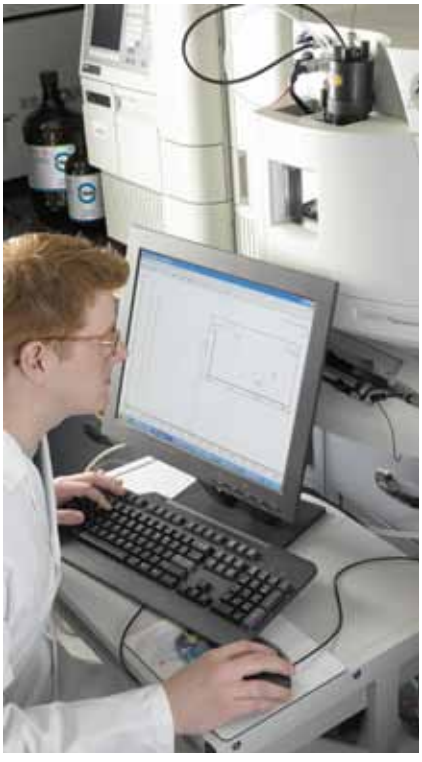
Facility Cleaning

The general cleaning of all facility surfaces, such as counters, carts, floors, ceilings, and walls, is needed to maintain cGMP environments and ensure that the immediate manufacturing areas facilitate the production of a safe and pure drug. The J.T.Baker Protocol C^3 product line provides the ultimate in Cleaning with Compliance for Critical environments. This family of sterile cleaners is cGMP-manufactured, USP sterility tested, Class-100 double-bagged, and packaged in convenient aerosol cans and polyethylene containers. These products are suitable for surface cleaning throughout your facility and are used extensively in laboratories and aseptic manufacturing areas.

Additional Biotech Products

Biotech Reagents

J.T.Baker biotech reagents are manufactured under cGMP to meet your most demanding requirements and provide regulatory compliance even though no compendial monograph exists for these products.



J.T.Baker Sterile Cleansers

Description	Product Number
Ethanol 70% Solution Denatured, Sterile	P004
Hydrogen Peroxide 3% Solution, Sterile	P006
Isopropyl Alcohol 70% Solution, Sterile	P002
Isopropyl Alcohol 70% Solution, Sterile	P007
Sodium Hypochlorite 5% Solution, Sterile	P005

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

J.T.Baker Biotech Reagents

Description	cGMP-produced	Product Number
1,4-Dithiothreitol (DTT), ULTRAPURE BIOREAGENT	•	F781
Galactose	•	2102,2103
Trehalose	•	4226
Tris Hydrochloride	•	4106

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

ULTRAPURE BIOREAGENTS

The J.T.Baker line of ULTRAPURE BIOREAGENTS delivers crucial parameters to molecular biologists, including assay purity ranging from 98% to above 99.9%, no detectable DNase, RNase and Protease, low heavy metal content, and low insolubles. The product line also includes biological buffers that are non-toxic to cells and are not absorbed through cell membranes. For a complete list of products, please see the Drug Discovery section of this catalog starting on page 58.

BAKER BIO-ANALYZED Solvents

J.T.Baker BAKER BIO-ANALYZED solvents for biomolecule synthesis are specifically designed, manufactured, and tested to maximize coupling efficiencies and deliver the highest yields in this critical application. For a complete list of products, please see the Drug Discovery section of this catalog starting on page 58.

Products for Biopharmaceutical Quality Control

In biopharmaceutical manufacturing, quality control is a critical component for our customers. For biopharmaceutical quality control and analysis, Avantor offers a broad range of high quality products, including a full line of high purity chemicals and reagents specifically for quality control testing. See the reference table below for the location of detailed descriptions and the A to Z section of this catalog for the broad range of products offered.

Products for Biopharmaceutical Quality Control

Product Line	Full Description Location
HPLC Solvents	Analytical Chromatography section starting on page 22
LC/MS Solvents	Analytical Chromatography section starting on page 22
UHPLC Solvents	Analytical Chromatography section starting on page 22
HPLC Columns	Analytical Chromatography section starting on page 22
Standards	Instrument Calibration and Standards section starting on page 94
Solid Phase Extraction	Analytical Chromatography section starting on page 22
Volumetric Solutions	Wet Chemical Analysis section starting on page 49
ACS Grade Reagents	Academic Section starting on page 91

Histopathology

Histopathology and histology deal with the microscopic study of cell anatomy and tissues. The products used in preparing biological samples for examination must be of high quality and consistency.

J.T.Baker and Macron Fine Chemicals products for use in histopathology are produced and packaged in our ISO 9001:2000 certified facilities and are of the highest quality, ensuring that they are dependable and consistent. We offer solvents, buffers, stains, and dyes formulated for use in the fixation, processing, and staining stages of the histopathology sample preparation process.

Solvents, Buffers, Stains, and Dyes

Both J.T.Baker and Macron Fine Chemicals offer buffered formalin and formaldehyde for use as a histology fixative, as well as other commonly used solvents and buffers specifically designed for histology applications. Our histology stains and dyes are certified by the Biological Stain Commission.

J.T.Baker Histopathology Products

Description	Product Number
2-Naphthol	2742
Acetone	A134
Acid Fuchsin	A355
Alcohol, Anhydrous, Reagent*	A478
Aniline Blue WS	B362
Auramine O	B604
Basic Fuchsin Hydrochloride	B660
Bismarck Brown Y	C548
Collodion	9202
Crystal Violet	F907
Decalcifying Solution, Krajian	G161
Eosin B	L083
Eosin Y	L088
Erythrosin B	L146
Fast Green FCF	M377

Description	Product Number
Formalin, 10% v/v Solution, Neutralized	M518
Formalin, 10% w/v Solution	M518
Giemsa Blood Staining Solution, Stock	M708
Giemsa Stain	M702
Hematoxylin	M906
Isopropyl Alcohol	U298
Lanolin	2252
Light Green SF Yellowish	P399
Malachite Green Oxalate	P450
Methanol	9076
Methylene Blue	Q475
Neutral Red	R746
New Methylene Blue N, Brecher Formula	R769
Orange G	S752
Pepsin, Powder	2844

Description	Product Number
Phloxine B	U029
Safranine O	U926
Schiff Reagent, Hotchkiss and McManus	U973
Sodium Sulfite, Exsiccated	3888
Sudan IV	V141
Sulfanilamide	4079
Thymol Iodide	4131
Titanium Tetrachloride	4167
Toluene	9462
Toluidine Blue O	W144
Wright's Stain	X492
Xylenes	X516

*Made from Specially Denatured Alcohol 3A

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals Histopathology Products

Description	Product Number
Acetone	H580
Acid-Dichromate Cleaning Solution	V582
Aniline Blue/WS	H179
Collodion	4560
Collodion, Flexible	4580
Eosin Y (Yellowish)	0460
Ethyl Alcohol	3791
Ethyl Alcohol *	7018
Formaldehyde Solution, 10% (w/v) in Aqueous Phosphate Buffer	H121

Description	Product Number
Formaldehyde, 37% Solution	5016
Formalin, 10% v/v Solution, Neutralized	E058
Gentian Violet	E518
Hematoxylin	E106
Hydrocortisone, Micronized	8830
Isopropyl Alcohol	H604
Malachite Green Oxalate	E107
Menthol, Crystal	6222
Mercury, Redistilled	1280
Methyl Alcohol Anydrous	H603

Description	Product Number
Orange G Certified	2619
Parlodion, Strips	6552
Pilocarpine Nitrate	6662
Reagent Alcohol	7019
Schiff Reagent, Hotchkiss and McManus	E070
Toluene	8608
Wright's Stain	E209
Xylene	8664

* Made from Completely Denatured Alcohol Formula 19

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com

Environmental Testing

The area of environmental testing is highly regulated with prescribed protocols testing for pollutants, such as heavy metals in all types of environmental samples—from groundwater to waste water streams to industrial waste. The test methods are rigorous and demanding, and suitable products need to be used throughout the protocols, from sample preparation to final analysis. Avantor offers a range of products for environmental testing—from solvents to solid phase extraction disks to standards for instrument standardization and calibration. These products are of the highest purity and are specifically designed for use in environmental test methods.

Products for GC Analysis

J.T.Baker ULTRA RESI-ANALYZED and Macron Fine Chemicals UltimAR grades of solvents are recommended for use in GC applications.

The rigorous demands of EPA extraction, concentration, and sample cleanup protocols drove the development of J.T.Baker and Macron Fine Chemicals solvents suitable for GC analysis. Our unique solvent stabilizer systems provide unmatched product stability and interference-free results. For more information on these products, please refer to the Analytical Chromatography section of this catalog, starting on page 22.

Liquid-Liquid Extraction

Liquid-liquid extraction is a method of separating sample components to isolate an analyte of interest. In environmental analyses, the process is typically done in a separatory funnel with volumes of an aqueous sample and an organic, non-miscible solvent. Separation is accomplished by agitating the mixture and allowing it to settle into layers, then decanting the organic layer containing the desired analyte. Liquid-liquid extractions are generally done as sample preparation steps for further analysis.

The solvent used in the separation needs to be suitable for whatever instrument the further analysis is going to be done on. Generally, for environmental analyses, the methods call for analysis by gas chromatography (GC). J.T.Baker ULTRA RESI-ANALYZED and Macron Fine Chemicals UltimAR grades are recommended for use in liquid-liquid extractions. For more information on these products, please refer to the Analytical Chromatography section of this catalog, starting on page 22.

Solid Phase Extraction

At one time, liquid-liquid extraction was the primary separation technique for environmental samples. In recent years, solid phase extraction (SPE) has taken over more and more of the separations of this type. The reasons are simple—speed, efficiency, and reproducibility are generally better with SPE. Far less solvent is used in the process, reducing costs and exposure of personnel to hazardous solvent fumes. Separations are also done in a shorter time and multiple samples can easily be processed at one time on a vacuum processor.

J.T.Baker BAKERBOND *Speedisk* Extraction Disks

These patented 50 mm disks are designed specifically for environmental samples. The laminar configuration of the disks provides filtration capacity and inlet characteristics that maximize access of analyte molecules to the microparticulate sorbent. The design resists clogging and ensures high throughput, even when samples contain solids. Capacity, recovery, and precision are high due to the unique disk configuration and the performance of our BAKERBOND sorbents. These disks can be used with J.T.Baker extraction stations, or inexpensive adapters are available for use with other brands of extraction stations.

On the top of page 90 is a summary of the U.S. EPA methods currently approved for SPE and the BAKERBOND *Speedisk* extraction disk recommended for the extraction:

J.T.Baker BAKERBOND *Speedisk* 50 mm Extraction Disks

Description	Quantity per Box	Product Number	Price	
BAKERBOND *Speedisk* C_{18} 50 mm extraction disk. For use in EPA Methods 500 Series, 608, SW 846/3535 and with slightly polar to non-polar industrial samples.	20	8055-06	$170.70	
	20	8055-07	191.60	High capacity
BAKERBOND *Speedisk* C_{18} XF 50 mm extraction disk. For dirty samples: EPA Methods 608, 846, and slightly polar to non-polar industrial samples.	20	8056-06	184.30	
BAKERBOND *Speedisk* C_8 50 mm extraction disk. For diquat, paraquat, EPA Method 549.1.	20	8057-06	167.50	
BAKERBOND *Speedisk* SAX 50 mm extraction disk. For EPA Method 552.1, haloacetic acids and Dalapon.	20	8058-06	237.30	
BAKERBOND *Speedisk* DVB 50 mm extraction disk. For chlorinated acids, EPA Method 515.2. Slightly polar to non-polar analytes.	20	8068-06	215.50	
BAKERBOND *Speedisk* DVB 50 mm extraction disk. For SW846 H_2O-phobic to slightly H_2O-philic compounds.	20	8072-06	220.20	
	20	8072-07	279.80	High capacity
BAKERBOND *Speedisk* Oil & Grease 50 mm extraction disk. For use with slightly polar to non-polar hydrocarbons, EPA Method 1664, Rev. A.	20	8060-06	196.30	
BAKERBOND *Speedisk* PolarPlus C_{18} 50 mm extraction disk. For extraction of slightly polar to moderately polar compounds such as sulfonylureas, phenols, chlorophenoxy acids, and urones.	20	8061-06	170.90	

BAKERBOND Speedisk Extraction Disks for Automated Extractors

Description	Quantity per Box	Product Number	Price	
BAKERBOND *Speedisk* C_{18} Auto 50 mm extraction disk. For use in EPA Methods 500 Series, 608, SW 846/3535 and with slightly polar to non-polar industrial samples.	32	8062-06	$275.50	
	32	8062-07	309.60	High capacity
BAKERBOND *Speedisk* DVB Auto 50 mm extraction disk. For chlorinated acids, EPA Method 515.2.	32	8069-06	339.20	
BAKERBOND *Speedisk* Oil & Grease Auto 50 mm extraction disk. For use with slightly polar to non-polar hydrocarbons, EPA Method 1664, Rev.A.	32	8064-06	314.30	

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

EPA Method 525.2 Columns

We offer two versions of J.T.Baker BAKERBOND SPE Octadecyl (C_{18}) columns that are suitable for use in EPA Method 525.2, titled "Determination of Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary Column Gas Chromatography/Mass Spectrometry". For more information on these SPE columns, please see the Analytical Chromatography section of this catalog starting on page 22.

Processors and Accessories

We offer a variety of processors for use with our sample preparation line of products. These include vacuum processors for use with standard SPE and *Speedisk* columns and *Speedisk* 50 mm disks. We also offer positive pressure processors for use with *Speedisk* 96 columns and well plates in a configuration for processing 48 or 96 columns simultaneously. For further information on these processors and available accessories, please see the Analytical Chromatography section of this catalog starting on page 22.

Products By Application

EPA Methods for SPE and BAKERBOND Products

EPA Method	Analytes	Sorbent	Product Number
506	Phthalate and Adipate Esters	C_{18}	8055-06
508.1	Organochlorine Pesticides, Herbicides, and Organohalides	C_{18} High Capacity	8055-07
515.2	Chlorinated Acids	H_2O-Phobic DVB	8068-06
525.2	Organic Compounds	C_{18}	8055-06
526.1	Selected Semivolatile Organics	H_2O-Phobic DVB	8068-06
532.1	Phenylurea	C_{18}	8055-06
549.2	Diquat and Paraquat	C_8	8057-06
550.1	PAH's	C_{18}	8055-06
552.1	Haloacetic Acids and Dalapon	SAX	8058-06
553.1	Benzidines and Nitrogen Pesticides	C_{18}	8055-06
1664	Oil and Grease	Oil and Grease	8060-06
1668	PCB's	C_{18}	8055-06
8041	Phenols	H_2O-Philic DVB	8072-07
8061A	Phthalate and Adipate Esters	C_{18}	8055-06
8081A/8082	Organochlorine Pesticides and PCB's	C_{18} XF or H_2O-Phobic DVB	8056-06 or 8068-06
8100	PAH's	C_{18}	8055-06
8141A	Organophosphorous Compounds	H_2O-Phobic DVB	8068-06
8270C	Semivolatile Organic Compounds	H_2O-Philic DVB	8072-07

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Products for Trace Metal Analysis

One of the most frequent types of environmental analysis is trace metal determination in environmental samples. In order to conduct trace metal analyses by AA or ICP, the sample must generally be digested in acid first. Avantor has a reputation for high-purity acids based on years of quality, consistency, and innovation. These products are part of the broadest acid portfolio available from any basic manufacturer of acids. Trace metal analysis also requires standards for creation of calibration curves and for instrument standardization. Avantor offers a wide range of single and multi-element standards, many designed specifically for environmental applications. For further information on acids for trace metal analysis, please see the Spectrophotometry/Element Analysis section of this catalog starting on page 46. For information on standards for use in trace metal applications, please see the Analytical Standards section of this catalog starting on page 94.

Purge and Trap

Purge and Trap or headspace analysis is a sample preparation technique for gas chromatography (GC) applications that is used when preconcentration or purification are required for a sample prior to injection into the GC. The Purge and Trap process separates and concentrates volatile sample components in a sorbent trap, which is then heated rapidly to desorb the volatile components onto the GC instrument.

J.T.Baker ULTRA RESI-ANALYZED Methanol (Product Number 9077) was designed specifically for use in Purge and Trap analysis applications. In addition to the usual specifications for GC applications (high assay, low residue, titrable acid, titrable base, water), this product is tested for volatile organic traces that could interfere with the purge and trap analysis. The product is tested to be below the required EPA quantitation limit (CRQL) by both photoionization and electroconductivity detection methods.

For product specifications, packaging, and prices, please see the A to Z section of this catalog or visit our web site at www.avantormaterials.com

Sodium Sulfate

Pesticide residue analysis methods require the use of high quality sodium sulfate. J.T.Baker ULTRA RESI-ANALYZED Sodium Sulfate (Product Number 3375) and Macron Fine Chemicals AR (ACS) (Product Number 8024) are recommended. These products are ideally suited for this use and are tested for hexane extractable impurities.

Reference Standards

The availability of reliable, accurate standards is critical to the success of many quantitative instrumental analyses. Avantor provides an array of J.T.Baker single element and multi-element standards for AA and ICP applications. We offer single element AA standards and single and multi-element Plasma standards for your convenience, including many standards specifically for EPA protocols and the EPA Contract Laboratory Program (CLP). For more information on standards for trace element analysis, please see the Analytical Standards section of this catalog starting on page 94.

Other Products for Environmental Testing

Product Line	Full Description Location
HPLC Solvents	Analytical Chromatography section starting on page 22
LC/MS Solvents	Analytical Chromatography section starting on page 22
UHPLC Solvents	Analytical Chromatography section starting on page 22
HPLC Columns	Analytical Chromatography section starting on page 22

Academic

Academic institutions have unique requirements for chemicals and reagents. Academic researchers may require the highest purity products, while the chemistry classrooms may need standard reagent grades of chemicals. Tightly controlled budgets require getting the best value for the lowest cost. Chemicals need to be of outstanding quality and work as expected. Known chemical impurities need to be identified and quantified. Safety is always a critical concern because inexperienced students are often handling chemical bottles. For this reason, academic institutions often place a premium on safety information that accompanies chemical products.

Avantor chemicals fit the needs of academic institutions very well. When the highest purity products are needed for research applications, J.T.Baker salts, solvents, acids, and specialty products provide very high characterization and purity. For standard reagent grades of chemicals, Macron Fine Chemicals AR grade chemicals are designed to provide the best value for the price. Both Macron Fine Chemicals and J.T.Baker chemical products brands offer enhanced safety via packaging options whenever possible, and our SAF-T-DATA label puts critical safety, handling and storage information prominently on the label.

Academic Research Products

Academic researchers demand a lot from their chemicals as they are putting their personal reputation on the line with each project. They need to control variables in their experiments. They need lot-to-lot consistency so that their reagents perform the same way over extended periods of time. They need to know what impurities are in their reagents, and at what levels. They may also need reagents with minimal impurities, such as water or peroxides.

Analytical Products

J.T.Baker products have a long history of excellence in product quality, consistency, and innovation making it the brand that research scientists around the world turn to for critical applications. J.T.Baker products are specifically designed, manufactured, highly characterized, and function-tested to provide the highest levels of performance. When needed, we have special packaging to protect the purity of our products from time of packaging through delivery to your lab bench.

Macron Fine Chemicals ChromAR and UltimAR solvents are designed, manufactured, and characterized for use in more than one type of application—allowing you to stock one grade of solvent for multiple applications. ChromAR solvents meet ACS specifications and are suitable for liquid chromatography and UV spectrophotometry. UltimAR solvents meet ACS specifications for HPLC, UV spectrophotometry and general applications. UltimAR solvents are also tested by GC/ECD and GC/FID for use in extraction/concentration sample clean up protocols for trace level organic impurities. Please see the Analytical Chromatography section of this catalog starting on page 22 for more information about these Macron Fine Chemicals solvents.

For additional information about products used in specific methods, please see the Analytical Methods section in the front of this catalog. For a complete listing of available J.T.Baker and Macron Fine Chemicals products, please see the A to Z section of this catalog starting on page 107, or visit our web site at www.avantormaterials.com.

Discovery Products

Avantor has provided researchers with the tools to enable discovery in multiple disciplines for decades. Products used in drug discovery, such as the J.T.Baker line of ULTRAPURE BIOREAGENTS, which deliver crucial parameters to molecular biologists, including assay purity ranging from 98% to above 99.9%, no detectable DNase, RNase and Protease, low heavy metal content, and low insolubles. The product line also includes biological buffers that are non-toxic to cells and are not absorbed through cell membranes. For a complete list of products, please see the Drug Discovery section of this catalog starting on page 58 or visit our web site at www.avantormaterials.com.

Products By Application

General Reagents

Macron Fine Chemicals AR (ACS) reagents offer the best value for the money. Our reagents are designed and manufactured to perform consistently time after time and packaged in a variety of options, which enhance safety and promote green initiatives. AR (ACS) products are tested to standards set by the American Chemical Society and many of our reagents surpass these requirements. We also offer a complete line of J.T.Baker BAKER ANALYZED ACS reagents.

Macron Fine Chemicals reagents are the ideal choice in the stockroom due to the wide range of safer, space-saving packaging options, which are available for the Macron Fine Chemicals brand. Our square, space-saving poly bottles and containers allow you to store 20 to 25% more product in the same space taken up by traditional round containers.

Macron Fine Chemicals products are packaged in durable poly bottles whenever possible. If a product is not compatible with poly bottles, we generally offer poly-coated glass bottles for enhanced safety. Some products are also available in the AR-CAN container, a steel can that passes drop tests of 10 feet without seam ruptures or spills.

Our unique Circle of Safety bottle for hydrofluoric acid, an extremely hazardous material, includes a ring of colored indicator ink that changes color if the outside of the bottle is contaminated with HF. When rinsed clean, the ink returns to its normal color. All our packaging is designed with purity, safety, and convenience in mind.

BAKER ANALYZED ACS REAGENT Solvents

Product	Product Number
Acetic Anhydride	0018
Acetone	9006
Acetonitrile	9011
Alcohol, Anhydrous, Reagent	9401
iso-Amyl Alcohol	9038
Aniline	9110
1-Butanol	9054
Butyl Acetate	D683
tert-Butyl Alcohol	9056
Carbon Disulfide	9172
Chlorobenzene	9179
Chloroform	9180
Cyclohexane	9206
1,2-Dichloroethane	H076
Diethanolamine	9227
Dimethylformamide	9221
Dimethyl Sulfoxide	9224
p-Dioxane	9231
Ether, Anhydrous	9244
Ether	9240
Ethyl Acetate	9280
Formaldehyde, 37% Solution	2106
Formamide	M522
Furfural	2118

Product	Product Number
Glycerol, Anhydrous	2136
Hexanes	9309
Hexanes	9367
Isobutyl Alcohol	9044
Methanol	9070
Methanol, Anhydrous	9049
2-Methoxyethanol	P784
Methyl tert-Butyl Ether	9034
Methyl iso-Butyl Ketone	9322
Methylene Chloride	9324
Methyl Ethyl Ketone	9319
Monoethanolamine	9314
Nitrobenzene	9325
Nitromethane	S161
Petroleum Ether, 35–60°C.	9268
2-Propanol	9084
iso-Propyl Ether	9243
Pyridine	3348
Tetrahydrofuran	9450
Toluene	9460
Trichloroethylene, Stabilized	9458
2,2,4-Trimethylpentane	9478
Xylenes	9490

For **BAKER ANALYZED ACS Reagent grade acids see** table on page 46

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

AR (ACS) Reagent Solvents

Product	Product Number
Acetic Anhydride	2420
Acetone	2440, 2437, 2443
Acetonitrile	0043
Aniline	3584
Benzoyl Chloride	3868
Butyl Alcohol, Normal	3000
tert-Butyl Alcohol	2998
Carbon Disulfide	8831
Chlorobenzene	4419
Chloroform	4440, 4441
Cyclohexane	4878
Cyclohexanone	4872
1,2-Dichloroethane	4966
Dichloromethane	4881, 4883, 4884

Product	Product Number
N,N-Dimethylformamide	4929
Dimethyl Sulfoxide	4948
Dioxane	4937
Ethyl Acetate	4992, 4988
Ethyl Ether	0850
Ethyl Ether, Anhydrous	0848
Formaldehyde Solution	5016
Glycerol	5092
Hexanes	5189
Hexanes	5162
Isobutyl Alcohol	3002
Isopentyl Alcohol	2992, 3032
Isopropyl Ether	0800
Methyl Alcohol	3017

Product	Product Number
Methyl Alcohol, Anhydrous	3016
Methyl Ethyl Ketone	6240
Methyl Isobutyl Ketone	6247
Morpholine	1884
Nitrobenzene	6410
Petroleum Ether, 35 °-60 °C	4980, 4971, 4983
Pyridine	7180, 7181
Reagent Alcohol, Absolute	7019, 6183
Tetrahydrofuran	8498, 8497
Toluene	8608
Trichloroethylene, Stabilized	8600
2,2,4-Trimethylpentane	1943
Water	H453
Xylenes	8668

For **Macron AR (ACS) acids see** table on page 46

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com

Safety Products

The safety of our customers is of prime importance at Avantor. In addition to safety conscious packaging, we provide a variety of resources to make sure customers have access to the critical information that they need to work safely in the laboratory. The range of safety products and services we offer include the following:

Material Safety Data Sheets

J.T.Baker and Macron Fine Chemicals Material Safety Data Sheets are available around the clock in a variety of ways - over our web site (www.avantormaterials.com), or through our MSDS CD-ROM subscription service. For more information about any of these services, please contact our Customer Service department at 1-855-282-6867.

Spill Cleanup Products

Despite everyone's best efforts to protect chemicals during transit and use, accidents happen. Chemical spills take place in a variety of environments—laboratory, stockroom, warehouse, storage, or transportation. When a spill does take place, it is important not just to clean up the spill, but to also neutralize any hazards associated with the spill. For example, vermiculite used to clean up a hazardous solvent spill can actually create a greater hazard than the spill by increasing flammable vapors.

Our proprietary spill kit formulations are designed to effectively counteract or neutralize the hazards associated with acid, caustic, mercury, and solvent spills. Our spill products are available in convenient, environmentally friendly kits or in drum sizes for larger spills.

J.T.Baker Spill Kits

Acid Neutralizers and SAF-T-SPILL Kits		Size
4456-05	NEUTRASORB Acid Neutralizer	3.2 kg
4456-09	NEUTRASORB Acid Neutralizer	45.4 kg
4442-02	Acid Spill Cleanup Kit	1 kit

Caustic Neutralizer and SAF-T-SPILL Kits		Size
4470-05	NEUTRACIT-2	1.2 kg
4441-02	Caustic Spill Cleanup Kit	1 kit

Mercury Spill CleanUp and SAF-T-SPILL Kits		Size
4439-01	Mercury Spill Cleanup Kit	1 kit

Solvent Adsorbent and SAF-T-SPILL Kits		Size
4458-05	SOLUSORB Solvent Absorbent	1.1 kg
4437-02	Solvent Spill Cleanup Kit	1 kit

Laboratory Spill Cleanup Centers and Accessories		Size
4434-03	Spill Cleanup Center	1 kit
4433-02	SAF-T-SPILL Bulk Center	1 kit
4483-03	Safety Equipment Kit	1 ea

Note: 12 Part Safety Video Series is also available - #4568-00

See the Reference Information Section in the back of this catalog for neutralizaiton capacities of these products.

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Products By Application

Instrument Calibration and Standards

The availability of reliable, accurate standards is critical to the success of your instrumental analyses. Analytical standards are needed to create calibration curves for quantitative analysis and for standardization of instruments used in a variety of elemental analysis applications. Standards must be stable and contain highly accurate concentrations of the element being tested for.

Avantor understands your needs and provides an array of J.T.Baker standards for atomic absorption and ICP applications. We offer single element AA standards and single and multi-element plasma standards for your convenience, including many standards specifically for EPA protocols and the EPA Contract Laboratory Program (CLP).

Atomic Absorption Standards

J.T.Baker atomic absorption standards are prepared from metals and salts of 99.99% spectral purity in specially selected matrices. Standards are available for 35 elements in 1,000 µg/mL concentrations packaged in 150 mL bottles. All standards are verified against standards traceable to the National Institute of Standards and Technology (NIST) Standard Reference Material (SRM) numbers, which are printed on the label.

J.T.Baker Atomic Absorption Standards

Description	Concentration	Solute	Matrix	Size	Product Number
Aluminum	1,000 µg/mL	Al	5% HCl	150 mL	6440-04
Antimony	1,000 µg/mL	Sb	20% HCl	150 mL	6441-04
Arsenic	1,000 µg/mL	As	5% HNO_3	150 mL	6442-04
Barium	1,000 µg/mL	$Ba(NO_3)_2$	5% HNO_3	150 mL	6443-04
Beryllium	1,000 µg/mL	Be	5% HCl	150 mL	6444-04
Bismuth	1,000 µg/mL	Bi	5% HNO_3	150 mL	6445-04
Boron	1,000 µg/mL	H_3BO_3	H_2O	150 mL	6446-04
Cadmium	1,000 µg/mL	Cd	5% HNO_3	150 mL	6447-04
Calcium	1,000 µg/mL	$CaCO_3$	5% HNO_3	150 mL	6448-04
Chromium	1,000 µg/mL	Cr	5% HCl	150 mL	6449-04
Cobalt	1,000 µg/mL	Co	5% HNO_3	150 mL	6450-04
				500 mL	6450-01
Copper	1,000 µg/mL	Cu	5% HNO_3	150 mL	6451-04
Gold	1,000 µg/mL	Au	20% HCl	150 mL	6452-04
Iron	1,000 µg/mL	Fe	5% HNO_3	150 mL	6453-04
Lanthanum	1,000 µg/mL	La	5% HNO_3	150 mL	6454-04
Lead	1,000 µg/mL	Pb	5% HNO_3	150 mL	6455-04
Lithium	1,000 µg/mL	Li_2CO_3	5% HNO_3	150 mL	6456-04
Magnesium	1,000 µg/mL	Mg	5% HNO_3	150 mL	6457-04
Manganese	1,000 µg/mL	Mn	5% HNO_3	150 mL	6458-04
Mercury	1,000 µg/mL	Hg	5% HNO_3	150 mL	6459-04
Molybdenum	1,000 µg/mL	Mo	5% HNO_3	150 mL	6460-04
Nickel	1,000 µg/mL	Ni	5% HNO3	150 mL	6461-04
Palladium	1,000 µg/mL	Pd	20% HCl	150 mL	6462-04

J.T.Baker Atomic Absorption Standards

Description	Concentration	Solute	Matrix	Size	Product Number
Platinum	1,000 µg/mL	Pt	20% HCl	150 mL	6463-04
Potassium	1,000 µg/mL	KNO_3	5% HNO_3	150 mL	6464-04
Selenium	1,000 µg/mL	Se	5% HNO_3	150 mL	6465-04
Silicon	1,000 µg/mL	$(NH_4)_2SiF_6$	H_2O	150 mL	6466-04
Silver	1,000 µg/mL	Ag	5% HNO_3	150 mL	6467-04
Sodium	1,000 µg/mL	Na_2CO_3	5% HNO_3	150 mL	6468-04
Strontium	1,000 µg/mL	$Sr(NO_3)_2$	5% HNO_3	150 mL	6469-04
Thorium	1,000 µg/mL	$Th(NO_3)_4$	5% HNO_3	150 mL	6470-04
Tin	1,000 µg/mL	Sn	20% HCl	150 mL	6471-04
Titanium	1,000 µg/mL	$(NH_4)_2TiF_6$	H_2O	150 mL	6472-04
Vanadium	1,000 µg/mL	V_2O_5	5% HNO_3	150 mL	6473-04
Zinc	1,000 µg/mL	Zn	5% HNO_3	150 mL	6474-04

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Single Element Plasma Standards

Produced from raw materials with greater than 99.999% spectral purity, these J.T.Baker standards are packaged in 100 mL bottles that are acid leached and triple rinsed. Each standard is analyzed for the calibrating element, as well as trace impurities of over 70 additional elements. All solutions are NIST traceable. Products are available in concentrations of 1,000 µg/mL or 10,000 µg/mL in 100 mL bottles.

J.T.Baker Single Element Plasma Standards

Description	Concentration	Solute	Matrix	Size	Product Number
Aluminum	1,000 µg/mL	Al	5% HCl	100 mL	5701-04
	10,000 µg/mL			100 mL	5716-04
	10,000 µg/mL			500 mL	5716-01
Antimony	1,000 µg/mL	Sb	20% HCl	100 mL	5703-04
	10,000 µg/mL			100 mL	5717-04
Arsenic	1,000 µg/mL	As	5% HNO_3	100 mL	5704-04
	10,000 µg/mL			100 mL	5718-04
Barium	1,000 µg/mL	$Ba(NO_3)$	5% HNO_3	100 mL	5705-04
	10,000 µg/mL			100 mL	5719-04
Beryllium	1,000 µg/mL	$Be_4O(C_2H_3O_2)_6$	5% HNO_3	100 mL	5706-04
	10,000 µg/mL			100 mL	5720-04
Bismuth	1,000 µg/mL	Bi	5% HNO_3	100 mL	5707-04
	10,000 µg/mL			100 mL	5721-04
Boron	1,000 µg/mL	H_3BO_3	1% NH_4OH	100 mL	5708-04
	10,000 µg/mL			100 mL	5722-04

Description	Concentration	Solute	Matrix	Size	Product Number
Cadmium	1,000 µg/mL	Cd	5% HNO_3	100 mL	5709-04
	10,000 µg/mL			100 mL	5723-04
Calcium	1,000 µg/mL	$CaCO_3$	5% HNO_3	100 mL	5710-04
	10,000 µg/mL			100 mL	5724-04
Chromium	1,000 µg/mL	Cr	5% HCl	100 mL	5711-04
	10,000 µg/mL			100 mL	5727-04
Cobalt	1,000 µg/mL	Co	5% HNO_3	100 mL	5712-04
	10,000 µg/mL			100 mL	5728-04
Copper	1,000 µg/mL	Cu	5% HNO_3	100 mL	5713-04
	10,000 µg/mL			100 mL	5729-04
	10,000 µg/mL			500 mL	5729-01
Gallium	1,000 µg/mL	Ga	5% HNO_3*	100 mL	5714-04
	10,000 µg/mL			100 mL	5758-04
Germanium	1,000 µg/mL	Ge	5% HNO_3**	100 mL	5762-04
	10,000 µg/mL			100 mL	5759-04

Products By Application

J.T.Baker Single Element Plasma Standards

Description	Concentration	Solute	Matrix	Size	Product Number
Gold	1,000 µg/mL	Au	20% HCl	100 mL	5763-04
	10,000 µg/mL			100 mL	5730-04
Iron	1,000 µg/mL	Fe	5% HNO_3	100 mL	5764-04
	10,000 µg/mL			100 mL	5731-04
Lead	1,000 µg/mL	Pb	5% HNO_3	100 mL	5765-04
	10,000 µg/mL			100 mL	5732-04
Lithium	1,000 µg/mL	Li_2CO_3	5% HNO_3	100 mL	5766-04
	10,000 µg/mL			100 mL	5733-04
Magnesium	1,000 µg/mL	Mg	5% HNO_3	100 mL	5767-04
	10,000 µg/mL			100 mL	5734-04
Manganese	1,000 µg/mL	Mn	5% HNO_3	100 mL	5793-04
	10,000 µg/mL			100 mL	5735-04
Mercury	1,000 µg/mL	Hg	5% HNO_3	100 mL	5768-04
	10,000 µg/mL			100 mL	5736-04
Molybdenum	1,000 µg/mL	Mo	5% HNO_3**	100 mL	5769-04
	10,000 µg/mL			100 mL	5737-04
Nickel	1,000 µg/mL	Ni	5% HNO_3	100 mL	5770-04
	10,000 µg/mL			100 mL	5738-04
Niobium	1,000 µg/mL	$NbCl_5$	2% HF	100 mL	5771-04
	10,000 µg/mL			100 mL	5760-04
Palladium	1,000 µg/mL	Pd	20% HCl	100 mL	5772-04
	10,000 µg/mL			100 mL	5739-04
Platinum	1,000 µg/mL	Pt	20% HCl	100 mL	5773-04
	10,000 µg/mL			100 mL	5740-04
Potassium	1,000 µg/mL	KNO_3	5% HNO_3	100 mL	5774-04
	10,000 µg/mL			100 mL	5741-04
Scandium	1,000 µg/mL	ScO_3	5% HNO_3	100 mL	5776-04
	10,000 µg/mL			100 mL	5742-04
Selenium	1,000 µg/mL	Se	5% HNO_3	100 mL	5777-04
	10,000 µg/mL			100 mL	5743-04
Silicon	1,000 µg/mL	Si	5% HNO_3	100 mL	5778-04
	10,000 µg/mL			100 mL	5744-04
	10,000 µg/mL			500 mL	5744-01

Description	Concentration	Solute	Matrix	Size	Product Number
Silver	1,000 µg/mL	Ag	5% HNO_3	100 mL	5779-04
	10,000 µg/mL			100 mL	5745-04
Sodium	1,000 µg/mL	Na_2CO_3	5% HNO_3	100 mL	5780-04
	1,000 µg/mL			500 mL	5780-01
	10,000 µg/mL			100 mL	5746-04
	10,000 µg/mL			500 mL	5746-01
Strontium	1,000 µg/mL	$Sr(NO_3)_2$	5% HNO_3	100 mL	5781-04
	10,000 µg/mL			100 mL	5747-04
Tantalum	1,000 µg/mL	$TaCl_5$	2% HF	100 mL	5782-04
	10,000 µg/mL			100 mL	5748-04
Tellurium	1,000 µg/mL	Te	20% HCl	100 mL	5783-04
Thallium	1,000 µg/mL	Tl	5% HNO_3	100 mL	5784-04
	10,000 µg/mL			100 mL	5761-04
Thorium	1,000 µg/mL	$Th(NO_3)_4$	5% HNO_3	100 mL	5785-04
	10,000 µg/mL			100 mL	5750-04
Tin	1,000 µg/mL	Sn	20% HCl	100 mL	5786-04
	10,000 µg/mL			100 mL	5751-04
Titanium	1,000 µg/mL	Ti	5% HNO_3**	100 mL	5787-04
	10,000 µg/mL			100 mL	5752-04
Uranium	1,000 µg/mL	U_3O_8	5% HNO_3	100 mL	5788-04
	10,000 µg/mL			100 mL	5753-04
Vanadium	1,000 µg/mL	V_2O_5	5% HNO_3	100 mL	5789-04
	10,000 µg/mL			100 mL	5754-04
Yttrium	1,000 µg/mL	Y_2O_3	5% HNO_3	100 mL	5790-04
	10,000 µg/mL			100 mL	5755-04
Zinc	1,000 µg/mL	Zn	5% HNO_3	100 mL	5791-04
	10,000 µg/mL			100 mL	5756-04
Zirconium	1,000 µg/mL	$ZrCl_2O$	5% HCl	100 mL	5792-04
	10,000 µg/mL			100 mL	5757-04

* Also contains a trace amount of HCl
** Also contains a trace amount of HF

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Multi-Element Plasma Standards

These J.T.Baker standards are available for water and solid waste analysis for use in conjunction with EPA SW-846 Methods 6010 and 200.7, as well as Manual 600/7-79-020, Methods for Chemical Analysis of Water and Waste Water. The accompanying Certificate of Analysis lists actual concentrations of each element to help control your analysis. All standards are traceable to NIST.

J.T.Baker Multi-Element Plasma Standards

Description	Concentration Elements	(µg/mL)	Product Size	Product Number
Mixed Calibration Standard I EPA Method: SW-846; 6010 Section 5.4; 200.7 Section 7.4 (Matrix: 2% HNO_3)	Beryllium	50	100 mL	6001-01
	Cadmium	150		
	Lead	500		
	Manganese	100		
	Selenium	200		
	Zinc	150		
Mixed Calibration Standard III EPA Method: SW-846; 6010 Section 5.4; 200.7 Section 7.4 (Matrix: 2% HNO_3)	Arsenic	500	100 mL	6003-01
	Molybdenum	100		
	Silicon	100		
Mixed Calibration Standard IV EPA Method: SW-846; 6010 Section 5.4; 200.7 Section 7.4 (Matrix: 5% HNO_3)	Aluminum	200	100 mL	6004-01
	Calcium	1,000		
	Chromium	20		
	Nickel	20		
	Potassium	400		
	Sodium	200		
Mixed Calibration Standard V EPA Method: SW-846; 6010 Section 5.4; 200.7 Section 7.4 (Matrix: 5% HNO_3 and a trace of tartaric acid)	Antimony	200	100 mL	6005-01
	Boron	100		
	Magnesium	1,000		
	Silver	50		
	Thallium	200		
Interference Check Standard I EPA Method: SW-846; 6010 Section 5.4; 200.7 Section 7.4 (Matrix: 5% HNO_3)	Arsenic	1,000	100 mL	6011-01
	Barium	300		
	Beryllium	100		
	Cadmium	300		
	Chromium	300		
	Cobalt	300		
	Copper	300		
	Lead	1,000		
	Manganese	200		
	Mercury	50		
	Nickel	300		
	Potassium	20,000		
	Selenium	500		
	Silver	300		
	Thallium	1,000		
	Vanadium	300		
	Zinc	300		

Description	Concentration Elements	(µg/mL)	Product Size	Product Number
Interference Check Standard II EPA Method: SW-846; 6010 Section 5.7; 200.7 Section 7.6.2 (Matrix: 5% HNO_3 and a trace of HF)	Boron	500	100 mL	6012-01
	Molybdenum	300		
	Silicon	230		
	Titanium	1,000		
Interference Check Standard IV EPA Method: SW-846; 6010 Section 5.7; 200.7 Section 7.6.2 (Matrix: 5% HNO_3)	Aluminum	1,200	100 mL	6014-01
	Calcium	6,000		
	Iron	5,000		
	Magnesium	3,000		
	Sodium	1,000		
Primary Drinking Water Standard I EPA Method: SW-846; 1310 and 40 CFR Part 141 (Matrix: 2% HNO_3)	Arsenic	10	100 mL	6021-01
	Barium	100		
	Cadmium	5		
	Chromium	10		
	Lead	10		
	Selenium	5		
	Silver	10		
Trace Metal Standard I EPA Method: Manual 600/4-79-020 Methods for Chemical Analysis of Water and Wastewater (Matrix: 5% HNO_3)	Aluminum	500	100 mL	6031-01
	Arsenic	100		
	Beryllium	100		
	Cadmium	25		
	Chromium	100		
	Cobalt	100		
	Copper	100		
	Iron	100		
	Lead	100		
	Manganese	100		
	Mercury	5		
	Nickel	100		
	Selenium	25		
	Vanadium	250		
	Zinc	100		
Trace Metal Standard III EPA Method: Manual 600/4-79-020 Methods for Chemical Analysis of Water and Wastewater (Matrix: 2% HNO_3)	Barium	500	100 mL	6033-01
	Calcium	500		
	Magnesium	100		
	Molybdenum	500		
	Potassium	100		
	Sodium	500		

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Products By Application

CLP Plasma Standards

These J.T.Baker standard kits are designed for the EPA Contract Laboratory Program (CLP). All standards are traceable to NIST and include only the elements required for strict adherence to the CLP program.

CLP PLASMA STANDARDS

Description	Elements Concentration (µg/mL)				Product Number
		Solution I		Solution II	
ICV Solution I & II Solution 1 Matrix: 5% HNO_3 Solution 2 Matrix: 20% HCl Kit Contents: 100 mL of each solution	Barium	100	Aluminum	100	6103-01
	Beryllium	40	Antimony	100	
	Cadmium	50	Arsenic	100	
	Cobalt	100	Calcium	1,000	
	Copper	100	Chromium	100	
	Iron	100	Magnesium	1,000	
	Lead	100	Potassium	1,000	
	Manganese	100	Selenium	100	
	Nickel	100	Sodium	1,000	
	Silver	20	Vanadium	100	
	Thallium	100			
	Zinc	100			
CCV Solution I & II Solution 1 Matrix: 5% HNO_3 Solution 2 Matrix: 20% HCl Kit Contents: 100 mL of each solution	Barium	500	Aluminum	500	6106-01
	Beryllium	200	Antimony	500	
	Cadmium	250	Arsenic	500	
	Cobalt	500	Calcium	5,000	
	Copper	500	Chromium	500	
	Iron	500	Magnesium	5,000	
	Lead	500	Potassium	5,000	
	Manganese	500	Selenium	500	
	Nickel	500	Sodium	5,000	
	Silver	100	Vanadium	500	
	Thallium	500			
	Zinc	500			
ICS Solutions AB-1 and AB-2 Solution 1 Matrix: 5% HNO_3 Solution 2 Matrix: 20% HCl Kit Contents: 100 mL of each solution	Beryllium	50	Barium	50	6119-01
	Cadmium	100	Chromium	50	
	Cobalt	50	Vanadium	50	
	Copper	50			
	Lead	100			
	Manganese	50			
	Nickel	100			
	Silver	100			
	Zinc	100			
Water Standard I & II Solution 1 Matrix: 5% HNO_3 Solution 2 Matrix: 20% HCl Kit Contents: 100 mL of each solution	Beryllium	5	Aluminum	200	6122-01
	Cadmium	5	Antimony	50	
	Cobalt	50	Arsenic	200	
	Copper	25	Barium	200	
	Iron	100	Chromium	20	
	Lead	50	Selenium	200	
	Manganese	50	Vanadium	50	
	Nickel	50			
	Silver	5			
	Thallium	200			
	Zinc	50			

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

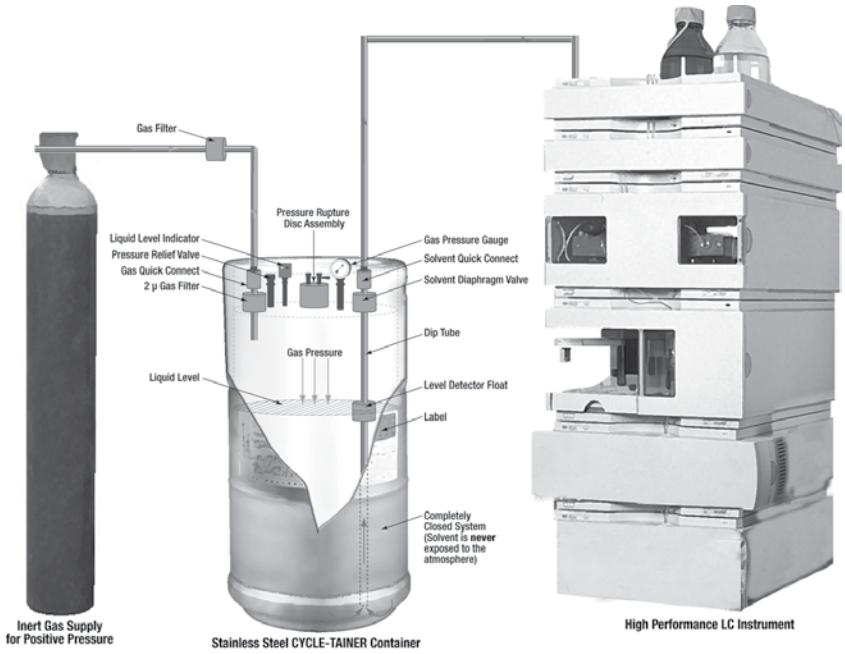
Solvent and Reagent Delivery Systems

J.T.Baker CYCLE-TAINER Solvent Delivery System

If you want to increase productivity and you routinely use high purity solvents in your work, you should consider the J.T.Baker CYCLE-TAINER solvent delivery system for your solvent needs. The CYCLE-TAINER system is a customer dedicated, 100% reusable, positive-pressure, closed dispensing system for J.T.Baker high purity solvents and reagents.

There are four primary reasons why the J.T.Baker CYCLE-TAINER solvent delivery system is a better solution than purchasing your solvents in bottles or one way drums.

Solvent quality is completely protected to your point of use with the closed CYCLE-TAINER system. An inert gas blanket and positive-pressure dispensing prevent solvent contact with possible contaminants such as air and water. Improve your productivity by eliminating frequent solvent testing due to opened bottles or multiple lots of solvent. The reproducibility of your applications may also be improved with consistent solvent quality.



A typical CYCLE-TAINER system connection to an HPLC instrument.

Green initiatives are enhanced. The J.T.Baker CYCLE-TAINER solvent delivery system is the greenest packaging available, since it is 100% reusable and generates no solid waste. It eliminates the need for additional packaging, which reduces storage space requirements and greatly reduces your solid waste stream. Eliminating bottle rinsing improves productivity and prevents addition of solvent residues to your waste water.

The CYCLE-TAINER system is available in a size to fit any appication.

Safety is enhanced by the stainless steel construction and built in safety features of the J.T.Baker CYCLE-TAINER solvent delivery system. Breakage and spills of glass bottles are eliminated. Employee exposure to hazardous solvent vapors is greatly reduced by delivering solvent directly to the point of use. Positive-pressure dispensing enables direct connection to instruments or solvent networks. Eliminating bottle rinsing prevents employee exposure to hazardous solvent vapors, improves productivity, and prevents addition of solvent residues to your waste water.

Scale up is made easy with our innovative Beaker to Bulk approach. Using the J.T.Baker CYCLE-TAINER solvent delivery system for your solvents ensures quality in the laboratory, consistency during the scale up process, and the volume requirements of production, since we provide identical product in all sizes. Improve your productivity by eliminating variables with consistent solvent quality at all stages of your application.

CYCLE-TAINER System Container Features

The J.T.Baker CYCLE-TAINER solvent delivery system is designed with built-in safety features that strengthen the system and provide error-free connections and maximum container control during operation.

A pressure relief valve (PRV) to handle minor pressure excursions during operation and a pressure rupture disc (PRDA) to handle major pressure excursions provide the utmost safety in your lab.

Two secondary manual shutoff valves (VS and VG) on the solvent and gas lines add additional safety and maximum control of the container.

Two color-coded, keyed quick-connects (QCS and QCG) prevent improper hook-ups and automatically shut off solvent flow once disconnected.

A pressure gauge (PG1) on 52, 215, and 1250 liter containers monitors the container pressure.

Tamper-evident seals (TE) ensure container integrity.

Liquid level cube (LLI) shows how much solvent remains in the container.

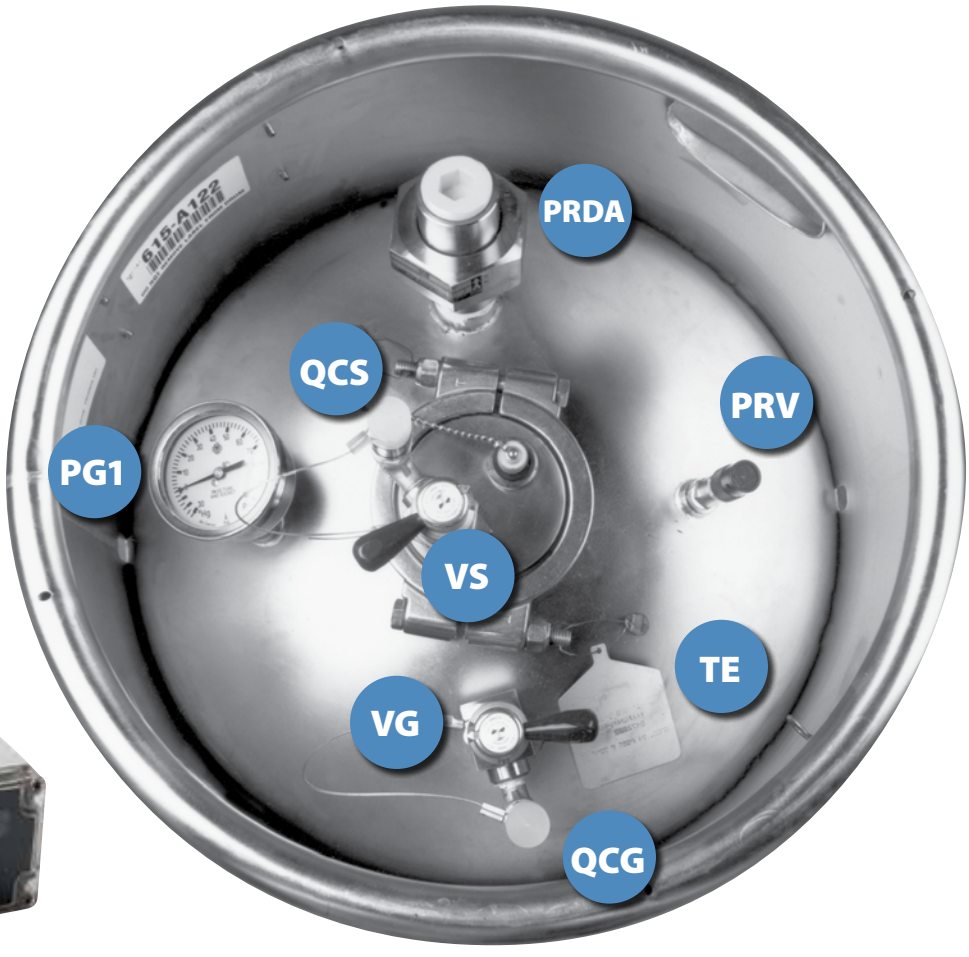
Rating or Certification	4 L Model S	18 L Model S	52 L Model S	215 L Model S	1250 L Model S
UN Rating	1A1X	1A1X	1A1X	1A1X	31A
Meets NFPA 30*	Yes	Yes	Yes	Yes	No
ASME ** Certified	No	No	Yes	Yes	No
FM *** Approved	Yes	Yes	Yes	Yes	Yes

* National Fire Protection Association Standard 30
** American Society of Mechanical Engineers
*** Factory Mutual

The J.T.Baker CYCLE-TAINER solvent delivery system is designed and certified with your safety in mind. The chart above indicates the standards and certifications for each size of CYCLE-TAINER system.

Container Specifications

The following tables contain container specification information for the J.T.Baker CYCLE TAINER solvent delivery system.



CYCLE-TAINER System Body Specification

Specification	4 L Model S	18 L Model S	52 L ASME Model S	215 L ASME Model S	1250 L Model S
Height	11.75″	22″	29″	55″	73″ including fork channels
Diameter	9.2″	11″	15.6″	21.7″	45″
Capacity	4 L	18 L	52 L	215 L	1250 L
Container Body	304 Stainless steel, wall thickness 0.052″	304 Stainless steel, wall thickness 0.06″	304 Stainless steel, wall thickness 0.08″	304 Stainless steel, wall thickness 0.08″	304 Stainless steel, wall thickness 0.098″
Tare Weight of System	13 lb.	24 ± 1 lb.	56 ± 1 lb.	144 ± 1 lb.	496 ± 1 lb.
Container Working Pressure	0–15 psi	0–15 psi	0–40 psi	0–40 psi	0–19 psi
Fork Truck Channels (2 ea.)	none	none	none	3.75″H x 8.5″W x 22″D	3.5″ H x 8.5″W
Fork Truck Base	none	none	none	22″ Square	41″ x 46″**

** Please Note: The 1250 L container fork channels extend beyond the diameter of the container on one side. The 1250 L container will need at least 46 inches for clearance.

CYCLE-TAINER System Head Assembly Specifications

	4 L Model S	18 L Model S	52 and 215 L ASME Model S	1250 L Model S
Container Head Assembly	304 Stainless steel	316 Stainless steel	316 Stainless steel	316 Stainless steel
On/Off Diaphragm Valve	1 valve for solvent Diaphragm Packless Valve	1 valve for solvent Diaphragm Packless Valve	2 valves—one for solvent and one for gas. Diaphragm Packless Valve	None
Gas Port (neutered Quick-Connect)	QT-2 Quick-Connect ¼″ male NPT connection	QT-2 Quick-Connect ¼″ male NPT connection	QT-2 Quick-Connect ¼″ male NPT connection	QT-2 Quick-Connect ¼″ male NPT connection
Solvent Port (color-coded, keyed Quick-Connect)	QT-2 Quick-Connect ¼″ male NPT connection	QT-2 Quick-Connect ¼″ male NPT connection	QT-2 Quick-Connect ¼″ male NPT connection	QT-8 Quick-Connect ¾″ male NPT connection
Pressure Relief Valve ¼″ Nupro Valve, male thread	Venting Pressure: 50 psi Reset Pressure: 35-38 psi	Venting Pressure: 50 psi Reset Pressure: 35-38 psi	Venting Pressure: 50 psi Reset Pressure: 38-40 psi	Venting Pressure: (25 psi) Reset Pressure: (16-22 psi)
Pressure Rupture Disk	N/A	N/A	Rupture Pressure: 56 psi 1″ female thread connection	Rupture Pressure: (35 psi) 2″ female thread connection
Venting Capacity	50 SCFM @ 50 psi (relief valve)	50 SCFM @ 50 psi (relief valve)	717 SCFM @ 61 psi (disk rupture)	(1460 SCFM @ 24 psi) (disk rupture)
Dispense Rate of Solvent	NA	3.5 L/min. typical @ 15 psi	3.5 L/min. typical @ 15 psi	Diaphragm pump usage will effect flow rate
Gas Pressure Gauge	NA	NA	-30 to 100 psi	NA
Level Indicator	NA	NA—if needed, a small scale may be used	LED level readout cube	NA
Tamper Evident Seals	Yes	Yes	Yes	No

Solvent and Reagent Delivery Systems

CYCLE-TAINER System Dispense Options and Accessories

We offer three basic dispense options for the J.T.Baker CYCLE-TAINER solvent delivery system. The CYCLE-TAP sampler allows you to easily withdraw small volumes of solvent to sample containers or transfer measured aliquots of solvent for oxygen- or water-sensitive reactions.

Solvent	Color Code	Product Number
Acetonitrile	Black	9815-02
Hexanes	Yellow	9815-06
Methanol	Orange	9815-03
Methylene Chloride	Green	9815-04
Tetrahydrofuran	Blue	9815-01
All Other Solvents	Brown	9815-05
Price		**$632.55**

The CYCLE-TAP toggle valve dispenser allows unmetered dispensing of solvents through a thumb operated toggle valve, which regulates solvent flow by pressing or releasing. The toggle valve also has a "hold on" position for continuous dispensing.

Solvent	Color Code	Product Number		
		4 ft	10 ft	15 ft
Acetone	White	9814-04	9814-05	9814-06
Acetonitrile	Black	9814-07	9814-08	9814-09
Ethyl Acetate	Purple	9814-17	9814-18	9814-19
Hexanes	Yellow	9814-20	9814-21	9814-22
Methanol	Orange	9814-23	9814-24	9814-25
Methylene Chloride	Green	9814-26	9814-27	9814-28
Tetrahydrofuran	Blue	9814-29	9814-30	9814-31
All Other Solvents	Brown	9814-12	9814-13	9814-14
Price		**$992.40**	**$1017.15**	**$1030.50**

The CYCLE-TAP needle adapter dispenser is specifically designed to enable dispensing of anhydrous solvents directly into a reaction vessel through a septum without the risk of exposure to air.

Solvent	Color Code	Product Number	
		4 ft	6 ft
Acetonitrile	Black	9814-10	9814-11
Methanol	Orange	9814-34	9814-35
Tetrahydrofuran	Blue	9814-32	9814-33
All Other Solvents	Brown	9814-15	9814-16
Price		**$992.40**	**$1002.25**

CYCLE-TAINER System Accessories

In addition to dispense options, we offer a range of high quality accessories for use with the J.T.Baker CYCLE-TAINER solvent delivery system, as detailed below.

Description	Photo	Size	Solvent	Color Code	Product Number	Price
Gas Quick-Connect Body—Swagelock quick-connect for use with gas line. For use with a Female Tube fitting.					9801-00	$179.60
Solvent Quick-Connect Body—Swagelock color-coded quick-connect for use with various solvents. For use with a Female Tube fitting.		<1250 L	Acetone	White	9802-06	179.60
		<1250 L	Acetonitrile	Black	9802-00	179.60
		1250 L	Acetonitrile	Black	9804-00	Inquire
		<1250 L	Ethyl Acetate	Purple	9802-07	179.60
		<1250 L	Hexanes	Yellow	9802-04	179.60
		<1250 L	Methanol	Orange	9802-01	179.60
		1250 L	Methanol	Orange	9804-01	Inquire
		<1250 L	Methylene Chloride	Green	9802-02	179.60
		<1250 L	Tetrahydrofuran	Blue	9802-05	179.60
		<1250 L	All Other Solvents	Brown	9802-03	179.60
Female Tube Fitting—adapts the quick-connect to the appropriate size tubing		1/8" tube size			9809-01	27.80
		1/4" tube size			9809-02	27.80
		1/2" tube size			9809-03	27.80
Liquid Level Indicator—provides a digital readout of the approximate volume of solvent remaining in the CYCLE-TAINER system. Signal can also be used to drive switching circuits. For 52 L and 215 L systems only.		52 L Model C			9803-01	566.30
		215 L Model C			9803-00	566.30
		225 L Model C			9803-02	566.30
		52 L Model S			9803-03	566.30
		215 L Model S			9803-04	566.30
SciLog Aliquot Dispense Station—an automated method for dispensing solvents when high precision or accuracy is required.						Inquire

CYCLE-TAINER System Container Return Program (SHaRE)

Avantor developed the SHaRE (SHipping and REturning) program to make the process of returning empty CYCLE-TAINER system containers easier and more cost effective. Avantor's low freight costs are available to you through an agreement with preferred freight line carriers, who are familiar with handling CYCLE-TAINER containers.

Please contact your local Avantor sales representative or Technical Services at 1-800-669-8230 for more information on container fleet size, installation, container tracking, returnable shipping programs, or any other aspect of using the J.T.Baker CYCLE-TAINER solvent delivery system.

The NOWPak Solvent Delivery System

The NOWPak solvent delivery system helps maintain the quality of our high-purity products where other packaging might not be suitable. This is particularly true for solvent blends containing an acidic modifier that are incompatible with stainless steel and are used in large-scale applications.

The NOWPak solvent delivery system consists of a rugged, non-pressurized, high density polyethylene (HDPE) or stainless steel outer container with a single-use polytetrafluoroethylene (PTFE) liner. Selected Macron Fine Chemicals high purity solvents are available in 20 L or 200 L NOWPak containers.

There are three primary reasons why the NOWPak system should be considered as an alternative to buying your solvents in glass bottles.

Solvent quality is protected by the sealed container and particle-free, inert liner, ensuring purity to the point of use. The collapsible liner prevents air from entering the system, reducing solvent degradation. The PTFE liners are manufactured in a class 10/100 cleanroom environment and will not contaminate the product.

Safety is enhanced by the elimination of breakage and spills common with glass bottles, and the double containment of the liner and outer package provides extra security against solvent or vapor leakage. Employee exposure to hazardous solvent vapors is greatly reduced by sealed dispensing directly to the point of use.

Productivity is improved by eliminating bottle rinsing. The translucent HDPE packaging allows for easy monitoring of the solvent level, and when the container is empty, the liner can be removed for easy disposal or returned with the overpack. Containers are not customer-dedicated, eliminating the need for tracking and rental programs. Convenient dispensing options are available to adapt to your application. Eliminating bottle rinsing and solid waste disposal of bottles and cases can help decrease operating costs and improve efficiency.

The NOWPak HDPE outer container is suitable for dispensing applications requiring intermittent pressure (<10 psig) or when solvent is withdrawn by an HPLC pump or bottletop dispenser. The NOWPak stainless steel outer container is designed for applications that require continuous pressure dispensing (<15 psi).

NOWPak System Dispense Options and Accessories

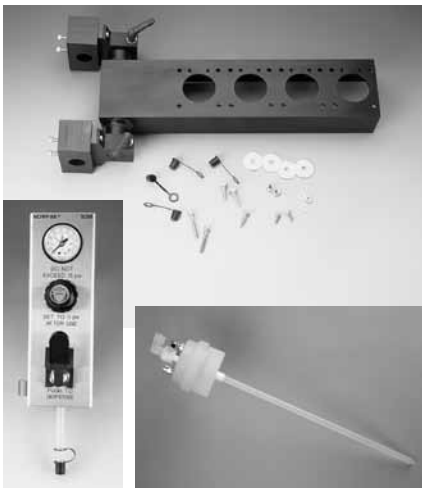
We offer a number of dispense options for the NOWPak containers, which are mainly screw-type attachments for fast, easy connection. For additional information on parts and accessories, please contact Avantor's Technical Service at 1-800-669-8230.

The NOWPak pour spout is a PTFE adapter for pouring from any size of NOWPak container. The nozzle tip is threaded to adapt to a variety of tube connection setups.

The NOWPak cap adaptor kit is required to pump solvent from the NOWPak container. The 20 L kit (shown) comes complete with the diptube, cap adapter, elbow, and frit for tubing attachment.

The bottletop dispenser adapter and remote bottletop dispenser are used for convenient dispensing of metered volumes from 20 L NOWPak containers. The screw-top adapter attaches to your bottletop dispenser. Kits are available for direct attachment to the container or with hardware to wall mount dispensers up to five feet from the container. Each kit comes with cap, diptube, and bottletop dispenser.

The Solvent Dispense Module, Pressure Dispense Connector, and Mounting Assembly are used to deliver solvent flow at the push of a button. This apparatus pressurizes the NOWPak between the liner and the overpack, compressing the liner and forcing the solvent to the valve operated dispense module. Mounting assemblies are available for multiple dispense modules.



The SciLog Inc. LabTec dispensing station provides automated, high precision, and high accuracy dispensing from milliliters to liters. Contact your Avantor sales representative for more information on this product.

NOWPak System Dispense Options and Accessories

Description	ATMI Product Number	Product Number	Price
20 L NOWPak			
Pour Spout		V589-00	$235.30
Cap Connector with 1/8" straight tubing		V583-00	382.85
Cap Connector with 1/4" elbow		V584-00	382.85
Sparging Adapter for 4 L (38 mm) bottle cap connection	ND-LD-12		Inquire
Bottletop Dispenser Adapter		V587-00	235.30
Solvent Dispense Module	ND-LD-17		Inquire
Pressure Dispense Connector	ND-LD-18		Inquire
Mounting Assembly	ND-LD-24		Inquire
LabTec Dispensing Station			Inquire
200 L NOWPak			
Cap Adapter with 3/4" straight tubing	DD-01-K1		Inquire
Cap Adapter with 1/2" straight tubing	DD-02-K1		Inquire
Diptube		V585-00	214.90

Container Return Program (SHaRE)

Utilizing the SHaRE program, the NOWPak container, with or without the disposable liner, can be returned using Avantor's low freight costs. Each NOWPak container is labeled with instructions for return when emptied, or you can contact our Customer Service department at 1-855-282-6867 for information or assistance. The complete details of the SHaRE program are outlined in the J.T.Baker CYCLE-TAINER solvent delivery system section of this catalog.

Please contact your local Avantor sales representative or Technical Service for more information on using the NOWPak solvent delivery system.

J.T.Baker Brand Alphabetical Product Listing

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

AA Standards

See Analytical Standards Section, p. 94-98

ABx BAKERBOND

See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

Acetanilide

BAKER ANALYZED Reagent
Reference Standard for the Determination of C, H, N, O

A068-03	Glass	25 g	non	86.00	

$CH_3CONHC_6H_5$ FW: 135.17

Carbon (C) ..... Actual Value Reported
Hydrogen (H) ..... Actual Value Reported
Nitrogen (N) ..... Actual Value Reported
Oxygen (O) ..... Actual Value Reported

Product Information (not specifications):
Appearance (white to off-white, grayish or brownish crystalline scales or crystalline powder)

CAS: 103-84-4 MERCK INDEX: 14,50 FLASH POINT: 174°C

Acetanilide

BAKER

A069-06	Poly	250 g	non	106.60	

$CH_3CONHC_6H_5$ FW: 135.17

Melting Point ..... 113-116 °C.

Product Information (not specifications):
Appearance (white to off-white, grayish or brownish crystalline scales or crystalline powder)

CAS: 103-84-4 MERCK INDEX: 14,50 FLASH POINT: 174°C

Acetic Acid, 4.0N Solution

BAKER ANALYZED Reagent

0330-07	Hedpak	19 L	bks	Inquire	
0330-09	Poly Drum	200 L	bul	Inquire	

CH_3COOH FW: 60.05

Made from USP Purified Water and Acetic Acid, Glacial, USP (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Assay (CH_3COOH), Normality 3.8-4.2
Appearance ..... Passes Test
Chloride (Cl) ..... max. 25 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Sulfate (SO_4) ..... Passes Test
Nonvolatile Residue (USP), mg/20 mL ..... max. 1.0

Filtered through 0.2 micron filter

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg IMO: 8:2790
FLASH POINT: 39°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, 30% Solution

cGMP

Biotech Reagent

0320-07	Hedpak	19 L	bks	Inquire	

CH_3COOH FW: 60.05

Made from USP Purified Water and Acetic Acid, Glacial, USP (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance ..... Passes Test
Assay (as CH_3COOH) 29.0-30.0%
Chloride (Cl) ..... max. 25 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Nonvolatile Residue (USP), mg/20 mL ..... max. 1.0
Sulfate (SO_4) ..... Passes Test

Filtered through 0.2 micron filter

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2790 FLASH POINT: 39°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial

BAKER ANALYZED ACS Reagent
(Aldehyde Free)

9508-02	Glass S/S	500 mL	cma	55.05	
		12 x 500 mL	cma	55.05	660.60
9508-01	Glass	12 x 500 mL	cma	33.40	400.80
9508-00	Poly Coated	6 x 500 mL	cma	37.35	224.10
9508-05	Glass S/S	2.5 L	cma	98.10	
		6 x 2.5 L	cma	98.10	588.60
9508-03	Glass	6 x 2.5 L	cma	59.35	356.10
9508-18	Poly	6 x 2.5 L	spr	54.75	328.50
9508-33	Poly Coated	6 x 2.5 L	cma	66.75	400.50
9508-06	Poly	4 x 4 L	cma	93.45	373.80
9508-07	Poly Pail	40 lb	bul	Inquire	
9508-08	Poly Drum	125 lb	bul	Inquire	
9508-15	Poly Drum	450 lb	bul	Inquire	

CH_3COOH FW: 60.05

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (by GC, corrected for water) ..... min. 99.7%
Color (APHA) ..... max. 10
Dilution Test ..... Passes Test
Residue after Evaporation ..... max. 0.001%
Acetic Anhydride ($(CH_3CO)_2O$) ..... max. 0.01%

Trace Impurities (in ppm):
Chloride (Cl) ..... max. 1
Sulfate (SO_4) ..... max. 1
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.2
Substances Reducing Dichromate ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Titrable Base (meq/g) ..... max. 0.0004
Acetaldehyde ..... max. 0.005%
Sensitivity ..... Passes Test

Trace Impurities (in ppb):
Arsenic and Antimony (as As) ..... max. 50
Boron (B) ..... max. 100

Acetic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chromium (Cr) ..... max. 200
Cobalt (Co) ..... max. 100
Copper (Cu) ..... max. 100
Heavy Metals (as Pb) ..... max. 500
Iron (Fe) ..... max. 200
Lead (Pb) ..... max. 300
Manganese (Mn) ..... max. 200
Nickel (Ni) ..... max. 100
Potassium (K) ..... max. 300
Tin (Sn) ..... max. 100
Titanium (Ti) ..... max. 300
Zinc (Zn) ..... max. 200

IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial
ULTREX II Ultrapure Reagent

6903-05	Fluoropolymer	500 mL	spr	444.90	

CH_3COOH FW: 60.05

Certificate Provided Reports Actual Lot Analysis
Assay (CH_3COOH) ..... min. 99.0%
Trace Impurities in ppt (pg/g):
Aluminum (Al) ..... max. 50
Antimony (Sb) ..... max. 50
Arsenic (As) ..... max. 50
Barium (Ba) ..... max. 10
Beryllium (Be) ..... max. 10
Bismuth (Bi) ..... max. 10
Cadmium (Cd) ..... max. 10
Calcium (Ca) ..... max. 50
Cerium (Ce) ..... max. 10
Cesium (Cs) ..... max. 10
Chromium (Cr) ..... max. 10
Cobalt (Co) ..... max. 10
Copper (Cu) ..... max. 50
Dysprosium (Dy) ..... max. 1
Erbium (Er) ..... max. 1
Europium (Eu) ..... max. 1
Gadolinium (Gd) ..... max. 1
Gallium (Ga) ..... max. 10
Germanium (Ge) ..... max. 10
Hafnium (Hf) ..... max. 10
Holmium (Ho) ..... max. 1
Indium (In) ..... max. 1
Iron (Fe) ..... max. 50
Lanthanum (La) ..... max. 1
Lead (Pb) ..... max. 10
Lithium (Li) ..... max. 10
Lutetium (Lu) ..... max. 10
Magnesium (Mg) ..... max. 50
Manganese (Mn) ..... max. 10
Molybdenum (Mo) ..... max. 10
Neodymium (Nd) ..... max. 1
Nickel (Ni) ..... max. 50
Platinum (Pt) ..... max. 50
Potassium (K) ..... max. 50
Praseodymium (Pr) ..... max. 1
Rhenium (Re) ..... max. 10
Rhodium (Rh) ..... max. 50

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Rubidium (Rb) ..... max. 10
Ruthenium (Ru) ..... max. 50
Samarium (Sm) ..... max. 1
Scandium (Sc) ..... max. 10
Selenium (Se) ..... Actual Value Reported
Silver (Ag) ..... max. 50
Sodium (Na) ..... max. 100
Strontium (Sr) ..... max. 10
Tellurium (Te) ..... max. 1
Terbium (Tb) ..... max. 1
Thallium (Tl) ..... max. 10
Thorium (Th) ..... max. 1
Thulium (Tm) ..... max. 1
Tin (Sn) ..... max. 50
Titanium (Ti) ..... max. 10
Tungsten (W) ..... max. 10
Uranium (U) ..... max. 1
Vanadium (V) ..... max. 10
Ytterbium (Yb) ..... max. 1
Yttrium (Y) ..... max. 1
Zinc (Zn) ..... max. 50
Zirconium (Zr) ..... max. 10

IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial
BAKER INSTRA-ANALYZED Reagent
For Trace Metal Analysis

9524-00	Poly Coated	500 mL	spr	94.00	
		6 x 500 mL	spr	53.70	322.20
9524-55	Glass	4 x 2.5 L	spr	Inquire	
9524-33	Poly Coated	2.5 L	spr	180.10	
		6 x 2.5 L	spr	102.90	617.40

CH_3COOH FW: 60.05

Meets ACS Specifications
Assay (by GC, corrected for water) ..... min. 99.9%
Acetaldehyde ..... max. 0.005%
Acetic Anhydride ($(CH_3CO)_2O$) ..... max. 0.01%
Color (APHA) ..... max. 10
Dilution Test ..... Passes Test
Residue after Evaporation ..... max. 5 ppm
Solubility in H_2O ..... Passes Test
Specific Gravity at 20°/20°C ..... min. 1.048
Substances Reducing Dichromate ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Titrable Base (meq/g) ..... max. 0.0004
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 0.5
Phosphate (PO_4) ..... max. 0.5
Sulfate (SO_4) ..... max. 0.5
Trace Impurities (in ppb):
Aluminum (Al) ..... max. 50
Arsenic and Antimony (as As) ..... max. 5
Barium (Ba) ..... max. 20
Beryllium (Be) ..... max. 10
Bismuth (Bi) ..... max. 50
Boron (B) ..... max. 10
Cadmium (Cd) ..... max. 5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium (Ca) .....max. 100
Chromium (Cr) .....max. 50
Cobalt (Co) .....max. 10
Copper (Cu) .....max. 10
Germanium (Ge) .....max. 50
Heavy Metals (as Pb) .....max. 300
Iron (Fe) .....max. 50
Lead (Pb) .....max. 10
Lithium (Li) .....max. 50
Magnesium (Mg) .....max. 50
Manganese (Mn) .....max. 5
Mercury (Hg) .....max. 5
Nickel (Ni) .....max. 10
Potassium (K) .....max. 200
Silicon (Si) .....max. 50
Silver (Ag) .....max. 5
Sodium (Na) .....max. 500
Strontium (Sr) .....max. 5
Tin (Sn) .....max. 10
Titanium (Ti) .....max. 300
Zinc (Zn) .....max. 10

IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial

HPLC
For Use in High Performance Liquid Chromatography

9515-03	Glass	2.5 L	chp	102.45	
		6 x 2.5 L	chp	68.30	409.80

CH_3COOH FW: 60.05

Assay (by GC, corrected for water) .....min. 99.7%
Ultraviolet Absorbance (1.00-cm cell vs. water):
280 nm .....max. 0.05
350 nm .....max. 0.01
Residue after Evaporation .....max. 0.0005%
Water (by Karl Fischer titrn) .....max. 0.1%
Physical Data (not specifications):
Eluotropic Value (on Al_2O_3), ε° 1.0
Density, g/mL at 20°C 1.049
Polarity Index 6.2
Solvent Group 4

IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetic Acid, Glacial

BAKER ANALYZED ACS Reagent
(Suitable for Cholesterol Determination)
(Aldehyde Free)

9511-02	Glass S/S	500 mL	cac	66.60	
		12 x 500 mL	cac	66.60	799.20
9511-05	Glass S/S	2.5 L	cac	121.05	
		6 x 2.5 L	cac	121.05	726.30

CH_3COOH FW: 60.05

Meets ACS Specifications

Assay (by GC, corrected for water) .....min. 99.7%
Color (APHA) .....max. 10
Dilution Test .....Passes Test
Residue after Evaporation .....max. 0.001%
Acetic Anhydride ($(CH_3CO)_2O$) .....max. 0.01%
Chloride (Cl) .....max. 1 ppm
Sulfate (SO_4) .....max. 1 ppm
Heavy Metals (as Pb) .....max. 0.5 ppm
Iron (Fe) .....max. 0.2 ppm
Substances Reducing Dichromate .....Passes Test
Substances Reducing Permanganate .....Passes Test
Titrable Base (meq/g) .....max. 0.0004
Suitability for Cholesterol Determination .....Passes Test
Acetaldehyde .....max. 0.005%

IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial

USP, FCC

cGMP

9522-02	Glass S/S	500 mL	rac	69.95	
		12 x 500 mL	rac	69.95	839.40
9522-05	Glass S/S	2.5 L	rac	132.20	
		6 x 2.5 L	rac	132.20	793.20
9522-03	Glass	6 x 2.5 L	rac	78.05	468.30
9522-33	Poly Coated	2.5 L	rac	136.95	
		6 x 2.5 L	rac	78.25	469.50
9522-07	Poly Pail	40 lb	bul	Inquire	
9522-08	Poly Drum	125 lb	bul	Inquire	
9522-15	Poly Drum	450 lb	bul	Inquire	

CH_3COOH FW: 60.05

Meets USP & FCC Requirements

Identification .....Passes Test
Congealing Temperature (solidification point) .....min. 15.6 °C.
Nonvolatile Residue (USP), mg/20 mL .....max. 1.0
Nonvolatile Residue (FCC) .....max. 0.005%
Chloride (Cl) .....Passes Test
Sulfate (SO_4) .....Passes Test
Heavy Metals (as Pb) .....max. 5 ppm
Readily Oxidizable Substances .....Passes Test
Assay (CH_3COOH) 99.5-100.5%

Acetic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lead (Pb) ..... max 0.5 mg/kg

IMPORTANT: Material will freeze if stored below 17°C (63°F). Preserve in tight containers, and store at room temperature

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial, USP

cGMP

Multi-Compendial

9526-01	Glass S/S	500 mL	rac	86.80	
		12 x 500 mL	rac	86.80	1041.60
9526-03	Glass	6 x 2.5 L	rac	91.95	551.70
9526-33	Poly Coated	2.5 L	rac	164.15	
		6 x 2.5 L	rac	93.80	562.80
9526-07	Poly Pail	15 L	rsb	481.60	
9526-20	Poly Drum	450 lb	bul	Inquire	

CH_3COOH FW: 60.05

Meets USP Requirements

Identification ..... Passes Test
Congealing Temperature ..... min. 15.6 °C.
Nonvolatile Residue (USP), mg/20 mL ..... max. 1.0
Chloride (Cl) ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Readily Oxidizable Substances ..... Passes Test
Assay (CH_3COOH) 99.5-100.5%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance ..... Passes Test
Freezing Point ..... min. 14.8 °C.
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Chloride (Cl) ..... max. 25 ppm
Sulfate (SO_4) ..... max. 50 ppm
Reducing Substances ..... Passes Test
Residue on Evaporation ..... max. 0.01%
Assay (CH_3COOH) 99.0-100.5%

Meets JP Chemical Specifications

Assay (CH_3COOH) 99.0-101.0%
Identification ..... Passes Test
Congealing Point ..... min. 14.5 °C.
Nonvolatile Residue, mg/10 mL ..... max. 1.0
Chloride (Cl) ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Reducing Substances ..... Passes Test

IMPORTANT: Material will freeze if stored below 17°C (63°F). Preserve in tight containers, and store at room temperature

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,55
IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, various metal salts

See entry for individual metal acetate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetic Anhydride

BAKER ANALYZED ACS Reagent

0018-01	Glass	500 mL	cso	71.80	
		12 x 500 mL	cso	47.85	574.20
0018-03	Glass	4 L	cso	297.30	
		4 x 4 L	cso	198.20	792.80
0018-07	Poly Pail	40 lb	bul	Inquire	

$(CH_3CO)_2O$ FW: 102.09

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3CO)_2O$) ..... min. 98%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.002%
Substances Reducing Permanganate ..... Passes Test

Trace Impurities (in ppm):

Chloride (Cl) ..... max. 3
Phosphate (PO_4) ..... max. 5
Sulfate (SO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 2
Iron (Fe) ..... max. 5

CAS: 108-24-7 DENSITY: 1 L = 1.08 kg MERCK INDEX: 14,56
IMO: 8:1715 FLASH POINT: 49°C

Acetoaminobenzene

See under Acetanilide

Acetone

BAKER ANALYZED ACS Reagent

9006-01	Glass	500 mL	cso	37.35	
		12 x 500 mL	cso	24.90	298.80
9006-06	Poly	500 mL	cso	38.65	
		12 x 500 mL	cso	25.75	309.00
9006-22	AI SAFETAINER	1 L	cso	89.25	
		6 x 1 L	cso	59.50	357.00
9006-25	AI SAFETAINER	2.5 L	cso	185.10	
		4 x 2.5 L	cso	123.40	493.60
9006-03	Glass	4 L	cso	156.10	
		4 x 4 L	cso	104.05	416.20
9006-05	AI SAFETAINER	4 L	cso	181.20	
		4 x 4 L	cso	120.80	483.20
9006-33	Poly Coated	4 L	cso	175.15	
		4 x 4 L	cso	116.75	467.00
9006-07	Steel Pail	20 L	sbk	363.35	
9006-R	Steel Drum	350 lb	bul	Inquire	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$(CH_3)_2CO$ FW: 58.08

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3)_2CO$) (by GC, corrected for water) ..... min. 99.5%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.001%
Solubility in H_2O ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0003

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Titrable Base (meq/g) .....max. 0.0006
Aldehydes (as HCHO) .....max. 0.002%
Isopropyl Alcohol ($CH_3CHOHCH_3$)(by GC) .....max. 0.05%
Methanol (CH_3OH)(by GC) .....max. 0.05%
Heavy Metals (as Pb) .....max. 1 ppm
Substances Reducing Permanganate .....Passes Test
Water (H_2O) .....max. 0.5%
Copper (Cu) .....max. 0.1 ppm
Iron (Fe) .....max. 0.1 ppm
Nickel (Ni) .....max. 0.1 ppm

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,66
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
HPLC
For Use in Liquid Chromatography

9002-02	Glass	1 L	chp	72.55	
		6 x 1 L	chp	48.35	290.10
9002-03	Glass	4 L	chp	137.20	
		4 x 4 L	chp	91.45	365.80
9002-33	Poly Coated	4 L	chp	155.50	
		4 x 4 L	chp	103.65	414.60

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$(CH_3)_2CO$ FW: 58.08

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-350 nm .....max. 0.01
UV Cut-off, nm .....max. 330
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
Assay ($(CH_3)_2CO$) (by GC, corrected for water) .....min. 99.3%
Residue after Evaporation .....max. 2 ppm
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.6
Water (H_2O) .....max. 0.4%
Filtered through a 0.2 micron filter.
Packaged under Nitrogen.

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,66
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

For more information on the CYCLE-TAINER Solvent Delivery System, see pages 99-105

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetone
ULTRA RESI-ANALYZED
For Organic Residue Analysis

9254-02	Glass	1 L	chp	70.75	
		6 x 1 L	chp	47.15	282.90
9254-03	Glass	4 L	chp	149.65	
		4 x 4 L	chp	99.75	399.00

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$(CH_3)_2CO$ FW: 58.08

Assay ($(CH_3)_2CO$) (by GC, corrected for water) .....min. 99.4%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Substances Reducing Permanganate .....Passes Test
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.6
Water (H_2O) .....max. 0.5%
Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,66
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
PHOTREX Reagent
(For Spectrophotometry)

9010-01	Glass	500 mL	cso	46.50	
		12 x 500 mL	cso	31.00	372.00
9010-03	Glass	4 L	cso	196.00	
		4 x 4 L	cso	130.65	522.60

$(CH_3)_2CO$ FW: 58.08

Meets ACS Specifications
Assay ($(CH_3)_2CO$) (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0005%
Solubility in H_2O .....Passes Test
Titrable Acid (meq/g) .....max. 0.0003
Titrable Base (meq/g) .....max. 0.0006
Aldehydes (as HCHO) .....max. 0.002%
Isopropyl Alcohol ($CH_3CHOHCH_3$)(by GC) .....max. 0.05%
Methanol (CH_3OH)(by GC) .....max. 0.05%
Substances Reducing Permanganate .....Passes Test
Water (H_2O) .....max. 0.5%
Ultraviolet Absorbance (1.00-cm cell vs. water):
400 nm .....max. 0.01
350 nm .....max. 0.02
340 nm .....max. 0.10
330 nm .....max. 1.00

Acetone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Product Information (not specifications):
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:

2.5-3.2	9.4-10.7
3.6-5.5	11.4-12.7
8.6-8.9	12.8-15.0

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,66
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
NF, FCC cGMP

9008-01	Glass	500 mL	rss	44.10	
		12 x 500 mL	rss	29.40	352.80
9008-03	Glass	4 L	rss	202.15	
		4 x 4 L	rss	134.75	539.00
9008-07	Steel Pail	20 L	bks	Inquire	
9008-R	Steel Drum	350 lb	bul	Inquire	

$(CH_3)_2CO$ FW: 58.08

Meets NF & FCC Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Solubility in H_2O ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Acidity (as CH_3COOH) ..... max. 0.002%
Aldehydes (as HCHO) ..... max. 0.002%
Alkalinity (as NH_3) ..... max. 10 ppm
Benzene ..... max. 2 ppm
Distilling Range: ..... max. 1 °C.
Recorded Boiling Point ..... max. 56.1 °C.
Lead (Pb) ..... max 1 mg/kg
Methanol (CH_3OH) ..... max. 0.05%
Phenols ..... Passes Test
Refractive Index at 20°C 1.358-1.360
Specific Gravity at 25°/25°C ..... max. 0.788
Nonvolatile Residue ..... max. 10 ppm
Readily Oxidizable Substances ..... Passes Test
Water (H_2O) ..... max. 0.5%
Assay (as $(CH_3)_2CO$) (calculated on anhydrous basis) 99.5-100.5%

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,66
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone, NF
Multi-Compendial cGMP

9036-01	Glass	500 mL	rss	52.90	
		12 x 500 mL	rss	35.25	423.00
9036-03	Glass	4 L	rss	254.80	
		4 x 4 L	rss	169.85	679.40
9036-07	Steel Pail	20 L	bks	Inquire	
9036-09	Steel Drum	200 L	bul	Inquire	

$(CH_3)_2CO$ FW: 58.08

Meets NF Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Gravity at 25°/25°C ..... max. 0.789
Nonvolatile Residue ..... max. 0.004%
Readily Oxidizable Substances ..... Passes Test
Water (H_2O) ..... max. 0.5%
Assay (as $(CH_3)_2CO$) (calculated on anhydrous basis) 99.5-100.5%
Benzene ..... max. 2 ppm

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Density (g/mL) at 20°C 0.790-0.793
Related Substances
Impurity A ..... max. 0.05%
Impurity B ..... max. 0.05%
Impurity C ..... max. 2 ppm
Other Impurities ..... max. 0.05%
Matter Insoluble in H_2O ..... Passes Test
Reducing Substances ..... Passes Test
Residue after Evaporation ..... max. 50 ppm
Water (H_2O), g/L ..... max. 3

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,66
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
BAKER
For Histological Use

A134-09	Poly	4 L	cor	126.85	
		4 x 4 L	cor	84.55	338.20

$(CH_3)_2CO$ FW: 58.08

Aldehydes (as HCHO) ..... max. 0.002%
Assay ($(CH_3)_2CO$) (by GC, corrected for water) ..... min. 99.5%
Color (APHA) ..... max. 10
Isopropyl Alcohol ($CH_3CHOHCH_3$)(by GC) ..... max. 0.05%
Methanol (CH_3OH)(by GC) ..... max. 0.05%
Residue after Evaporation ..... max. 0.001%
Solubility in H_2O ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0006
Trace Impurities (in ppb):
Copper (Cu) ..... max. 0.1
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.1
Nickel (Ni) ..... max. 0.1
Water (H_2O) ..... max. 0.5%

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,66
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetone, Low Water

HPLC
For Use in Liquid Chromatography

9003-03	Glass	4 L	chp	149.80	
		4 x 4 L	chp	99.85	399.40

$(CH_3)_2CO$ FW: 58.08

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-350 nm .....max. 0.01
UV Cut-off, nm .....max. 330
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
Assay ($(CH_3)_2CO$) (by GC, corrected for water) .....min. 99.3%
Residue after Evaporation .....max. 2 ppm
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.6
Water (H_2O) .....max. 0.10%
Filtered through a 0.2 micron filter.
Packaged under Nitrogen.

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,66
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile

HPLC
For Use in Liquid Chromatography and Spectrophotometry

9012-03	Glass	4 L	chp	351.30	
		4 x 4 L	chp	234.20	936.80
9012-33	Poly Coated	4 L	chp	364.05	
		4 x 4 L	chp	242.70	970.80

CH_3CN FW: 41.05

Appearance .....Passes Test
Assay (GC) .....min. 99.9%
Color (APHA) .....max. 10
Water (H_2O) .....max. 0.02%
Gradient Elution Test (mAU):
254 nm .....max. 0.005
Residue after Evaporation .....max. 3 ppm
Titrable Acid (µeq/g) .....max. 0.8
Titrable Base (µeq/g) .....max. 0.6
Ultraviolet Absorbance (1.00 cm)
200 nm .....max. 0.1
210 nm .....max. 0.05
220 nm .....max. 0.03
254 nm .....max. 0.01
280 nm .....max. 0.01
350 nm .....max. 0.01
400 nm .....max. 0.01
UV Cut-off, nm .....max. 190
Filtered through a 0.2 micron filter.

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,70
IMO: 3:1648 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetonitrile

HPLC Ultra Gradient
For Use in Liquid Chromatography and Spectrophotometry

9017-02	Glass	1 L	chp	139.05	
		6 x 1 L	chp	92.70	556.20
9017-03	Glass	4 L	chp	372.40	
		4 x 4 L	chp	248.25	993.00
9017-33	Poly Coated	4 L	chp	387.40	
		4 x 4 L	chp	258.25	1033.00

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

CH_3CN FW: 41.05

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-254 nm .....max. 0.005
220 nm .....max. 0.01
200 nm .....max. 0.05
UV Cut-off, nm .....max. 190
Gradient Elution Test (a.u.):
254 nm .....max. 0.0005
210 nm .....max. 0.002
Density (g/mL) at 25°C 0.775-0.780
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
Assay (CH_3CN) (by GC, corrected for water) .....min. 99.9%
Appearance .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.8
Titrable Base (µeq/g) .....max. 0.6
Water (by KF, coulometric) .....max. 100 ppm
Carbonyl Compounds (as Acetone) .....max. 25 ppb

CAS: 75-05-8 MERCK INDEX: 14,70 IMO: 3:1648
FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile

BAKER ANALYZED LC/MS Reagent

9829-02	Glass	1 L	cbs	151.00	
		6 x 1 L	cbs	100.65	603.90
9829-03	Glass	4 L	cbs	403.75	
		4 x 4 L	cbs	269.15	1076.60
9829-23	NOWPak	20 L	npk	1509.05	

CH_3CN FW: 41.05

Assay (CH_3CN) .....min. 99.9%
Appearance .....Passes Test
Gradient Elution Test (a.u.):
254 nm .....max. 0.0005
210 nm .....max. 0.002
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.8 ppm
Water (H_2O) .....max. 200 ppm

Acetonitrile

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....max. 50
* Calcium (Ca) .....max. 50
Iron (Fe) .....max. 50
Magnesium (Mg) .....max. 50
Lithium (Li) .....max. 30
Nickel (Ni) .....max. 30
Potassium (K) .....max. 50
* Sodium (Na) .....max. 50
* May change over time due to extraction from glass container.
Filtered through a 0.2 micron filter.

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,70
IMO: 3:1648 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile
BAKER ANALYZED ULTRA LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9853-01	Glass	2 x 1 L	spr	139.05	278.10
9853-02	Glass	1 L	spr	166.75	
		6 x 1 L	spr	111.15	666.90

CH_3CN FW: 41.05

Assay (CH_3CN) .....min. 99.9%
Appearance .....Passes Test
Gradient Elution Test (a.u.):
254 nm .....max. 0.0005
210 nm .....max. 0.002
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.8 ppm
Water (H_2O) .....max. 100 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 25 ppb
Largest Response on ESI-Negative Mode
(as 4-Nitrophenol) .....max. 25 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....max. 25
Calcium (Ca) .....max. 25
Chromium (Cr) .....max. 5
Cobalt (Co) .....max. 5
Copper (Cu) .....max. 5
Iron (Fe) .....max. 5
Lead (Pb) .....max. 5
Lithium (Li) .....max. 5
Magnesium (Mg) .....max. 10
Manganese (Mn) .....max. 5
Nickel (Ni) .....max. 5
Potassium (K) .....max. 10
Sodium (Na) .....max. 50
Tin (Sn) .....max. 5
Zinc (Zn) .....max. 10
Filtered through a 0.1 micron filter.

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,70
IMO: 3:1648 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetonitrile
ULTRA RESI-ANALYZED
For Organic Residue Analysis

9255-02	Glass	1 L	chp	141.25	
		6 x 1 L	chp	94.15	564.90
9255-03	Glass	4 L	chp	401.95	
		4 x 4 L	chp	267.95	1071.80

CH_3CN FW: 41.05

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Assay (CH_3CN) (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.6
Water (by KF, coulometric) .....max. 0.05%

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,70
IMO: 3:1648 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile
BAKER ANALYZED ACS Reagent

9011-01	Glass	500 mL	cso	108.10	
		12 x 500 mL	cso	72.05	864.60
9011-03	Glass	4 L	cso	406.15	
		4 x 4 L	cso	270.75	1083.00
9011-07	Steel Pail	20 L	sbk	721.80	
9011-R	Steel Drum	350 lb	bul	Inquire	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

CH_3CN FW: 41.05

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (CH_3CN) (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.005%
Titrable Acid (µeq/g) .....max. 8
Titrable Base (µeq/g) .....max. 0.6
Water (by KF, coulometric) .....max. 0.3%

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,70
IMO: 3:1648 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetonitrile, Low Water
BAKER BIO-ANALYZED Reagent

9018-03	Glass	4 L	cbs	440.70	
		4 x 4 L	cbs	293.80	1175.20

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

CH_3CN FW: 41.05

Ultraviolet Absorbance (1.00-cm cell vs. water):
- 400-254 nm .....max. 0.010
- 220 nm .....max. 0.01
- 200 nm .....max. 0.05

UV Cut-off, nm .....max. 190

Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
- at 450 nm Emission .....max. 0.3
- at Emission Maximum for Impurities .....max. 1.0

Appearance .....Passes Test
Assay (CH_3CN) (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.8
Titrable Base (µeq/g) .....max. 0.6
Water (by KF, coulometric) .....max. 10 ppm

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,70
IMO: 3:1648 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile, Ultra Low Water
BAKER BIO-ANALYZED Reagent

9019

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

CH_3CN FW: 41.05

Ultraviolet Absorbance (1.00-cm cell vs. water):
- 400-254 nm .....max. 0.010
- 220 nm .....max. 0.01
- 200 nm .....max. 0.05

UV Cut-off, nm .....max. 190

Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
- at 450 nm Emission .....max. 0.3
- at Emission Maximum for Impurities .....max. 1.0

Appearance .....Passes Test
Assay (CH_3CN) (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.8
Titrable Base (µeq/g) .....max. 0.6
Water (by KF, coulometric) .....max. 5 ppm

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,70
IMO: 3:1648 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetonitrile, Ultra Low Water
BakerDRY

9035-10	Septum-Seal Cap	100 mL	lws	52.65	
		6 x 100 mL	lws	42.10	252.60
9035-12	Septum-Seal Cap	1 L	lws	110.00	
		6 x 1 L	lws	88.00	528.00

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

CH_3CN FW: 41.05

Meets ACS Specifications

Assay (CH_3CN) (by GC, corrected for water) .....min. 99.5%
Appearance .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.8
Titrable Base (µeq/g) .....max. 0.6
Water (by KF, coulometric) .....max. 10 ppm

Product Information (not specifications):
Boiling Point (typical) .....81.6 °C.
Density (g/mL) at 25°C (typical) 0.778

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,70
IMO: 3:1648 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile-0.1% Formic Acid
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9832-02	Glass	1 L	cbs	160.20	
		6 x 1 L	cbs	106.80	640.80
9832-03	Glass	4 L	cbs	434.25	
		4 x 4 L	cbs	289.50	1158.00
9832-23	NOWPak	20 L	npk	2111.20	

Appearance .....Passes Test
Formic Acid 0.095-0.105%

Gradient Elution Test (a.u.):
- 254 nm .....max. 0.01

Residue after Evaporation .....max. 1.0 ppm
Water (H_2O) .....max. 200 ppm

LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 50 ppb

Trace Impurities (in ppb):
Aluminum (Al) .....max. 50
* Calcium (Ca) .....max. 50
Iron (Fe) .....max. 50
Magnesium (Mg) .....max. 50
Potassium (K) .....max. 50
* Sodium (Na) .....max. 50

* May change over time due to extraction from glass container.
Filtered through a 0.2 micron filter.

DENSITY: 1 L = 0.79 kg IMO: 3:1993 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetonitrile-0.1% Formic Acid
BAKER ANALYZED Reagent

9824-03	Glass	4 L	spr	406.20	
		4 x 4 L	spr	324.95	1299.80
9824-07	Poly Pail	19 L	spr	1252.55	

DENSITY: 1 L = 0.79 kg IMO: 3:1993 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile-0.1% Trifluoroacetic Acid
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9835-02	Glass	1 L	cbs	162.10	
		6 x 1 L	cbs	108.05	648.30
9835-03	Glass	4 L	cbs	434.25	
		4 x 4 L	cbs	289.50	1158.00
9835-23	NOWPak	20 L	npk	2111.20	

Appearance ..... Passes Test
Trifluoroacetic Acid 0.095-0.105%
Gradient Elution Test (a.u.):
254 nm ..... max. 0.01
Residue after Evaporation ..... max. 1.0 ppm
Water (H_2O) ..... max. 200 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) ..... max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) ..... max. 50
* Calcium (Ca) ..... max. 50
Iron (Fe) ..... max. 50
Magnesium (Mg) ..... max. 50
Potassium (K) ..... max. 50
* Sodium (Na) ..... max. 50
* May change over time due to extraction from glass container.
Filtered through a 0.2 micron filter.

IMO: 3:1993 FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetylacetone
See 2,4-Pentanedione

Acetylcholine Chloride
BAKER ANALYZED Biochemical Reagent

A261-05	Glass	100 g	bio	311.30	

$(CH_3)_3N(Cl)(CH_2)_2OCOCH_3$ FW: 181.66

Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_7H_{16}ClNO_2$) (dried basis) ..... min. 99.0%
Melting Range (dried) ..... 149-152 °C.
Residue after Ignition ..... max. 0.1%
Loss on Drying at 110°C ..... max. 5.0%
Iron (Fe) ..... max. 0.003%
Reaction ..... Passes Test
Solubility in Alcohol ..... Passes Test
Acetyl Content 23.2-24.2%
Chlorine (as Cl) 19.3-19.8%

CAS: 60-31-1 MERCK INDEX: 14,87

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N-acetyl-D-mannosamine
ULTRAPURE BIOREAGENT

9419-07		10 kg	upr	Inquire	

$C_8H_{15}NO_6$ FW: 221.2

Appearance ..... Passes Test
Identification ..... Passes Test
Optical Rotation ..... +9.0 - +11.0 °
Purity (by HPLC) ..... min. 98%
Solubility ..... Passes Test
Water (H_2O) 6.0-8.0%
Recommended Storage Temperature: -20°C (-4°F)

CAS: 7772-94-3

Acetylene Tetrabromide
See 1,1,2,2-Tetrabromoethane

Acid Fuchsin
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology, Andrade Indicator (C.I. 42685)

A355-03	Glass	25 g	non	132.05	

$C_{20}H_{17}N_3Na_2O_9S_3$ FW: 585.54

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum
(1.0 mg/200 mL in H_2O, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 3244-88-0 MERCK INDEX: 14,107

Acid Green 5
See Light Green SF Yellowish

Acid Orange 10
See Orange G

Acid Red 51
See Erythrosin B

Acid Red 91
See Eosin B

Acid Spill Cleanup Products
See under Spill Cleanup Products

Acid Violet 19
See Acid Fuchsin

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acrylamide
ULTRAPURE BIOREAGENT
Purified for Electrophoresis

4081-00	Poly	100 g	upr	50.85	
4081-01	Poly	500 g	upr	166.45	
4081-05	Poly Pail	2.5 kg	upr	662.15	
4081-07	Poly Pail	12 kg	upr	2391.60	

CH_2:$CHCONH_2$ FW: 71.08

Assay (CH_2:$CHCONH_2$) ..... min. 99.9%
pH of 10% Solution in 0.1M NaCl 6.0-7.0
Insoluble in H_2O ..... max. 0.005%
Insoluble in Methanol ..... max. 0.005%
Acrylic Acid (CH_2:CHCOOH) ..... max. 0.001%
Absorbance of a 1% Solution at 290 nm
(1-cm path vs water)(au) ..... max. 0.1
Conductivity of 35% Solution, µmho ..... max. 2.5
RNase Activity ..... None Detected
DNase Activity ..... None Detected
Protease Activity ..... None Detected
Heavy Metals (as Pb) ..... max. 1 ppm
Iron (Fe) ..... max. 1 ppm
Store between 18°C and 26°C

CAS: 79-06-1 MERCK INDEX: 14,129 IMO: 6.1:2074
FLASH POINT: 138°C

Acrylamide/Bis, 37.5:1, 40% Solution
ULTRAPURE BIOREAGENT
For Protein Separations

4970-00	Poly	500 mL	upr	76.20	

Appearance ..... Passes Test
Polymerization Time (in minutes) ..... max. 20
Electrophoresis Performance ..... Passes Test
Store between 18°C and 26°C

IMO: 6.1:2810 FLASH POINT: 138°C

Acrylamide/Bis, 29:1, 40% Solution
ULTRAPURE BIOREAGENT
For Protein Separations and DNA Fragment Analysis

4969-00	Poly	500 mL	upr	79.80	

Appearance ..... Passes Test
Polymerization Time (in minutes) ..... max. 20
Electrophoresis Performance ..... Passes Test
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Store between 18°C and 26°C

IMO: 6.1:2810 FLASH POINT: 138°C

Acrylamide/Bis, 19:1, 40% Solution
ULTRAPURE BIOREAGENT
For Nucleic Acid Analysis

4968-00	Poly	500 mL	upr	79.80	

Appearance ..... Passes Test
Polymerization Time (in minutes) ..... max. 30
Sequencing Band Clarity (bp) ..... min. 260
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Store between 18°C and 26°C

IMO: 6.1:2810 FLASH POINT: 138°C

8% Premix Acrylamide Solution
ULTRAPURE BIOREAGENT
Supplied in 1X TBE and 7M urea

4170-00	6x75 mL	upr	102.20		

Appearance ..... Passes Test
Polymerization Time (in minutes) ..... max. 30
Sequencing Band Clarity (bp) ..... min. 200
Keep material refrigerated at 4°C

IMO: 6.1:2810

6% Premix Acrylamide Solution
ULTRAPURE BIOREAGENT
Supplied in 1X TBE and 7M urea

4169-00	6x75 mL	upr	102.20		

Appearance ..... Passes Test
Polymerization Time (in minutes) ..... max. 30
Sequencing Band Clarity (bp) ..... min. 260
Keep material refrigerated at 4°C

IMO: 6.1:2810

Acrylic Acid
BAKER
(stabilized with p-methoxyphenol)

A397-07	Glass	500 mL	non	53.50	

CH_2:CHCOOH FW: 72.06

Meets Reagent Specifications for testing USP/NF monographs
Assay (CH_2:CHCOOH) ..... min. 99%
Refractive Index, η^{20}_D 1.419-1.423

CAS: 79-10-7 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,130
IMO: 8:2218 FLASH POINT: 51°C

Acid Spill Cleanup Products available. See pp. 378.

Activated Carbon
See under Carbon, Activated

Activated Charcoal

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Activated Charcoal, Powder

See Charcoal, Activated, Powder

Agar Agar

BAKER

A434-05	Poly	100 g	bio	112.40	

Identification ..... Passes Test

CAS: 9002-18-0 MERCK INDEX: 14,184

Agarose, Low Melting

ULTRAPURE BIOREAGENT
For Separating DNA Greater than 1,000 bp

4090-05	Poly	100 g	upr	588.85	

Loss on Drying at 70°C (in vacuo) ..... max. 10%
Sulfate (SO_4) ..... max. 0.10%
Electroendosmosis (EEO)($-m_r$) ..... max. 0.12
Gel Strength, g/cm^2 (MCl, 1.0%) ..... min. 250
Gelling Temperature of 1.5% w/w Solution ..... 24-28 °C.
Melting Temperature of 1.5% w/w Solution ..... max. 65 °C.
DNase Activity ..... None Detected
RNase Activity ..... None Detected

CAS: 39346-81-1

Agarose, PFGE

ULTRAPURE BIOREAGENT
For Rapid Resolution of DNA Greater than 1,000 bp

4063-03	Poly	25 g	upr	91.30	
4063-05	Poly	100 g	upr	327.25	

Loss on Drying at 70°C (in vacuo) ..... max. 7.0%
Sulfate (SO_4) ..... max. 0.12%
Electroendosmosis (EEO)($-m_r$) ..... max. 0.12%
Gel Strength, g/cm^2 (MCl, 1.0%) ..... min. 2000
Gelling Temperature of 1.5% w/w Solution ..... 34.5-37.5 °C.
Melting Temperature of 1.5% w/w Solution ..... 86.5-89.5 °C.
DNase Activity ..... None Detected
RNase Activity ..... None Detected

CAS: 9012-36-6

Agarose, Standard, Low Electroendosmosis (EEO)

ULTRAPURE BIOREAGENT
For Electrophoresis

A426-05	Poly	100 g	upr	228.80	
A426-07	Poly	500 g	upr	729.30	

Loss on Drying at 70°C (in vacuo) ..... max. 7%
Sulfate (SO_4) ..... max. 0.2%
Electroendosmosis (EEO)($-m_r$) ..... max. 0.13
Gel Strength, g/cm^2 (MCl, 1.0%) ..... min. 1200
Gelling Temperature of 1.5% w/w Solution ..... 34.5-37.5 °C.
Melting Temperature of 1.5% w/w Solution ..... 86.5-89.5 °C.
DNase Activity ..... None Detected
RNase Activity ..... None Detected

CAS: 9012-36-6 MERCK INDEX: 14,184

L-Alanine, USP

cGMP

USP, FCC

2065-06	Poly	1 kg	bio	814.10	

$C_3H_7NO_2$ FW: 89.09

Meets USP Requirements

Assay ($C_3H_7NO_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +13.7 - +15.1 °
pH 5.5-7.0
Loss on Drying at 105°C ..... max. 0.2%
Residue on Ignition ..... max. 0.15%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0015%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%

Meets FCC Requirements

Assay ($C_3H_7NO_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying at 105°C ..... max. 0.3%
Residue on Ignition ..... max. 0.2%
Specific Rotation $[\alpha]_D^{20}$ ..... +13.5 - +15.5 °

CAS: 56-41-7 MERCK INDEX: 14,204

Albumin, Bovine, Fraction V

BAKER

A464-02	Glass	10 g	bio	89.20	

Appearance ..... Passes Test
Loss on Drying ..... max. 6%
Solubility in H_2O ..... Passes Test

CAS: 9048-46-8

Albumin, Egg, Powder

Purified

0440-04	Poly	125 g	non	53.05	
0440-01	Poly	500 g	non	87.25	

CAS: 9006-50-2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Alcohol, Anhydrous, Reagent
BAKER ANALYZED ACS Reagent
(Made from Specially Denatured Alcohol 3A)
For Histological Use

9401-01	Glass	500 mL	cso	48.15	
		12 x 500 mL	cso	32.10	385.20
9401-02	Poly	1 L	cso	65.20	
		6 x 1 L	cso	43.45	260.70
9401-22	AI SAFETAINER	1 L	cso	88.15	
		6 x 1 L	cso	58.75	352.50
9401-03	Glass	4 L	cso	157.65	
		4 x 4 L	cso	105.10	420.40
9401-06	Poly	4 L	cso	157.15	
		4 x 4 L	cso	104.75	419.00
9401-05	AI SAFETAINER	4 L	cso	185.55	
		4 x 4 L	cso	123.70	494.80
9401-33	Poly Coated	4 L	cso	173.80	
		4 x 4 L	cso	115.85	463.40

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

Exceeds ACS Specifications

Assay:
Specially Denatured Alcohol Formula 3A (200 proof)(v/v) . . .94.0-96.0%
Isopropyl Alcohol (2-propanol)(v/v) 4.0-6.0%
Appearance . . . . . .Passes Test
Color (APHA) . . . . . .max. 10
Residue after Evaporation . . . . . .max. 0.001%
Specific Gravity at 25°/25°C 0.785-0.795
Water (H_2O)(by Karl Fischer titrn) . . . . . .max. 0.5%
SDA Formula 3A consists of 5 volumes of methanol and 100 volumes of 200 proof ethanol.

DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,3761 IMO: 3:1987
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

Alcohol, Anhydrous, Reagent
PHOTREX Reagent
(Made from Specially Denatured Alcohol 3A)
For Use in Liquid Chromatography and Spectrophotometry

9229-01	Glass	500 mL	cso	42.70	
		12 x 500 mL	cso	28.45	341.40
9229-03	Glass	4 L	cso	179.70	
		4 x 4 L	cso	119.80	479.20

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

Meets ACS Specifications

Assay:
Specially Denatured Alcohol Formula 3A (200 proof)(v/v) . . .94.0-96.0%
Isopropyl Alcohol (2-propanol)(v/v) 4.0-6.0%
Appearance . . . . . .Passes Test
Color (APHA) . . . . . .max. 5
Residue after Evaporation . . . . . .max. 5 ppm
Specific Gravity at 25°/25°C 0.785-0.795
Water (H_2O)(by Karl Fischer titrn) . . . . . .max. 0.1%
Ultraviolet Absorbance (1.00-cm cell vs. water) (curve smooth throughout stated range with no extraneous impurity peaks):
210 nm . . . . . .max. 1.00
220 nm . . . . . .max. 0.50
230 nm . . . . . .max. 0.20
250 nm . . . . . .max. 0.05
270 nm . . . . . .max. 0.01
400 nm . . . . . .max. 0.01
SDA Formula 3A consists of 5 volumes of methanol and 100 volumes of 200 proof ethanol.

DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,3761 IMO: 3:1987
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

Alcohol, Anhydrous, Reagent
(Made from Specially Denatured Alcohol 3A)
For Histological Use

A478-09	Poly	4 L	cor	123.55	
		4 x 4 L	cor	82.35	329.40

Color (APHA) . . . . . .max. 10
Specific Gravity at 25°/25°C 0.785-0.795
Residue after Evaporation . . . . . .max. 0.001%
Water (H_2O)(by Karl Fischer titrn) . . . . . .max. 0.5%
Specially Denatured Alcohol Formula 3A (200 proof)(v/v) . . .94.0-96.0%
Isopropyl Alcohol (2-propanol)(v/v) 4.0-6.0%
SDA Formula 3A consists of 5 volumes of methanol and 100 volumes of 200 proof ethanol.

DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,3761 IMO: 3:1987
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

ALCONOX
For manual cleaning and use in ultrasonic washers

A461-05		1.8 kg	non	82.75	

Alizarin Red S
BAKER ANALYZED Reagent
(3,4-dihydroxy-2-anthraquinonesulfonic acid, sodium salt)
(C.I. 58005)

A475-03	Glass	25 g	bio	64.40	

$C_{14}H_7NaO_7S$ FW: 342.26

Visual Transition Interval:
pH . . . . . .(Yellow) 4.0
pH . . . . . .(Red) 6.0

CAS: 130-22-3 MERCK INDEX: 14,8573

Alloys
See Devarda's Alloy and Wood's Alloy

Alum
See Aluminum Ammonium Sulfate, 12-Hydrate, Crystal

Alum

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Alum, Cake
See Aluminum Sulfate, 18-Hydrate, Crystal

Alum Iron
See Ferric Ammonium Sulfate

Alumina
See Aluminum Hydroxide and Aluminum Oxide

Aluminum, Foil
Purified
210 Sheets: 6" x 6" x 0.001"

0449-01		1 pk	csa	231.45	
		4 x 1 pk	csa	154.30	617.20

Al AW: 26.98

Nitrogen Compounds (as N) ..... max. 0.002%

CAS: 7429-90-5 MERCK INDEX: 14,323

Aluminum, Shot
Purified

0456-01	Glass	500 g	csa	95.70	
		4 x 500 g	csa	63.80	255.20

Al AW: 26.98

Assay (Al) ..... min. 95%

CAS: 7429-90-5 MERCK INDEX: 14,323

Aluminum, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Aluminum, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Al metal in 5% HCl)
Plasma Standard

5716-04		100 mL	spr	112.60	
5716-01		500 mL	spr	218.15	

Al AW: 26.98

DENSITY: 1 L = 1 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Aluminum, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Al metal in 5% HCl)
Plasma Standard

5701-04		100 mL	spr	72.00	

Al AW: 26.98

DENSITY: 1 L = 1 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Aluminum 1,000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Al metal in 5% HCl)
Plasma Standard

6440-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Al AW: 26.98

DENSITY: 1 L = 1 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Aluminum Ammonium Sulfate, 12-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
(Alum)

0484-01	Poly	500 g	csa	125.10	
		4 x 500 g	csa	83.40	333.60

$AlNH_4(SO_4)_2 \cdot 12H_2O$ FW: 453.33

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($AlNH_4(SO_4)_2 \cdot 12H_2O$) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Calcium (Ca) ..... max. 0.05%
Potassium (K) ..... max. 0.05%
Sodium (Na) ..... max. 0.01%
Alkalies and Alkaline Earths ..... max. 0.25%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 0.5
Iron (Fe) ..... max. 5

CAS: 7784-26-1 MERCK INDEX: 14,327

Aluminum Hydroxide, Powder
BAKER ANALYZED Reagent

0518-01	Poly	500 g	csa	61.50	
		4 x 500 g	csa	41.00	164.00

$Al(OH)_3$ FW: 78.00

Assay ($Al(OH)_3$) ..... min. 98.0%
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.005%

CAS: 21645-51-2 MERCK INDEX: 14,342

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Aluminum Nitrate, 9-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

0528-01	Poly	500 g	csa	119.25	
		4 x 500 g	csa	79.50	318.00
0528-05	Poly	2.5 kg	csa	392.35	
		4 x 2.5 kg	csa	261.55	1046.20
0528-07	Lined Fiber Dr	12 kg	bks	Inquire	
0528-09	Lined Fiber Dr	100 lb	bul	Inquire	
0528-R	Lined Fiber Dr	300 lb	bul	Inquire	

$Al(NO_3)_3 \cdot 9H_2O$ FW: 375.13

Meets ACS Specifications

Assay ($Al(NO_3)_3 \cdot 9H_2O$) (by EDTA titrn) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 2.5-3.5
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.001%
Potassium (K) ..... max. 0.002%
Sodium (Na) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%

CAS: 7784-27-2 MERCK INDEX: 14,352 IMO: 5.1:1438

Aluminum Oxide, Powder
BAKER ANALYZED Reagent

0536-01	Poly	500 g	csa	57.60	
		4 x 500 g	csa	38.40	153.60
0536-05	Poly	2.5 kg	csa	203.10	
		4 x 2.5 kg	csa	135.40	541.60

Al_2O_3 FW: 101.96

Assay (Al_2O_3) ..... min. 98.5%
Loss on Ignition ..... max. 1.0%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.02%

CAS: 1344-28-1 MERCK INDEX: 14,356

Aluminum Oxide, Powder
BAKER ANALYZED Reagent
Suitable for Chromatographic Use

0537-01	Poly	500 g	spr	106.60	
0537-05	Poly	2.5 kg	spr	441.40	

Al_2O_3 FW: 101.96

pH of 5% Slurry at 20°C 7.0-7.8
Adsorption, mg o-nitroaniline/g ..... min. 0.05
Loss on Drying ..... max. 5%
Physical Data (not specifications):
Mean Pore Diameter, Å 60
Average Particle Diameter, µm (APD) 50-200
Bulk Density (g/cc) 0.9

CAS: 1344-28-1 MERCK INDEX: 14,356

Aluminum Oxide, Acid, Powder
BAKER ANALYZED Reagent
Brockmann Activity Grade I, For Chromatography

0538-01	Poly	500 g	spr	152.50	

Al_2O_3 FW: 101.96

pH of 3% Slurry at 20°C 3.5-5.0
Adsorption, mg o-nitroaniline/g ..... min. 1.0
Physical Data (not specifications):
Mean Pore Diameter, Å 60
Average Particle Diameter, µm (APD) 50-200
Bulk Density (g/cc) 0.9

CAS: 1344-28-1 MERCK INDEX: 14,356

Aluminum Oxide, Basic, Powder
BAKER ANALYZED Reagent
Brockmann Activity Grade I, For Chromatography

0539-01	Glass	500 g	spr	162.30	
0539-05	Poly	2.5 kg	spr	539.75	

Al_2O_3 FW: 101.96

pH of 3% Slurry at 20°C 8.5-10.0
Adsorption, mg o-nitroaniline/g ..... min. 1.0
Physical Data (not specifications):
Mean Pore Diameter, Å 60
Average Particle Diameter, µm (APD) 50-200
Bulk Density (g/cc) 0.9

CAS: 1344-28-1 MERCK INDEX: 14,356

Aluminum Oxide, Neutral, Powder
BAKER ANALYZED Reagent
Brockmann Activity Grade I, For Chromatography

0540-01	Poly	500 g	spr	161.80	
0540-05	Poly	2.5 kg	spr	619.70	

Al_2O_3 FW: 101.96

pH of 5% Slurry at 20°C 7.0-7.8
Adsorption, mg o-nitroaniline/g ..... min. 1.0
Physical Data (not specifications):
Mean Pore Diameter, Å 60
Average Particle Diameter, µm (APD) 50-200
Bulk Density (g/cc) 0.9

CAS: 1344-28-1 MERCK INDEX: 14,356

Aluminum Potassium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Aluminum Potassium Sulfate, 12-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

0546-01	Poly	500 g	non	144.20	
0546-05	Poly	2.5 kg	csa	584.40	
		4 x 2.5 kg	csa	389.60	1558.40

$AlK(SO_4)_2 \cdot 12H_2O$ FW: 474.39

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($AlK(SO_4)_2 \cdot 12H_2O$) (by EDTA titrn) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 2.0-4.0
Ammonium (NH_4) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Sodium (Na) ..... max. 0.02%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 5

CAS: 7784-24-9 MERCK INDEX: 14,360

Aluminum Silicate
See Kaolin, Powder

Aluminum Sulfate, 18-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

0564-01	Poly	500 g	csa	192.55	
		4 x 500 g	csa	128.35	513.40
0564-05	Poly	2.5 kg	csa	802.75	
		4 x 2.5 kg	csa	535.15	2140.60

$Al_2(SO_4)_3 \cdot 18H_2O$ FW: 666.41

Meets ACS Specifications

Assay ($Al_2(SO_4)_3 \cdot 18H_2O$) (by EDTA titrn) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.002%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%

CAS: 7784-31-8 MERCK INDEX: 14,366

N-Amidino-N-Methylglycine
See Creatinine, Monohydrate

N-Amidinosarcosine
See Creatinine, Monohydrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Amido Black 10B
BAKER
(C.I. 20470)

A586-03	Glass	25 g	bio	60.30	

$NO_2C_6H_4N{:}NC_{10}H_2(NH_2)(OH)(N{:}NC_6H_5)(SO_3Na)_2$ FW: 616.50

Identification (by IR) ..... Passes Test

CAS: 1064-48-8

Amido Schwarz 10B
See Amido Black 10B

Aminoacetic Acid
See under Glycine

4-Aminoantipyrine
BAKER

A630-03	Glass	25 g	non	58.00	
A630-05	Glass	100 g	non	104.40	

$C_{11}H_{13}N_3O$ FW: 203.24

Melting Point ..... 107-109 °C.
Identification (by IR) ..... Passes Test

CAS: 83-07-8 MERCK INDEX: 14,591

Aminobenzene
See Aniline

p-Aminobenzenesulfonamide
See Sulfanilamide

p-Aminobenzenesulfonic Acid
See Sulfanilic Acid, Anhydrous

2-Amino-N-[[-1-(carboxymethyl)carbamoyl]-2-mercaptoethyl]glutaramic Acid
See Glutathione Reduced

p-Amino-N,N-diethylaniline Oxalate
See N,N-Diethyl-p-phenylenediamine Oxalate

4-Amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one
See 4-Aminoantipyrine

4,4-bis(8-Amino-3,6-disulfo-1-hydroxy-2-naphthylazo)3,3′-dimethylbiphenyl Tetrasodium Salt
See Trypan Blue

Aminoethanoic Acid
See Glycine

2-Aminoethanol
See Monoethanolamine

2-Aminoglutaramic Acid
See L-Glutamine

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2-Aminoglutaric Acid
See L-(+)-Glutamic Acid

2-Amino-2-(hydroxymethyl)-1,3-propanediol
See Tris

4-Amino-5-hydroxy-3-[(p-nitrophenyl)azo]-6-(phenylazo)2,7-naphthalenedisulfonic Acid
See Amido Black 10B

2-Amino-3-mercaptopropionic Acid
See L-(+)-Cysteine

2-Amino-2-methyl-1-propanol
BAKER ANALYZED Reagent

A896-07	Poly Pail	10 L	bio	555.20	

$CH_3C(NH_2)(CH_3)CH_2OH$ FW: 89.14

Assay ($CH_3C(NH_2)(CH_3)CH_2OH$) (by acidimetry) .....min. 93%
Color (APHA) .....max. 20

CAS: 124-68-5 DENSITY: 1 L = 0.934 kg MERCK INDEX: 14,449
FLASH POINT: 67°C

8-Amino-5-[(p-nitrophenyl)azo]-2-(phenylazo)-1-naphthol-3,6-disulfonic Acid
See Amido Black 10B

4-Aminophenazone
See 4-Aminoantipyrine

Aminosulfamic Acid
See under Sulfamic Acid

Ammonia Solution, Strong
NF, FCC
(27.0-30.0%)
cGMP

9726-02	Glass S/S	500 mL	rnc	62.35	
9726-05	Glass S/S	2.5 L	rac	147.95	
		6 x 2.5 L	rac	84.55	507.30
9726-R	Lined Steel Dr	360 lb	bul	Inquire	

NH_3 FW: 17.03

Meets NF & FCC Requirements
Identification .....Passes Test
Nonvolatile Residue .....max. 0.02%
Readily Oxidizable Substances .....Passes Test
Assay (NH_3)(w/w) 27.0-30.0%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Lead (Pb) .....max 0.5 mg/kg

DENSITY: 1 L = 0.90 kg MERCK INDEX: 14,492 IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonia Solution, Strong, NF
Multi-Compendial
(27.0-30.0%)
cGMP

9736-05	Glass S/S	2.5 L	rac	159.35	
		6 x 2.5 L	rac	91.05	546.30
9736-09	Lined Steel Dr	360 lb	bul	Inquire	

NH_3 FW: 17.03

Meets NF Requirements
Identification .....Passes Test
Heavy Metals (as Pb) .....max. 0.0013%
Nonvolatile Residue .....max. 0.05%
Readily Oxidizable Substances .....Passes Test
Assay (NH_3)(w/w) 27.0-31.0%
Meets BP/Ph.Eur. Chemical Specifications
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Appearance of Solution .....Passes Test
Oxidizable Substances .....Passes Test
Pyridine and Related Substances .....Passes Test
Residue on Evaporation (mg/L) .....max. 20
Carbonate (CO_3) .....max. 60 ppm
Chloride (Cl) .....max. 1 ppm
Sulfate (SO_4) .....max. 5 ppm
Iron (Fe) .....max. 0.25 ppm
Heavy Metals (as Pb) .....max. 1 ppm
Assay (NH_3)(w/w) 25.0-30.0%

CAS: 7664-41-7 DENSITY: 1 L = 0.90 kg MERCK INDEX: 14,492
IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonia Solution
See Ammonium Hydroxide, 28.0-30.0%

Ammonia, T.S.
BAKER ANALYZED Reagent

5905-02	Poly	1 L	sol	28.00	
5905-06	Poly	4 L	sol	66.25	

Assay (NH_3), w/v 9.5-10.5%
Product Information (not specifications):
Appearance (clear, colorless solution)

DENSITY: 1 L = 0.90 kg IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonia

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonia-Ammonium Chloride Buffer, T.S.

BAKER ANALYZED Reagent

5904-02	Poly	1 L	sol	59.70	

pH (1 in 10) 10.08-10.12

Product Information (not specifications):

Appearance (clear, colorless solution)

DENSITY: 1 L = 1.0 kg IMO: 8:2922

Ammonia Acetate

HPLC

For Use in High Performance Liquid Chromatography

0599-08	Poly	1 kg	spr	138.70	

CH_3COONH_4 FW: 77.08

Assay (CH_3COONH_4) (by acid-base titration) ..... min. 97%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.01%
pH of 5% Solution at 25°C 6.7-7.3
Nitrate (NO_3) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.001%

UV Absorbance (1 M Aqueous Solution) (1.00-cm cell vs. water):

350 nm ..... max. 0.01
280 nm ..... max. 0.01
254 nm ..... max. 0.02

Trace Impurities (in ppm):

Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 631-61-8 MERCK INDEX: 14,495

Ammonium Acetate, Crystal

BAKER ANALYZED ACS Reagent

0596-01	Poly	500 g	csa	118.65	
		4 x 500 g	csa	79.10	316.40
0596-19	Poly	1 kg	csa	201.90	
		4 x 1 kg	csa	134.60	538.40
0596-05	Poly	2 kg	csa	279.10	
		4 x 2 kg	csa	186.05	744.20
0596-07	Poly Pail	12 kg	bks	Inquire	
0596-R	Poly Drum	225 lb	bul	Inquire	

CH_3COONH_4 FW: 77.08

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Assay (CH_3COONH_4) (by acid-base titration) ..... min. 97%
Insoluble Matter ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.001%
pH of 5% Solution at 25°C 6.7-7.3
Residue after Ignition ..... max. 0.01%
Solution (20:100) -clear, colorless, complete ..... Passes Test
Sulfate (SO_4) ..... max. 0.001%
Water (H_2O) ..... max. 2.5%

Trace Impurities (in ppm):

Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 631-61-8 MERCK INDEX: 14,495

Ammonium Alum

See Aluminum Ammonium Sulfate

Ammonium Bicarbonate, Powder

BAKER ANALYZED Reagent

(ammonium hydrogen carbonate)

3003-01	Poly	500 g	non	38.40	
3003-05	Poly	2.5 kg	csa	111.90	
		4 x 2.5 kg	csa	74.60	298.40
3003-07	Poly Pail	12 kg	bks	Inquire	

NH_4HCO_3 FW: 79.06

Assay (as NH_3) 21.30-21.73%
pH of 5% Solution at 25°C 7.0-8.0
Nonvolatile Matter ..... max. 0.02%
Insoluble Matter ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.002%
Sulfur Compounds (as SO_4) ..... max. 0.002%

Trace Impurities (in ppm):

Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 1066-33-7 MERCK INDEX: 14,497

Ammonium Bichromate

See Ammonium Dichromate

Ammonium Bifluoride, Flake

BAKER ANALYZED Reagent

(ammonium hydrogen fluoride)

0619-04	Poly	125 g	non	34.25	
0619-01	Poly	500 g	csa	71.65	
		4 x 500 g	csa	47.75	191.00
0619-05	Poly	2.5 kg	csa	210.25	
		4 x 2.5 kg	csa	140.15	560.60
0619-07	Poly Pail	12 kg	bks	Inquire	
0619-09	Lined Fiber Dr	100 lb	bul	Inquire	

$NH_4F{\cdot}HF$ FW: 57.04

Assay ($NH_4F{\cdot}HF$) ..... min. 96.0%
Insoluble Matter ..... max. 0.02%
pH of 5% Solution at 25°C 4.0-6.5
Heavy Metals (as Pb) ..... max. 0.002%
Moisture (as H_2O) ..... max. 0.4%

CAS: 1341-49-7 MERCK INDEX: 14,498 IMO: 8:1727

Ammonium Biphosphate

See Ammonium Phosphate, Monobasic

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Bromide
BAKER ANALYZED ACS Reagent

0636-01	Poly	500 g	non	63.90	

NH_4Br FW: 97.94

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (NH_4Br) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.01%
pH of 5% Solution at 25°C 4.5-6.0
Bromate (BrO_3) ..... max. 0.002%
Chloride (Cl) ..... max. 0.2%
Iodide (I) ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.002%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 12124-97-9 MERCK INDEX: 14,505

Ammonium Carbonate
BAKER ANALYZED ACS Reagent

0642-01	Glass	500 g	csa	74.85	
		4 x 500 g	csa	49.90	199.60
0642-05	Poly Coated	2.5 kg	csa	255.70	
		4 x 2.5 kg	csa	170.45	681.80
0642-07	Lined Fiber Dr	12 kg	bks	Inquire	

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (as NH_3) ..... min. 30.0%
Insoluble Matter ..... max. 0.005%
Nonvolatile Matter ..... max. 0.01%
Sulfur Compounds (as SO_4) ..... max. 0.002%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 3

CAS: 506-87-6 MERCK INDEX: 14,508

Ammonium Carbonate
HPLC
For Use in High Performance Liquid Chromatography

0651-08	Poly	1 kg	spr	141.15	

Assay (as NH_3) ..... min. 30.0%
Insoluble Matter ..... max. 0.005%
Nonvolatile Matter ..... max. 0.01%
Sulfur Compounds (as SO_4) ..... max. 0.002%
Ultraviolet Absorbance:
254 nm ..... max. 0.02
280 nm ..... max. 0.01
350 nm ..... max. 0.01
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 3

CAS: 506-87-6 MERCK INDEX: 14,508

Ammonium Carbonate, Powder
NF, FCC

0650-01	Glass	500 g	rnc	53.95	
0650-R	Fiber Drum	300 lb	bul	Inquire	

Meets NF & FCC Requirements

Identification ..... Passes Test
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.003%
Lead (Pb) ..... max 3 mg/kg
Sulfate (SO_4) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 5 ppm
Assay (as NH_3) 30.0-34.0%
Nonvolatile Residue ..... max. 0.05%
Sulfur Compounds (as SO_4) ..... max. 0.005%
Important: Store in tight, light-resistant containers, at a temperature not above 30°C

CAS: 506-87-6 MERCK INDEX: 14,508

Ammonium Cerium(IV) Nitrate
See Ceric Ammonium Nitrate

Ammonium Cerium(IV) Sulfate
See Ceric Ammonium Sulfate

Ammonium Chloride, Granular
BAKER ANALYZED ACS Reagent

0660-01	Poly	500 g	csa	71.25	
		4 x 500 g	csa	47.50	190.00
0660-19	Poly	1 kg	csa	123.00	
		4 x 1 kg	csa	82.00	328.00
0660-05	Poly	2.5 kg	csa	239.65	
		4 x 2.5 kg	csa	159.75	639.00
0660-07	Poly Pail	12 kg	bks	Inquire	
0660-09	Lined Fiber Dr	100 lb	bul	Inquire	
0660-R	Poly Drum	200 lb	bul	Inquire	

NH_4Cl FW: 53.49

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (NH_4Cl) (by Ag titrn) ..... min. 99.5%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.01%
pH of 5% Solution at 25°C 4.5-5.5
Sulfate (SO_4) ..... max. 0.002%
Calcium (Ca) ..... max. 0.001%
Magnesium (Mg) ..... max. 5 ppm

Ammonium Citrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppm):
Nitrate (NO_3) ..... max. 5
Phosphate (PO_4) ..... max. 2
Heavy Metals (as Pb) ..... max. 2
Iron (Fe) ..... max. 2

CAS: 12125-02-9 MERCK INDEX: 14,509

Ammonium Citrate, Dibasic, Crystal
BAKER ANALYZED ACS Reagent
(diammonium hydrogen citrate)

0682-01	Poly	500 g	non	135.35	
0682-07	Poly Pail	12 kg	bks	Inquire	
0682-R	Poly Drum	200 lb	bul	Inquire	

$(NH_4)_2HC_6H_5O_7$ FW: 226.19

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($(NH_4)_2HC_6H_5O_7$) (by formol method) 98.0-103.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.01%
pH of 5% Solution at 25°C 4.5-5.5
Chloride (Cl) ..... max. 0.001%
Oxalate (C_2O_4) ..... Passes Test
Sulfur Compounds (as SO_4) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Phosphate (PO_4) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 5 ppm

CAS: 3012-65-5 MERCK INDEX: 14,512

Ammonium Dichromate, Crystal
BAKER ANALYZED ACS Reagent

0688-01	Poly	500 g	non	112.70	
0688-05	Poly	2.5 kg	non	447.50	
0688-07	Lined Fiber Dr	12 kg	bks	Inquire	

$(NH_4)_2Cr_2O_7$ FW: 252.07

Meets ACS Specifications
Assay ($(NH_4)_2Cr_2O_7$) (dried basis, by iodometry) ..... min. 99.5%
Loss on Drying at 105°C ..... max. 3.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.002%
Iron (Fe) ..... max. 0.002%
Sodium (Na) ..... max. 0.005%
pH of 5% Solution at 25°C 3.5-5.0

CAS: 7789-09-5 MERCK INDEX: 14,515 IMO: 5.1:1439

Ammonium Dihydrogen Phosphate
See Ammonium Phosphate, Monobasic

Ammonium Ferric Citrate
See Ferric Ammonium Citrate

Ammonium Ferric Sulfate
See Ferric Ammonium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Fluoride, Crystal
BAKER ANALYZED ACS Reagent

0698-04	Poly	125 g	csa	109.05	
		4 x 125 g	csa	72.70	290.80
0698-01	Poly	500 g	csa	199.75	
		4 x 500 g	csa	133.15	532.60
0698-05	Poly Pail	2.5 kg	non	485.35	
0698-07	Lined Fiber Dr	12 kg	bks	Inquire	

NH_4F FW: 37.04

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (NH_4F) ..... min. 98.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 12125-01-8 MERCK INDEX: 14,522 IMO: 6.1:2505

Ammonium Formate
See Formic Acid, Ammonium Salt

Ammonium Heptamolybdate, Tetrahydrate
See Ammonium Molybdate, 4-Hydrate

Ammonium Hexanitratocerate(IV)
See Ceric Ammonium Nitrate

Ammonium Hydrogen Carbonate
See Ammonium Bicarbonate

Ammonium Hydrogen Fluoride
See Ammonium Bifluoride

Ammonium Hydroxide, 30%
BAKER INSTRA-ANALYZED Reagent
For Trace Metal Analysis

9733-01	Poly	500 mL	spr	66.75	
		12 x 500 mL	spr	38.15	457.80
9733-03	Poly	4 L	spr	202.50	
		4 x 4 L	spr	115.70	462.80

NH_4OH FW: 35.05

Assay (as NH_3) 28.0-30.0%
Specific Gravity at 60°/60°F 0.896-0.902
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 3 ppm
Substances Reducing Permanganate ..... Passes Test
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 0.5
Phosphate (PO_4) ..... max. 0.4
Total Sulfur (as SO_4) ..... max. 1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppb):
Aluminum (Al) ..... max. 20
Arsenic and Antimony (as As) ..... max. 50
Barium (Ba) ..... max. 10
Boron (B) ..... max. 20
Cadmium (Cd) ..... max. 5
Calcium (Ca) ..... max. 200
Chromium (Cr) ..... max. 5
Cobalt (Co) ..... max. 1
Copper (Cu) ..... max. 20
Heavy Metals (as Pb) ..... max. 200
Iron (Fe) ..... max. 10
Lead (Pb) ..... max. 5
Lithium (Li) ..... max. 20
Magnesium (Mg) ..... max. 20
Manganese (Mn) ..... max. 5
Mercury (Hg) ..... max. 5
Nickel (Ni) ..... max. 5
Potassium (K) ..... max. 500
Silicon (Si) ..... max. 1000
Silver (Ag) ..... max. 5
Sodium (Na) ..... max. 300
Strontium (Sr) ..... max. 10
Tin (Sn) ..... max. 10
Zinc (Zn) ..... max. 5

CAS: 1336-21-6 DENSITY: 1 L = 0.9 kg MERCK INDEX: 14,494
IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonium Hydroxide, 28.0-30.0%
BAKER ANALYZED ACS Reagent

9721-02	Glass S/S	500 mL	cma	42.10	
		12 x 500 mL	cma	42.10	505.20
9721-01	Glass	12 x 500 mL	cma	24.85	298.20
9721-00	Poly Coated	6 x 500 mL	cma	30.50	183.00
9721-05	Glass S/S	2.5 L	cma	79.15	
		6 x 2.5 L	cma	79.15	474.90
9721-03	Glass	6 x 2.5 L	cma	38.00	228.00
9721-18	Poly	6 x 2.5 L	spr	31.15	186.90
9721-33	Poly Coated	6 x 2.5 L	cma	46.70	280.20
9721-06	Poly	4 x 4 L	cma	59.05	236.20
9721-15	Lined Steel Dr	360 lb	bul	Inquire	

NH_4OH FW: 35.05

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Appearance (Colorless and free from suspended matter or sediment) ..... Passes Test
Assay (as NH_3) 28.0-30.0%
Color (APHA) ..... max. 5
Specific Gravity at 60°/60°F 0.896-0.902
Residue after Ignition ..... max. 0.002%
Carbon Dioxide (CO_2) ..... max. 0.002%
Substances Reducing Permanganate ..... Passes Test
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 0.5
Nitrate (NO_3) ..... max. 2
Phosphate (PO_4) ..... max. 2
Sulfate (SO_4) ..... max. 2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppb):
Aluminum (Al) ..... max. 200
Arsenic and Antimony (as As) ..... max. 3000
Barium (Ba) ..... max. 300
Boron (B) ..... max. 50
Chromium (Cr) ..... max. 100
Copper (Cu) ..... max. 100
Gold (Au) ..... max. 200
Heavy Metals (as Pb) ..... max. 500
Iron (Fe) ..... max. 100
Lead (Pb) ..... max. 200
Magnesium (Mg) ..... max. 200
Manganese (Mn) ..... max. 100
Nickel (Ni) ..... max. 100
Tin (Sn) ..... max. 100
Titanium (Ti) ..... max. 100
Zinc (Zn) ..... max. 100

CAS: 1336-21-6 DENSITY: 1 L = 0.9 kg MERCK INDEX: 14,494
IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonium Hydroxide, 20%
ULTREX II Ultrapure Reagent

4807-05	Poly	490 mL	spr	267.55

NH_4OH FW: 35.05

Certificate Provided Reports Actual Lot Analysis
Assay (as NH_3) 20-22%
Trace Impurities in ppt (pg/g):
Arsenic (As) ..... max. 10
Aluminum (Al) ..... max. 20
Antimony (Sb) ..... max. 10
Barium (Ba) ..... max. 10
Beryllium (Be) ..... max. 10
Bismuth (Bi) ..... max. 10
Cadmium (Cd) ..... max. 10
Calcium (Ca) ..... max. 20
Cerium (Ce) ..... max. 10
Cesium (Cs) ..... max. 10
Chromium (Cr) ..... max. 10
Cobalt (Co) ..... max. 10
Copper (Cu) ..... max. 20
Hafnium (Hf) ..... Actual Value Reported
Dysprosium (Dy) ..... max. 10
Erbium (Er) ..... max. 10
Europium (Eu) ..... max. 10
Gadolinium (Gd) ..... max. 10
Iron (Fe) ..... max. 20
Gallium (Ga) ..... max. 10
Germanium (Ge) ..... max. 10
Gold (Au) ..... max. 10
Holmium (Ho) ..... max. 10
Indium (In) ..... max. 10
Lanthanum (La) ..... max. 10
Lead (Pb) ..... max. 10
Lithium (Li) ..... max. 10
Lutetium (Lu) ..... max. 10
Magnesium (Mg) ..... max. 20
Manganese (Mn) ..... max. 10
Molybdenum (Mo) ..... max. 10
Neodymium (Nd) ..... max. 10
Nickel (Ni) ..... max. 10

Ammonium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Niobium (Nb) ..... max. 10
Palladium (Pd) ..... Actual Value Reported
Platinum (Pt) ..... Actual Value Reported
Potassium (K) ..... max. 20
Praseodymium (Pr) ..... max. 10
Rhenium (Re) ..... Actual Value Reported
Rhodium (Rh) ..... max. 10
Rubidium (Rb) ..... max. 10
Ruthenium (Ru) ..... Actual Value Reported
Samarium (Sm) ..... max. 10
Scandium (Sc) ..... max. 10
Selenium (Se) ..... Actual Value Reported
Silver (Ag) ..... max. 10
Sodium (Na) ..... max. 20
Strontium (Sr) ..... max. 10
Terbium (Tb) ..... max. 10
Thallium (Tl) ..... max. 10
Thorium (Th) ..... max. 10
Thulium (Tm) ..... max. 10
Tellurium (Te) ..... max. 10
Tin (Sn) ..... max. 10
Titanium (Ti) ..... max. 10
Tungsten (W) ..... max. 10
Uranium (U) ..... max. 10
Vanadium (V) ..... max. 10
Ytterbium (Yb) ..... max. 10
Yttrium (Y) ..... Actual Value Reported
Zinc (Zn) ..... max. 10
Zirconium (Zr) ..... max. 10

CAS: 1336-21-6 DENSITY: 1 L = 0.9 kg MERCK INDEX: 14,494
IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonium Hydroxide, 5N Volumetric Solution
BAKER ANALYZED Reagent

5604-02	Poly	1 L	sol	57.65	
		6 x 1 L	sol	48.05	288.30
5604-03	Cubitainer	4 L	sol	159.70	
		4 x 4 L	sol	133.10	532.40
5604-07	Cubitainer	20 L	sol	420.30	

NH_4OH FW: 35.05

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality should be confirmed at the time of use because
Ammonium Hydroxide may vaporize thus reducing its normality.
Normality 4.95-5.05

CAS: 1336-21-6 DENSITY: 1 L = 0.9 kg MERCK INDEX: 14,494
IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonium Hydroxide
See also Ammonia Solution Strong

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Iodide, Crystal
BAKER ANALYZED ACS Reagent

0708-04	Glass	125 g	non	138.00	
0708-01	Glass	500 g	csa	431.55	
		4 x 500 g	csa	287.70	1150.80

NH_4I FW: 144.94

Meets ACS Specifications
Assay (NH_4I) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.05%
Chloride and Bromide (as Cl) ..... max. 0.005%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.05%
Barium (Ba) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 5 ppm

CAS: 12027-06-4 MERCK INDEX: 14,529

Ammonium Iron(II) Sulfate, Hexahydrate
See Ferrous Ammonium Sulfate

Ammonium Iron(III) Citrate
See Ferric Ammonium Citrate

Ammonium Iron(III) Sulfate
See Ferric Ammonium Sulfate

Ammonium Metavanadate
See Ammonium meta-Vanadate

Ammonium Molybdate, 4-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
(ammonium heptamolybdate, tetrahydrate)

0716-01	Poly	500 g	csa	229.95	
		4 x 500 g	csa	153.30	613.20
0716-05	Poly	2.5 kg	csa	1001.65	
		4 x 2.5 kg	csa	667.75	2671.00
0716-07	Poly Pail	12 kg	bks	Inquire	
0716-R	Lined Fiber Dr	300 lb	bul	Inquire	

$(NH_4)_6Mo_7O_{24}{\cdot}4H_2O$ FW: 1235.86

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (as MoO_3) 81.0-83.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.002%
Nitrate (NO_3) ..... Passes Test
Arsenate, Phosphate and Silicate (as SiO_2) ..... max. 0.001%
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.01%

CAS: 12054-85-2 MERCK INDEX: 14,533

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Molybdate

See also Molybdic Acid

Ammonium Nitrate
BAKER ANALYZED ACS Reagent

0729-01	Poly	500 g	csa	68.70	
		4 x 500 g	csa	45.80	183.20
0729-05	Poly	2.5 kg	csa	216.40	
		4 x 2.5 kg	csa	144.25	577.00
0729-07	Poly Pail	12 kg	bks	Inquire	
0729-08	Flowmor	12 kg	bks	Inquire	
0729-09	Lined Fiber Dr	100 lb	bul	Inquire	

NH_4NO_3 FW: 80.04

Meets Reagent Specifications for testing USP/NF monographs
Meets ACS Specifications

Assay (NH_4NO_3) .....min. 95.0%
Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.01%
pH of 5% Solution at 25°C 4.5-6.0
Sulfate (SO_4) .....max. 0.002%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Nitrite (NO_2) .....Passes Test
Phosphate (PO_4) .....max. 5
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2

CAS: 6484-52-2 MERCK INDEX: 14,534 IMO: 5.1:1942

Ammonium Nitrate
BAKER ANALYZED ACS Reagent

0829-08	Flowmor	12 kg	bks	Inquire	

NH_4NO_3 FW: 80.04

Meets ACS Specifications

Assay (NH_4NO_3) .....min. 99.5%
Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.01%
pH of 0.5% Solution at 25°C 4.5-6.0
Sulfate (SO_4) .....max. 0.002%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Phosphate (PO_4) .....max. 5
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2
Nitrite (NO_2) .....Passes Test

CAS: 6484-52-2 MERCK INDEX: 14,534 IMO: 5.1:1942

Ammonium-N-nitroso-N-phenylhydroxylamine

See Cupferron

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Oxalate, Monohydrate, Crystal
BAKER ANALYZED ACS Reagent

0746-04	Poly	125 g	csa	103.50	
		4 x 125 g	csa	69.00	276.00
0746-01	Poly	500 g	csa	182.05	
		4 x 500 g	csa	121.35	485.40
0746-05	Poly	2.5 kg	csa	617.65	
		4 x 2.5 kg	csa	411.75	1647.00
0746-R	Lined Fiber Dr	250 lb	bul	Inquire	

$NH_4OCOCOONH_4 \cdot H_2O$ FW: 142.11

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($NH_4OCOCOONH_4 \cdot H_2O$) 99.0-101.0%
Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.02%
Chloride (Cl) .....max. 0.002%
Sulfate (SO_4) .....max. 0.002%
Heavy Metals (as Pb) .....max. 5 ppm
Iron (Fe) .....max. 2 ppm

CAS: 6009-70-7 MERCK INDEX: 14,537 IMO: 8:1759

Ammonium Oxalate, T.S.
BAKER ANALYZED Reagent

5906-02	Poly	1 L	sol	44.80	

Assay ($(NH_4)_2C_2O_4 \cdot H_2O$), w/v 3.4-3.6%
Product Information (not specifications):
Appearance (clear, colorless solution)
DENSITY: 1 L = 1.50 kg

Ammonium Peroxydisulfate

See Ammonium Persulfate

Ammonium Persulfate
ULTRAPURE BIOREAGENT
(ammonium peroxydisulfate)
Catalyst for Polyacrylamide Gels

4030-00	Glass	25 g	upr	24.45	
4030-04	Glass	100 g	upr	37.25	

$(NH_4)_2S_2O_8$ FW: 228.20

Assay ($(NH_4)_2S_2O_8$) .....min. 98.0%
Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.05%
Titrable Free Acid (meq/g) .....max. 0.04
Chloride and Chlorate (as Cl) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.005%
Iron (Fe) .....max. 0.001%
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected

Ammonium Persulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppm):
Manganese (Mn) ..... max. 0.5
Store below 20°C
CAS: 7727-54-0 MERCK INDEX: 14,541 IMO: 5.1:1444

Ammonium Persulfate, Crystal
BAKER ANALYZED ACS Reagent
(ammonium peroxydisulfate)

0762-01	Poly	500 g	csa	73.65	
		4 x 500 g	csa	49.10	196.40
0762-05	Poly	2.5 kg	csa	280.00	
		4 x 2.5 kg	csa	186.65	746.60
0762-07	Poly Pail	12 kg	bks	Inquire	

$(NH_4)_2S_2O_8$ FW: 228.20

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($(NH_4)_2S_2O_8$) ..... min. 98.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.05%
Titrable Free Acid (meq/g) ..... max. 0.04
Chloride and Chlorate (as Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Trace Impurities (in ppm):
Manganese (Mn) ..... max. 0.5
Store below 20°C
CAS: 7727-54-0 MERCK INDEX: 14,541 IMO: 5.1:1444

Ammonium Phosphate, Monobasic
ULTREX Ultrapure Reagent
(ammonium dihydrogen phosphate)

4931-04	Glass	50 g	spr	191.40	
4931-07	Glass	500 g	spr	892.80	

$NH_4H_2PO_4$ FW: 115.03

Certificate Provided Reports Actual Lot Analysis
Assay ($NH_4H_2PO_4$) 98.9%
pH of 5% Solution at 25°C 4.4
Particulate Matter 0.003%
Non-Metallic Impurities (in ppm)(ug/g):
Arsenic (As) ..... < 0.1
Fluoride (F) ..... < 1
Halide (as Cl) ..... < 4
Nitrate (NO_3) 2
Silicon (Si) 0.4
Sulfur Compounds (as SO_4) ..... < 5
Metallic Impurities (in ppm)(ug/g):
Aluminum (Al) ..... < 0.2
Barium (Ba) ..... < 0.2
Bismuth (Bi) ..... < 2.2
Cadmium (Cd) ..... < 0.1
Calcium (Ca) 0.1
Chromium (Cr) ..... < 0.2
Cobalt (Co) ..... < 0.2
Copper (Cu) ..... < 0.1
Iron (Fe) 0.7
Lead (Pb) 0.2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium (Mg) ..... < 0.1
Manganese (Mn) ..... < 0.1
Mercury (Hg) ..... < 0.3
Molybdenum (Mo) ..... < 0.1
Nickel (Ni) ..... < 0.2
Niobium (Nb) ..... < 0.1
Potassium (K) 1.1
Silver (Ag) ..... < 0.3
Sodium (Na) 1.1
Strontium (Sr) ..... < 0.2
Tin (Sn) ..... < 0.2
Titanium (Ti) ..... < 0.2
Vanadium (V) ..... < 0.1
Zinc (Zn) ..... < 0.2
Zirconium (Zr) ..... < 0.2
Ultraviolet Absorbance (1.00-cm cell vs. water):
280 nm 0.02
260 nm 0.02
254 nm 0.02
220 nm 0.04
215 nm 0.04
CAS: 7722-76-1 MERCK INDEX: 14,543

Ammonium Phosphate, Monobasic, Crystal
HPLC
(ammonium dihydrogen phosphate)
For Use in High Performance Liquid Chromatography

0777-08	Glass	1 kg	spr	152.20	

$NH_4H_2PO_4$ FW: 115.03

Assay ($NH_4H_2PO_4$) ..... min. 98.0%
Insoluble Matter ..... max. 0.005%
Ammonium Hydroxide Precipitate ..... max. 0.005%
pH of 5% Solution at 25°C 3.8-4.4
Nitrate (NO_3) ..... max. 0.001%
Sulfur Compounds (as SO_4) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Ultraviolet Absorbance (1.00-cm cell vs. water):
254 nm ..... max. 0.03
280 nm ..... max. 0.02
350 nm ..... max. 0.01
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Arsenic (As) ..... max. 0.5
Heavy Metals (as Pb) ..... max. 5
CAS: 7722-76-1 MERCK INDEX: 14,543

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Phosphate, Monobasic, Crystal

BAKER ANALYZED ACS Reagent
(ammonium dihydrogen phosphate)

0776-01	Poly	500 g	csa	81.40	
		4 x 500 g	csa	54.25	217.00
0776-07	Poly Pail	12 kg	bks	Inquire	
0776-09	Lined Fiber Dr	100 lb	bul	Inquire	
0776-R	Lined Fiber Dr	275 lb	bul	Inquire	

$NH_4H_2PO_4$ FW: 115.03

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($NH_4H_2PO_4$) .....min. 98.0%
Calcium (Ca) .....max. 0.001%
Insoluble Matter .....max. 0.005%
pH of 5% Solution at 25°C 3.8-4.4
Magnesium (Mg) .....max. 0.0005%
Nitrate (NO_3) .....max. 0.001%
Sulfate (SO_4) .....max. 0.01%
Iron (Fe) .....max. 0.001%
Potassium (K) .....max. 0.005%
Sodium (Na) .....max. 0.005%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 5

CAS: 7722-76-1 MERCK INDEX: 14,543

Ammonium Phosphate, Dibasic, Crystal

BAKER ANALYZED ACS Reagent
(diammonium hydrogen phosphate)

0784-01	Poly	500 g	csa	107.65	
		4 x 500 g	csa	71.75	287.00
0784-05	Poly	2.5 kg	csa	420.30	
		4 x 2.5 kg	csa	280.20	1120.80
0784-07	Poly Pail	12 kg	bks	Inquire	
0784-R	Lined Fiber Dr	200 lb	bul	Inquire	

$(NH_4)_2HPO_4$ FW: 132.06

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(NH_4)_2HPO_4$) (by acidimetry) .....min. 98.0%
pH of 5% Solution at 25°C 7.7-8.1
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Nitrate (NO_3) .....max. 0.003%
Sulfate (SO_4) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%
Calcium (Ca) .....max. 0.001%
Magnesium (Mg) .....max. 0.0005%
Potassium (K) .....max. 0.005%
Sodium (Na) .....max. 0.005%

CAS: 7783-28-0 MERCK INDEX: 14,542

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Phosphate, 0.3M Solution

BAKER
(ammonium dihydrogen phosphate)

3332-23	NOWPak	20 L	npk	Inquire	

Molarity 0.28-0.32
Identification .....Passes Test
pH of 5% Solution at 25°C 3.8-5.4

DENSITY: 1 L = 1.01 kg

Ammonium 1-Pyrrolidinecarbodithioate

BAKER ANALYZED Reagent
(APCD)
For Use in Atomic Absorption Spectrophotometry

B337-02	Glass	10 g	bio	145.85	

$C_5H_{12}N_2S_2$ FW: 164.29

Assay ($C_5H_{12}N_2S_2$) .....min. 98.0%
Insoluble Matter .....max. 0.10%
Melting Point .....min. 146 °C.
Suitability as Chelating Agent .....Passes Test

CAS: 5108-96-3

Ammonium Sodium Hydrogen Phosphate, Tetrahydrate

See Sodium Ammonium Phosphate

Ammonium Sulfate

ULTRAPURE BIOREAGENT
For Protein Precipitation and Liquid Chromatography

4027-02	Poly	1 kg	upr	66.75	
4027-06	Poly Pail	5 kg	upr	218.15	
4027-07	Flowmor	12 kg	bks	Inquire	
4027-09	Flowmor	50 kg	bul	Inquire	

$(NH_4)_2SO_4$ FW: 132.14

Assay ($(NH_4)_2SO_4$) .....min. 99.5%
Insoluble Matter .....max. 0.005%
pH of 5% Solution at 25°C 5.0-6.0
Residue after Ignition .....max. 0.005%
Absorbance of a 1M Solution:
260 nm .....max. 0.04
280 nm .....max. 0.04
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected
Trace Impurities (in ppm):
Chloride (Cl) .....max. 3
Nitrate (NO_3) .....max. 10
Phosphate (PO_4) .....max. 3
Arsenic (As) .....max. 0.2
Cadmium (Cd) .....max. 2
Calcium (Ca) .....max. 2
Copper (Cu) .....max. 0.2
Iron (Fe) .....max. 1
Lead (Pb) .....max. 0.1
Lithium (Li) .....max. 2
Magnesium (Mg) .....max. 2
Manganese (Mn) .....max. 0.6

Ammonium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium (K) ..... max. 2
Zinc (Zn) ..... max. 0.5
Solution Test ..... Passes Test
CAS: 7783-20-2 MERCK INDEX: 14,555

Ammonium Sulfate, Granular
BAKER ANALYZED ACS Reagent

0792-01	Poly	500 g	csa	55.05	
		4 x 500 g	csa	36.70	146.80
0792-05	Poly	2.5 kg	csa	145.75	
		4 x 2.5 kg	csa	97.15	388.60
0792-07	Flowmor	12 kg	bks	Inquire	
0792-09	Lined Fiber Dr	100 lb	bul	Inquire	
0792-R		325 lb	bul	Inquire	

$(NH_4)_2SO_4$ FW: 132.14

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Appearance (White crystals or granules) ..... Passes Test
Assay ($(NH_4)_2SO_4$) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.005%
pH of 5% Solution at 25°C 5.0-6.0
Nitrate (NO_3) ..... max. 0.001%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 3
Phosphate (PO_4) ..... max. 3
Arsenic (As) ..... max. 0.2
Heavy Metals (as Pb) ..... max. 3
Iron (Fe) ..... max. 5
CAS: 7783-20-2 MERCK INDEX: 14,555

Ammonium Sulfate, Granular
FCC, ACS
Endotoxin Tested
FOOD GRADE cGMP

0793-07	Poly Pail	12 kg	bks	Inquire	
0793-09	Poly Drum	100 lb	bul	Inquire	
0793-08	Poly Drum	325 lb	bul	Inquire	

$(NH_4)_2SO_4$ FW: 132.14

Meets ACS & FCC Requirements
Assay ($(NH_4)_2SO_4$) 99.0-100.5%
Identification ..... Passes Test
Insoluble Matter ..... max. 0.005%
Residue on Ignition (ACS) ..... max. 0.005%
Residue on Ignition (FCC) ..... max. 0.25%
pH of 5% Solution at 25°C 5.0-6.0
Lead (Pb) ..... max 3 mg/kg
Nitrate (NO_3) ..... max. 0.001%
Endotoxin Concentration (2.5 EU/g max.) ..... Passes Test
Selenium (Se) ..... max. 0.003%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 3
Phosphate (PO_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 3
Iron (Fe) ..... max. 5
CAS: 7783-20-2 MERCK INDEX: 14,555

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Sulfate
NF
Endotoxin Tested
cGMP

0798-01	Poly	500 g	rss	79.95	
		4 x 500 g	rss	53.30	213.20
0798-05	Poly	2.5 kg	rss	219.10	
		4 x 2.5 kg	rss	146.05	584.20
0798-F7	Flowmor	12 kg	bks	Inquire	
0798-08	Poly Drum	25 kg	bul	Inquire	
0798-F9	Flowmor	50 kg	bul	Inquire	

$(NH_4)_2SO_4$ FW: 132.14

Meets NF Requirements
Assay ($(NH_4)_2SO_4$) 99.0-100.5%
Insoluble Matter ..... max. 0.005%
Residue on Ignition ..... max. 0.005%
pH of 5% Solution 5.0-6.0
Nitrate (NO_3) ..... max. 0.001%
Chloride (Cl) ..... max. 5 ppm
Phosphate (PO_4) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Identification ..... Passes Test
Microbial Limit
Total Aerobic Microbes (cfu/g) ..... max. 1000
Total Combined Molds and Yeasts (cfu/g) ..... max. 10
Endotoxin Concentration (EU/g) ..... max. 2.5
CAS: 7783-20-2 MERCK INDEX: 14,555

Ammonium Sulfate, Granular
FCC
FOOD GRADE cGMP

0800-05	Poly	2.5 kg	non	231.95	

$(NH_4)_2SO_4$ FW: 132.14

Meets FCC Requirements
Assay 99.0-100.5%
Identification ..... Passes Test
Lead (Pb) ..... max 3 mg/kg
Residue on Ignition ..... max. 0.25%
Selenium (Se) ..... max. 0.003%
CAS: 7783-20-2 MERCK INDEX: 14,555

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Sulfate, 6% (w/v) Solution
BAKER ANALYZED Reagent

0333-07	Poly Pail	19 L	bks	Inquire	

$(NH_4)_2SO_4$ FW: 132.14

Appearance ..... Passes Test
Assay ($(NH_4)_2SO_4$) (by formol method) 5.9-6.1%
pH ("As Is" basis) 5.0-6.0

CAS: 7783-20-2

Ammonium Sulfate, 3% (w/v) Solution
BAKER ANALYZED Reagent

0332-07	Hedpak	19 L	bks	Inquire	

$(NH_4)_2SO_4$ FW: 132.14

Appearance ..... Passes Test
Assay ($(NH_4)_2SO_4$) (by formol method) 2.9-3.1%
pH ("As Is" basis) 5.0-6.0

CAS: 7783-20-2

Ammonium Sulfocyanide
See Ammonium Thiocyanate

Ammonium Tetrasulfatocerate(IV)
See Ceric Ammonium Sulfate

Ammonium Thiocyanate, Crystal
BAKER ANALYZED ACS Reagent

0818-01	Poly	500 g	csa	156.40	
		4 x 500 g	csa	104.25	417.00
0818-R	Lined Fiber Dr	200 lb	bul	Inquire	

NH_4SCN FW: 76.12

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance ..... Passes Test
Assay (NH_4SCN) (by Ag titrn) ..... min. 97.5%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.01%
pH of 5% Solution at 25°C 4.5-6.0
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Iodine Consuming Substances (meq/g) ..... max. 0.004
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 3

CAS: 1762-95-4 MERCK INDEX: 14,561

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Thiocyanate, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5627-02	Poly	1 L	sol	57.85	
		6 x 1 L	sol	48.20	289.20

NH_4SCN FW: 76.12

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.095-0.105

CAS: 1762-95-4 DENSITY: 1 L = 1.1-1.15 kg

Ammonium meta-Vanadate
BAKER ANALYZED ACS Reagent

0715-04	Glass	125 g	csa	120.85	
		4 x 125 g	csa	80.55	322.20
0715-01	Glass	500 g	csa	274.50	
		4 x 500 g	csa	183.00	732.00

NH_4VO_3 FW: 116.98

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (NH_4VO_3) ..... min. 99.0%
Solubility in Ammonium Hydroxide ..... Passes Test
Carbonate (CO_3) ..... Passes Test
Chloride (Cl) ..... max. 0.2%
Sulfate (SO_4) ..... max. 0.05%
Appearance ..... Passes Test

CAS: 7803-55-6 MERCK INDEX: 14,568 IMO: 6.1:2859

Amyl-
See also Pentyl-

Amyl Acetate (Mixed Isomers)
Purified

9094-01	Glass	500 mL	cso	77.25	
		12 x 500 mL	cso	51.50	618.00
9094-03	Glass	4 L	cso	326.25	
		4 x 4 L	cso	217.50	870.00

CAS: 628-63-7 DENSITY: 1 L = 0.88 kg IMO: 3:1104
FLASH POINT: 38°C

Solvent Spill Cleanup Products available. See pp. 378.

Amyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Amyl Alcohol (Mixed Isomers)

BAKER ANALYZED Reagent
(pentanol)

9032-01	Glass	500 mL	cso	86.80	
		12 x 500 mL	cso	57.85	694.20
9032-03	Glass	4 L	cso	339.15	
		4 x 4 L	cso	226.10	904.40

$C_5H_{11}OH$ FW: 88.15

Assay ($C_5H_{11}OH$) (by GC)(total isomers) .....min. 98%
n-Amyl Alcohol (by GC) .....Actual Value Reported
iso-Amyl Alcohol (by GC) .....Actual Value Reported
Color (APHA) .....max. 15
Acidity (as CH_3COOH) .....max. 0.01%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.3%
Residue after Evaporation .....max. 0.005%
Density (g/mL) at 20°C 0.812-0.819
Aldehydes .....Passes Test

MERCK INDEX: 14,7119 IMO: 3:1105 FLASH POINT: 33°C

Solvent Spill Cleanup Products available. See pp. 378.

iso-Amyl Alcohol

BAKER ANALYZED ACS Reagent
(iso-pentyl alcohol)

9038-01	Glass	500 mL	cso	99.85	
		12 x 500 mL	cso	66.55	798.60
9038-03	Glass	4 L	cso	360.30	
		4 x 4 L	cso	240.20	960.80

$(CH_3)_2CHCH_2CH_2OH$ FW: 88.15

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($(CH_3)_2CHCH_2CH_2OH$) (by GC, corrected for water) ....min. 98.5%
Residue after Evaporation .....max. 0.003%
Titrable Acid (meq/g) .....max. 0.002
Acids and Esters (as amyl acetate) .....max. 0.2%
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.1%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.5%

CAS: 123-51-3 DENSITY: 1 L = 0.813 kg MERCK INDEX: 14,5195
IMO: 3:1105 FLASH POINT: 43°C

Solvent Spill Cleanup Products available. See pp. 378.

tert-Amyl Alcohol

BAKER ANALYZED Reagent
(2-methyl-2-butanol)

9046-01	Glass	500 mL	cso	143.80	
		12 x 500 mL	cso	95.85	1150.20
9046-03	Glass	4 L	cso	878.65	
		4 x 4 L	cso	585.75	2343.00

$CH_3CH_2C(CH_3)_2OH$ FW: 88.15

Assay ($CH_3CH_2C(CH_3)_2OH$) (by GC) .....min. 99.0%
Residue after Evaporation .....max. 0.004%
Acids and Esters (as amyl acetate) .....max. 1%
Aldehydes .....Passes Test

CAS: 75-85-4 DENSITY: 1 L = 0.81 kg MERCK INDEX: 14,7140
IMO: 3:1105 FLASH POINT: 19°C

Solvent Spill Cleanup Products available. See pp. 378.

Analytical Filter Aids

See Diatomaceous Earth and Celite

Aneurine

See Thiamine Hydrochloride

ANHYDRONE

BAKER ANALYZED ACS Reagent
(magnesium perchlorate, desiccant)
For Drying

0828-01		500 g	non	191.45	

$Mg(ClO_4)_2$ FW: 223.21

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Titrable Free Acid (meq/g) .....max. 0.005
Titrable Base (meq/g) .....max. 0.025
Loss on Drying at 190°C .....max. 8%
Suitability for Moisture Absorption .....Passes Test

CAS: 10034-81-8 MERCK INDEX: 14,5678 IMO: 5.1:1475

Anhydrous Lanolin, USP

See Lanolin, USP

Aniline

BAKER ANALYZED ACS Reagent

9110-01	Glass	500 mL	cso	94.20	
		12 x 500 mL	cso	62.80	753.60
9110-03	Glass	4 L	cso	387.30	
		4 x 4 L	cso	258.20	1032.80

$C_6H_5NH_2$ FW: 93.13

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_6H_5NH_2$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 250
Residue after Ignition .....max. 0.005%
Chlorobenzene (C_6H_5Cl) .....max. 0.01%
Hydrocarbons .....Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nitrobenzene ($C_6H_5NO_2$) ..... Passes Test
Product Information (not specifications):
Boiling Point (typical) ..... 184.4 °C.
CAS: 62-53-3 DENSITY: 1 L = 1.022 kg MERCK INDEX: 14,659
IMO: 6.1:1547 FLASH POINT: 70°C

Solvent Spill Cleanup Products available. See pp. 378.

Aniline Blue Black

See Amido Black 10B

Aniline Blue WS

BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology (C.I. 42755)

B362-03	Glass	25 g	non	89.30	

$C_{32}H_{25}N_3Na_2O_9S_3$ FW: 737.74

Meets Reagent Specifications for testing USP/NF monographs
Certified by the Biological Stain Commission
Total Dye Content
(mL 0.1N $TiCl_3$ consumed per gram) ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Decolorization Test ..... Passes Test
Biological Test ..... Passes Test
CAS: 8004-91-9

p-Anilinesulfonic Acid

See Sulfanilic Acid

Anion Exchange Resins

See Ion Excahnge Resins, p. 242

Anthracene

BAKER

B490-05	Poly	100 g	non	94.15	

$C_{14}H_{10}$ FW: 178.23

Melting Point ..... 214-217 °C.
CAS: 120-12-7 MERCK INDEX: 14,682 FLASH POINT: 121°C

Antifoam B Silicone Emulsion

BAKER

B531-05	Glass	125 mL	non	41.10	
B531-07	Glass	500 mL	cor	150.30	
		12 x 500 mL	cor	100.20	1202.40
B531-01	Poly Pail	19 L	sbo	1442.10	

Nonvolatile Content ..... Actual Value Reported
Appearance ..... Passes Test
DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,3215 FLASH POINT: > 101.1°C

Antifoam C Medical Emulsion

cGMP

Biotech Reagent

8535-02	Poly	1 L	rss	175.00	
		6 x 1 L	rss	116.65	699.90

Assay 25.5-33.0%
The following test results are derived from testing Antifoam C, Medical Emulsion to the USP chemical specifications for Simethicone
Appearance ..... Passes Test
Microbial Limit (per g) ..... max. 100
Defoaming Activity (seconds) ..... max. 15
Heavy Metals(as Pb) (µg/g) ..... max. 5
Identification (by IR) ..... Passes Test
DENSITY: 1 L = 1.00 kg FLASH POINT: 100°C

Antimony, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Antimony, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Sb metal in 20% HCl)
Plasma Standard

5717-04		100 mL	spr	112.60	

Sb AW: 121.75

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Antimony, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Sb metal in 20% HCl)
Plasma Standard

5703-04		100 mL	spr	72.00	

Sb AW: 121.75

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Antimony, 1000 µg/mL

BAKER INSTRA-ANALYZED Reagent
(antimony metal in 20% (w/v HCl))

6441-04	Glass	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Sb AW: 121.75

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Antimony(III) Chloride

See Antimony Trichloride

Antimony(III) Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Antimony(III) Oxide

See Antimony Trioxide

Antimony Potassium Tartrate, Trihydrate, Powder

cGMP

USP

0864-04	Poly	125 g	rnc	112.90	
0864-01	Poly	500 g	rss	225.55	
		4 x 500 g	rss	150.35	601.40
0864-05	Poly	2.5 kg	rnc	808.15	

$C_8H_4K_2O_{12}Sb_2 \cdot 3H_2O$ FW: 667.85

Meets USP Requirements

Completeness of Solution ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Loss on Drying ..... max. 2.7%
Arsenic (As) ..... max. 0.015%
Lead (Pb) ..... max. 0.002%
Assay 99.0-103.0%

CAS: 28300-74-5 MERCK INDEX: 14,700 IMO: 6.1:1551

Antimony Trichloride, Crystal

BAKER ANALYZED ACS Reagent
(antimony(III) chloride)

0878-04	Glass	125 g	csa	197.20	
		4 x 125 g	csa	131.45	525.80
0878-01	Glass	500 g	csa	412.60	
		4 x 500 g	csa	275.05	1100.20

$SbCl_3$ FW: 228.11

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($SbCl_3$) (by iodometry) ..... min. 99.0%
Insoluble in Chloroform ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.005%
Arsenic (As) ..... max. 0.02%
Calcium (Ca) ..... max. 0.005%
Copper (Cu) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%
Lead (Pb) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%

CAS: 10025-91-9 MERCK INDEX: 14,707 IMO: 8:1733

Antimony Trioxide, Powder

BAKER ANALYZED Reagent
(antimony(III) oxide)

0886-04	125 g	non	102.75	
0886-01	500 g	non	143.10	

Sb_2O_3 FW: 291.52

Assay (Sb_2O_3) ..... min. 99.0%
Chloride (Cl) ..... max. 0.005%
Total Sulfur (as SO_4) ..... Actual Value Reported
Arsenic (As) ..... max. 0.2%
Iron (Fe) ..... max. 0.005%
Other Heavy Metals (as Pb) ..... Actual Value Reported

CAS: 1309-64-4 MERCK INDEX: 14,711 IMO: 6.1:1549

APCD

See Ammonium 1-Pyrrolidinecarbodithioate

L-Arginine, USP

cGMP

Multi-Compendial

2066-06	Poly	1 kg	bio	296.85
2066-07	Poly Pail	12 kg	bks	Inquire
2066-09	Poly Drum	50 kg	bul	Inquire

$C_6H_{14}N_4O_2$ FW: 174.20

Meets USP Requirements

Assay ($C_6H_{14}N_4O_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +26.3 - +27.7 °
Loss on Drying at 105°C ..... max. 0.5%
Chloride (Cl) ..... max. 0.05%
Residue on Ignition ..... max. 0.3%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0015%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%

Meets FCC Requirements

Assay ($C_6H_{14}N_4O_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying at 105°C ..... max. 1.0%
Residue on Ignition ..... max. 0.2%
Specific Rotation $[\alpha]_D^{20}$ ..... +26.0 - +27.9 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_6H_{14}N_4O_2$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +25.5 - +28.5 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Endotoxin Concentration, IU/mg ..... Actual Value Reported
Preserve in well-closed containers.
CAS: 74-79-3 MERCK INDEX: 14,780

L-Arginine Hydrochloride, USP
cGMP
Multi-Compendial

2067-06	Poly	1 kg	bio	185.05	
2067-07	Poly Pail	12 kg	bks	Inquire	
2067-09	Poly Drum	50 kg	bul	Inquire	

$C_6H_{14}N_4O_2 \cdot HCl$ FW: 210.66

Meets USP Requirements
Assay ($C_6H_{14}N_4O_2 \cdot HCl$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +21.4 - +23.6 °
Loss on Drying at 105°C ..... max. 0.2%
Residue on Ignition ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.03%
Heavy Metals (as Pb) ..... max. 0.002%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%
Chloride (Cl) 16.5-17.1%

Meets FCC Requirements
Assay ($C_6H_{14}N_4O_2 \cdot HCl$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Loss on Drying ..... max. 0.3%
Residue after Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... +21.3 - +23.5 °
Lead (Pb) ..... max 5 mg/kg

Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_6H_{14}N_4O_2 \cdot HCl$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification E ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +21.0 - +23.5 °
Ninhydrin-Positive Substances ..... Passes Test
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%

Meets JP Chemical Specifications
Assay ($C_6H_{14}N_4O_2 \cdot HCl$) (dried basis) 98.5-101.0%
Identification ..... Passes Test
Optical Rotation ..... +21.5 - +23.5 °
pH (1 in 10) 4.7-6.2
Clarity and Color of Solution ..... Passes Test
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 0.20%
Residue after Ignition ..... max. 0.10%
Preserve in well-closed containers.
Store protected from light.
CAS: 1119-34-2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

L-(+)-Arginine Monohydrochloride
BAKER ANALYZED Biochemical Reagent

B577-05	Poly	100 g	bio	73.40	
B577-06	Poly	1 kg	bio	762.30	
		4 x 1 kg	bio	508.20	2032.80
B577-07	Poly Pail	12 kg	bks	Inquire	

$NH_2C(:NH)NH(CH_2)_3CH(NH_2)COOH \cdot HCl$ FW: 210.67

Assay ($C_6H_{14}N_4O_2 \cdot HCl$) (dried basis, by non-aqueous acid-base titration) 98.0-102.0%
Specific Rotation $[\alpha]_D^{20}$ (dried basis, c = 80mg in 6N HCL) ..... +21.4 - +23.6 °
Homogeneity by TLC ..... No Extraneous Spots
Ash (sulfated) ..... max. 0.1%
Loss on Drying at 105°C ..... max. 0.5%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.005%
CAS: 1119-34-2 MERCK INDEX: 14,780

Arsenic, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Arsenic, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(As metal in 5% HNO_3)
Plasma Standard

5718-04	100 mL	spr	112.60	

As AW: 74.92

MERCK INDEX: 14,794 IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Arsenic, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(As metal in 5% HNO_3)
Plasma Standard

5704-04	100 mL	spr	72.00	

As AW: 74.92

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Arsenic

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Arsenic, 1000 µg/mL
BAKER INSTRA-ANALYZED Reagent
(As metal in 5% HNO_3)

6442-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

As AW: 74.92

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Arsenic(III) Oxide
See Arsenic Trioxide

ASCARITE II, Coarse (8-20 Mesh)
(sodium hydroxide coated non-fibrous silicate)

0928-01	Poly Drum	500 g	spr	1021.65	
		4 x 500 g	spr	681.10	2724.40

Appearance ..... Passes Test
Loss on Drying ..... max. 2%

IMO: 8:1823

L-(+)-Ascorbic Acid, Powder
BAKER ANALYZED Biochemical Reagent

B581-05	Poly	100 g	bio	33.40
B581-07	Poly	500 g	bio	130.35

$C_6H_8O_6$ FW: 176.12

Meets ACS Specifications

Assay ($C_6H_8O_6$) ..... min. 99.5%
Specific Rotation, $[\alpha]_D^{25}$ (c = 10 in water) ..... +20.5 - +21.5 °
Residue after Ignition ..... max. 0.1%
Loss on Drying at 105°C ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%

CAS: 50-81-7 MERCK INDEX: 14,830

Ascorbic Acid, Crystalline Powder
USP, FCC
20-200 mesh

cGMP

0936-07	Poly	500 g	rnc	195.80	
0936-08	Poly	1 kg	rnc	371.70	

$C_6H_8O_6$ FW: 176.12

Meets USP & FCC Requirements

Assay ($C_6H_8O_6$) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +20.5 - +21.5 °
Residue on Ignition ..... max. 0.1%
Arsenic (As) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 0.002%
Lead (Pb) ..... max 2 mg/kg
Mesh:
Thru U.S. No. 20 Sieve ..... min. 100%
Thru U.S. No. 100 Sieve ..... max. 70%
Thru U.S. No. 200 Sieve ..... max. 20%

CAS: 50-81-7 MERCK INDEX: 14,830

Ascorbic Acid, Fine Granular
USP, FCC
20-80 Mesh

cGMP

0938-05	Poly	125 g	rnc	115.85	
0938-07	Poly	500 g	rnc	337.15	
0938-08	Poly	1 kg	rnc	592.40	

$C_6H_8O_6$ FW: 176.12

Meets USP & FCC Requirements

Assay ($C_6H_8O_6$) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +20.5 - +21.5 °
Residue on Ignition ..... max. 0.1%
Arsenic (As) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 0.002%
Lead (Pb) ..... max 2 mg/kg
Mesh:
Thru U.S. No. 20 Sieve ..... min. 100%
Thru U.S. No. 30 Sieve ..... min. 95%
Thru U.S. No. 80 Sieve ..... max. 20%

CAS: 50-81-7 MERCK INDEX: 14,830

Ascorbic Acid, Fine Powder
USP, FCC
200-325 Mesh

cGMP

0937-07	Poly	500 g	rnc	365.90	
0937-08	Poly	1 kg	rnc	681.70	

$C_6H_8O_6$ FW: 176.13

Meets USP & FCC Requirements

Assay ($C_6H_8O_6$) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +20.5 - +21.5 °
Residue on Ignition ..... max. 0.1%
Arsenic (As) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 0.002%
Lead (Pb) ..... max 2 mg/kg
Mesh:
Thru U.S. No. 100 Sieve ..... min. 100%
Thru U.S. No. 200 Sieve ..... min. 95%

CAS: 50-81-7 MERCK INDEX: 14,830

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ascorbic Acid, Fine Powder, USP

cGMP

Multi-Compendial
200-325 Mesh

0939-07	Glass	500 g	rnc	478.80	
0939-08	Glass	1 kg	rnc	799.65	

$C_6H_8O_6$ FW: 176.12

Meets USP Requirements

Assay ($C_6H_8O_6$) 99.0-100.5%
Identification A .....Passes Test
Identification B .....Passes Test
Specific Rotation $[\alpha]_D^{25}$ .....+20.5 - +21.5 °
Residue on Ignition .....max. 0.1%
Heavy Metals (as Pb) .....max. 0.002%
Mesh:
Thru U.S. No. 100 Sieve .....min. 100%
Thru U.S. No. 200 Sieve .....min. 95%

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_6H_8O_6$) 99.0-100.5%
Identification B .....Passes Test
Identification C .....Passes Test
Appearance of Solution .....Passes Test
Specific Optical Rotation $[\alpha]_D^{20}$ .....+20.5 - +21.5 °
Oxalic Acid .....max. 0.2%
Copper (Cu) .....max. 5 ppm
Iron (Fe) .....max. 2.0 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Sulfated Ash .....max. 0.1%
Related Substances
Impurities C, D .....max. 0.15%
Unspecified Impurities .....max. 0.10%
Total Impurities .....max. 0.2%

Meets JP Chemical Specifications

Assay ($C_6H_8O_6$) (dried basis) 99.0-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Optical Rotation $[\alpha]_D^{20}$ .....+20.5 - +21.5 °
pH (1 in 20) 2.2-2.5
Clarity and Color of Solution .....Passes Test
Heavy Metals (as Pb) .....max. 20 ppm
Loss on Drying .....max. 0.20%
Residue on Ignition .....max. 0.10%

CAS: 50-81-7 MERCK INDEX: 14,830

L-Asparagine, Monohydrate

FOOD GRADE

FCC

2068-06	Poly	1 kg	bio	265.20	
2068-07	Poly Pail	12 kg	bks	Inquire	

$C_4H_8N_2O_3.H_2O$ FW: 150.13

Meets FCC Requirements

Assay ($C_4H_8N_2O_3$) (dried basis) 98.0-101.5%
Identification .....Passes Test
Lead (Pb) .....max. 5 ppm
Loss on Drying 11.5-12.5%
Residue on Ignition .....max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ .....+33.0 - +36.5 °
Endotoxin Concentration, IU/mg .....Actual Value Reported
Preserve in well-closed containers.
Store protected from light.

CAS: 5794-13-8 MERCK INDEX: 14,837

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

DL-Aspartic Acid

BAKER ANALYZED Biochemical Reagent

B601-05	Glass	100 g	bio	59.45	

$HOCOCH(NH_2)CH_2COOH$ FW: 133.10

Homogeneity by TLC .....No Extraneous Spots
Ash (sulfated) .....max. 0.1%
Loss on Drying at 105°C .....max. 0.3%
Water-Insoluble Matter .....Passes Test
Arsenic (As) .....max. 0.0003%
Heavy Metals (as Pb) .....max. 0.002%
Identification (by IR) .....Passes Test

CAS: 617-45-8 MERCK INDEX: 14,840

Atomic Absorption Standards

See Analytical Standards Section, p. 94-98

Auramine O

BAKER ANALYZED Reagent, Certified Stain
Certified for Use in General Staining in Fluorescence Microscopy. (C.I. 41000)

B604-03	Glass	25 g	non	156.40	

$C_{17}H_{21}N_3.HCl$ FW: 303.84

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum
(1.0 mg/200 mL in H_2O, 1-cm path) .....Actual Value Reported
Biological Test .....Passes Test

CAS: 2465-27-2

Aurin(e)

See Rosolic Acid

BAKERBOND Columns and Packings

See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

BAKERBOND spe Columns

See Analytical Chromatography Section, p. 22-45

BAKERBOND spe Glass Columns

See Analytical Chromatography Section, p. 22-45

Baker-flex TLC Sheets

See also Analytical Chromatography Section, p. 22-45

Baker-flex TLC Sheets

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Baker-flex, Aluminum Oxide IB-F
Flexible TLC Sheet

4467-00	1 pk	spr	175.65	
4467-02	1 pk	spr	171.25	
4467-04	1 pk	spr	292.95	

A flexible sheet coated with high purity aluminum oxide containing an inert binder and a fluorescent indicator (activated at 2540 Å). Neither the binder nor the indicator chars on sulfuric acid heat treatment.

Baker-flex, Cellulose PEI
Flexible TLC Sheet

4473-00	1 pk	spr	228.60	
4473-04	1 pk	spr	389.25	

A flexible sheet coated with polyethylenimine cellulose powder. The absorbent fluoresces strongly at 3660 Å and weakly at 2540 Å.

Baker-flex, Cellulose PEI-F
Flexible TLC Sheet

4474-00	1 pk	spr	198.90	
4474-04	1 pk	spr	337.70	

A flexible sheet coated with polyethylenimine cellulose powder containing a fluorescent indicator that enhances the fluorescence of the absorbent at 2540Å. The absorbent also fluoresces strongly at 3660Å.

Baker-flex, Silica Gel IB-F
Flexible TLC Sheet

4463-02	1 pk	spr	164.30	
4463-00	1 pk	spr	178.50	
4463-04	1 pk	spr	270.10	

A flexible sheet coated with high purity silica gel containing an inert binder and a fluorescent indicator (activated at 2540 Å). Neither the binder nor the indicator chars on sulfuric acid heat treatment.

Baker-flex, Silica Gel IB2-F
Flexible TLC Sheet

4449-02	1 pk	spr	170.10	
4449-00	1 pk	spr	173.90	
4449-04	1 pk	spr	264.00	

A flexible sheet coated with high purity silica gel containing an inert binder and a fluorescent indicator (activated at 2540 Å). Neither the binder nor the indicator chars on sulfuric acid heat treatment.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

BAKER-pHIX pH Indicator Sticks
See pH Products, p. 297-298

BAKER-pHIX pH Papers with Color Scale
See pH Products, p. 297-298

BAKER spe-12G and spe-24G Column Processors
See Analytical Chromatography Section, p. 22-45

BAKER TESTRIPS
See Ion Determination Testrips, p. 241

Baker TLC Plates (glass)
See Thin-Layer Chromatography and Flash Chromatography Analysis Section, p. 29

Barbituric Acid
BAKER

B654-05	Glass	100 g	org	78.85	

$C_4H_4N_2O_3$ FW: 128.09

Loss on Drying at 105°C .....max. 2%
Solubility (4% in H_2O) .....Passes Test
Assay ($C_4H_4N_2O_3$) (by acid-base titration) .....min. 98%
Appearance .....Passes Test

CAS: 67-52-7 MERCK INDEX: 14,963

Barium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Barium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent (barium nitrate in 5% HNO_3) Plasma Standard

5719-04		100 mL	spr	112.60	

Ba AW: 137.33

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Barium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent (barium nitrate in 5% HNO_3) Plasma Standard

5705-04		100 mL	spr	72.00	

Ba AW: 137.33

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Barium, 1000 µg/mL
BAKER INSTRA-ANALYZED Reagent (barium nitrate in 5% HNO_3)

6443-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Ba AW: 137.33

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Barium Acetate, Crystal
BAKER ANALYZED ACS Reagent

0942-01	Poly	500 g	csa	95.05	
		4 x 500 g	csa	63.35	253.40
0942-05	Poly	2.5 kg	csa	379.90	
		4 x 2.5 kg	csa	253.25	1013.00

$(CH_3COO)_2Ba$ FW: 255.43

Exceeds ACS Specifications

Assay ($(CH_3COO)_2Ba$) 99.0-102.0%
Insoluble Matter .....max. 0.01%
pH of 5% Solution at 25°C 7.0-9.0
Chloride (Cl) .....max. 0.001%
Oxidizing Substances (as NO_3) .....max. 0.005%
Calcium (Ca) .....max. 0.05%
Potassium (K) .....max. 0.003%
Sodium (Na) .....max. 0.005%
Strontium (Sr) .....max. 0.2%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 8

CAS: 543-80-6 MERCK INDEX: 14,965 IMO: 6.1:1564

Barium Carbonate, Powder
BAKER ANALYZED ACS Reagent

0950-01	Glass	500 g	csa	207.15	
		4 x 500 g	csa	138.10	552.40
0950-05	Poly	2.5 kg	csa	727.80	
		4 x 2.5 kg	csa	485.20	1940.80
0950-07	Poly Pail	12 kg	bks	Inquire	
0950-R	Lined Fiber Dr	225 lb	bul	Inquire	

$BaCO_3$ FW: 197.34

Exceeds ACS Specifications

Assay ($BaCO_3$) (by acidimetry) 99.0-101.0%
Insoluble in Dilute HCl .....max. 0.015%
Chloride (Cl) .....max. 0.002%
Water-Soluble Titrable Base, meq/g .....max. 0.002
Oxidizing Substances (as NO_3) .....max. 0.005%
Sulfide (S) .....max. 0.001%
Calcium (Ca) .....max. 0.05%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.002%
Potassium (K) .....max. 0.005%
Sodium (Na) .....max. 0.01%
Strontium (Sr) .....max. 0.7%
Average Particle Diameter, µm (APD) .....max. 5
Specific Surface Area, m^2/g .....Actual Value Reported
Bulk Density (g/cc) .....Actual Value Reported
Mesh (Wet Screen Analysis):
On U.S. No. 325 Sieve .....Actual Value Reported

CAS: 513-77-9 MERCK INDEX: 14,969 IMO: 6.1:1564

Barium Chloride, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent

0970-04	Poly	125 g	non	58.65	
0970-01	Poly	500 g	csa	103.90	
		4 x 500 g	csa	69.25	277.00
0970-05	Poly	2.5 kg	csa	425.20	
		4 x 2.5 kg	csa	283.45	1133.80
0970-07	Poly Pail	12 kg	bks	Inquire	
0970-R	Lined Fiber Dr	250 lb	bul	Inquire	

$BaCl_2 \cdot 2H_2O$ FW: 244.27

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($BaCl_2 \cdot 2H_2O$) (by EDTA titrn) .....min. 99.0%
Loss on Drying at 150°C 14.0-16.0%
Insoluble Matter .....max. 0.005%
pH of 5% Solution at 25°C 5.2-7.0
Oxidizing Substances (as NO_3) .....max. 0.005%
Calcium (Ca) .....max. 0.05%
Potassium (K) .....max. 0.0025%
Sodium (Na) .....max. 0.005%
Strontium (Sr) .....max. 0.1%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2

CAS: 10326-27-9 MERCK INDEX: 14,971 IMO: 6.1:1564

Barium Chloride, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent
For Sulfate by Turbidimetric Method

0974-04	Poly	125 g	non	57.85	
0974-01	Poly	500 g	csa	115.95	
		4 x 500 g	csa	77.30	309.20
0974-05	Poly	2.5 kg	csa	469.95	
		4 x 2.5 kg	csa	313.30	1253.20

$BaCl_2 \cdot 2H_2O$ FW: 244.26

Meets ACS Specifications

Assay ($BaCl_2 \cdot 2H_2O$) (by EDTA titrn) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Loss on Drying at 150°C 14.0-16.0%
pH of 5% Solution at 25°C 5.2-7.0
Oxidizing Substances (as NO_3) .....max. 0.005%
Calcium (Ca) .....max. 0.05%
Potassium (K) .....max. 0.0025%
Sodium (Na) .....max. 0.005%

Barium Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Strontium (Sr) .....max. 0.1%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2
CAS: 10326-27-9 MERCK INDEX: 14,971 IMO: 6.1:1564

Barium Chloride, Anhydrous, Powder
Purified

0980-01	Poly	500 g	csa	102.70	
		4 x 500 g	csa	68.45	273.80
0980-05	Poly	2.5 kg	csa	374.95	
		4 x 2.5 kg	csa	249.95	999.80

$BaCl_2$ FW: 208.23

Assay ($BaCl_2$) .....min. 98.0%
Insoluble Matter .....max. 0.02%
pH of 5% Solution at 25°C 4.5-7.5
Heavy Metals (as Pb) .....max. 0.002%
CAS: 10361-37-2 MERCK INDEX: 14,971 IMO: 6.1:1564

Barium Chloride, T.S.
BAKER ANALYZED Reagent

5907-01	Poly	500 mL	sol	24.80	

Assay ($BaCl_2 \cdot 2H_2O$), w/v 11.6-12.4%
Product Information (not specifications):
Appearance (clear, colorless solution)
DENSITY: 1 L = 1.0 kg IMO: 6.1:1564

Barium Diphenylaminesulfonate
BAKER ANALYZED Reagent

B652-01	Glass	5 g	non	169.05	

$(C_6H_5NHC_6H_4\text{-}4\text{-}SO_3)_2Ba$ FW: 633.93

Sensitivity as Redox Indicator .....Passes Test
CAS: 6211-24-1 IMO: 6.1:1564

Barium Hydroxide, 8-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

1006-04	Poly	125 g	non	82.80	
1006-01	Poly	500 g	csa	155.50	
		4 x 500 g	csa	103.65	414.60
1006-05	Poly	2.5 kg	non	269.80	
1006-07	Poly Pail	12 kg	bks	Inquire	

$Ba(OH)_2 \cdot 8H_2O$ FW: 315.46

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Ba(OH)_2 \cdot 8H_2O$) .....min. 98.0%
Carbonate (as $BaCO_3$) .....max. 2.0%
Insoluble in Dilute HCl .....max. 0.01%
Chloride (Cl) .....max. 0.001%
Sulfide (S) .....Passes Test
Calcium (Ca) .....max. 0.05%
Iron (Fe) .....max. 0.001%
Potassium (K) .....max. 0.01%
Sodium (Na) .....max. 0.01%
Strontium (Sr) .....max. 0.8%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
CAS: 12230-71-6 MERCK INDEX: 14,977 IMO: 6.1:1564

Barium Nitrate, Crystal
BAKER ANALYZED ACS Reagent

1018-04	Poly	125 g	non	47.40	
1018-01	Poly	500 g	csa	98.50	
		4 x 500 g	csa	65.65	262.60
1018-07	Lined Fiber Dr	12 kg	bks	Inquire	
1018-09	Lined Fiber Dr	100 lb	bul	Inquire	

$Ba(NO_3)_2$ FW: 261.35

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Ba(NO_3)_2$) (by EDTA titrn) .....min. 99.0%
Insoluble Matter .....max. 0.01%
pH of 5% Solution at 25°C 5.0-7.0
Calcium (Ca) .....max. 0.05%
Potassium (K) .....max. 0.005%
Sodium (Na) .....max. 0.005%
Strontium (Sr) .....max. 0.1%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2
CAS: 10022-31-8 MERCK INDEX: 14,983 IMO: 5.1:1446

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Barium Sulfate, Powder
BAKER ANALYZED Reagent

1030-01	Poly	500 g	csa	232.50	
		4 x 500 g	csa	155.00	620.00
1030-05	Poly	2.5 kg	csa	938.85	
		4 x 2.5 kg	csa	625.90	2503.60

$BaSO_4$ FW: 233.39

Assay ($BaSO_4$) ..... min. 97.0%
Acidity (as H_2SO_4) ..... max. 0.01%
Water-Soluble Salts ..... max. 0.02%
Chloride (Cl) ..... max. 0.005%
Phosphate (PO_4) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1

CAS: 7727-43-7 MERCK INDEX: 14,994

Barium Sulfate
USP
Tested for Microbiological Activity

1040-01	Poly	500 g	rss	281.40	
		4 x 500 g	rss	187.60	750.40
1040-07	Poly Pail	12 kg	bks	Inquire	

$BaSO_4$ FW: 233.39

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Bulkiness ..... Passes Test
pH of 10% Aqueous Solution at 25°C 3.5-10.0
Sulfide (µg/g) ..... max. 0.5
Acid-Soluble Substances ..... max. 0.3%
Soluble Barium Salts ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Assay 97.5-100.5%
Total Aerobic Count (per g): ..... max. 100
Escherichia coli ..... Passes Test
Salmonella ..... Passes Test
Particulate Matter ..... Passes Test

CAS: 7727-43-7 MERCK INDEX: 14,994

Barium Sulfate, USP
Multi-Compendial

1041-01	Poly	500 g	rss	298.20	
		4 x 500 g	rss	198.80	795.20

$BaSO_4$ FW: 233.39

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Bulkiness ..... Passes Test
pH of 10% Aqueous Solution at 25°C 3.5-10.0
Sulfide (µg/g) ..... max. 0.5
Acid-Soluble Substances ..... max. 0.3%
Soluble Barium Salts ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Assay 97.5-100.5%
Particulate Matter ..... Passes Test
Meets BP/Ph.Eur. Chemical Specifications
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... max. 0.3%
Acid-Soluble Substances ..... Passes Test
Oxidizable Sulfur Compounds ..... Passes Test
Soluble Barium Salts ..... max. 10 ppm
Phosphate (PO_4) ..... max. 50 ppm
Arsenic (As) ..... max. 2 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Ignition ..... max. 2.0%
Sediment ..... Passes Test

CAS: 7727-43-7 MERCK INDEX: 14,994

Basic Blue 9
See Methylene Blue

Basic Blue 17
See Toluidine Blue O

Basic Brown 1
See Bismark Brown Y

Basic Fuchsin Hydrochloride
BAKER ANALYZED Reagent, Certified Stain
Certified for use in Histology (PAS, Feulgen, and Aldehyde) and Bacteriology (Staining in Media) (C.I. 42510)

B660-03	Glass	25 g	non	96.65	

$CH_3(NH_2)C_6H_3C(C_6H_4NH_2):C_6H_4:NH{\cdot}HCl$ FW: 337.85

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.2 mg/200 mL in 50% C_2H_5OH, 1-cm path vs water) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 632-99-5

Basic Fuchsin Hydrochloride
See Pararosanilin Hydrochloride

Basic Green 4
See Malachite Green Oxalate

Basic Red 2
See Safranine O

Basic Red 5
See Neutral Red

Basic Violet 14
See Basic Fuchsin Hydrochloride

Benzenediol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

o-Benzenediol
See Pyrocatechol

1,3-Benzenediol
See Resorcinol

Benzoic Acid, Crystal
BAKER ANALYZED ACS Reagent

0076-01	Glass	500 g	csa	125.20	
		4 x 500 g	csa	83.45	333.80

C_6H_5COOH FW: 122.12

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (C_6H_5COOH) .....min. 99.5%
Freezing Point .....122.0-123.0 °C.
Residue on Ignition .....max. 0.005%
Insoluble in Methanol .....max. 0.005%
Chlorine Compounds (as Cl) .....max. 0.005%
Sulfur Compounds (as S) .....max. 0.002%
Substances Reducing Permanganate .....Passes Test
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5

CAS: 65-85-0 MERCK INDEX: 14,1091 FLASH POINT: 121°C

Benzoic Acid, Crystal
USP, FCC

cGMP

0080-01	Glass	500 g	rnc	144.20	

C_6H_5COOH FW: 122.12

Meets USP & FCC Requirements

Assay (C_6H_5COOH) (anhydrous basis) 99.5-100.5%
Identification .....Passes Test
Congealing Range .....121-123 °C.
Water (H_2O) .....max. 0.7%
Residue on Ignition .....max. 0.05%
Heavy Metals (as Pb) .....max. 10 ppm
Lead (Pb) .....max 2 mg/kg
Readily Carbonizable Substances .....Passes Test
Readily Oxidizable Substances .....Passes Test

CAS: 65-85-0 MERCK INDEX: 14,1091 FLASH POINT: 121°C

Benzoic Acid, Sodium Salt
See Sodium Benzoate

Benzophenone
BAKER

B889-06	Poly	250 g	non	63.05	

$C_6H_5COC_6H_5$ FW: 182.22

Melting Range .....47-50 °C.
Assay .....min. 99%

CAS: 119-61-9 MERCK INDEX: 14,1098

Benzotriazole
Practical

B934-07	Poly	500 g	non	140.45	

$C_6H_5N_3$ FW: 119.13

Identification (by IR) .....Passes Test

CAS: 95-14-7 MERCK INDEX: 14,1108 FLASH POINT: 171°C

Benzoyl Chloride
BAKER ANALYZED ACS Reagent

1066-01	Glass	500 mL	non	146.35	
1066-03	Poly Coated	4 L	non	707.45	

C_6H_5COCl FW: 140.57

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (C_6H_5COCl) 98.0-100.5%
Freezing Point .....2.0 °C.
Residue after Ignition .....max. 0.005%
Phosphorus Compounds (as P) .....max. 0.002%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%

CAS: 98-88-4 DENSITY: 1 L = 1.21 kg MERCK INDEX: 14,1112
IMO: 8:1736 FLASH POINT: 72°C

Benzyl Alcohol
NF

cGMP

9040-03	Glass	4 L	rss	425.70	
		4 x 4 L	rss	283.80	1135.20

$C_6H_5CH_2OH$ FW: 108.14

Meets NF Requirements

Assay 98.0-100.5%
Clarity of Solution .....Passes Test
Color of Solution .....Passes Test
Identification .....Passes Test
Peroxide Value .....max. 5
Refractive Index, η^{20}_D 1.538-1.541
Related Compounds:
Benzaldehyde .....max. 0.15%
Cyclohexylmethanol .....max. 0.10%
Ethylbenzene and dicyclohexyl .....Passes Test
Total Other Peaks <R_T of Benzyl Alcohol .....max. 0.04%
Total Other Peaks >R_T of Benzyl Alcohol .....max. 0.3%
Acidity .....Passes Test
Nonvolatile Residue .....max. 0.05%
This product is not intended for use in preparing parenteral dosage forms.

CAS: 100-51-6 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,1124
FLASH POINT: 93°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Benzyl Alcohol, NF
Multi-Compendial cGMP

9421-01	Glass S/S	500 mL	rnc	120.05	
9421-03	Glass	4 L	rss	684.75	
		4 x 4 L	rss	456.50	1826.00

$C_6H_5CH_2OH$ FW: 108.14

Meets NF Requirements

Assay ($C_6H_5CH_2OH$) 98.0-100.5%
Clarity of Solution ..... Passes Test
Color of Solution ..... Passes Test
Identification ..... Passes Test
Peroxide Value ..... max. 5
Related Compounds:
- Benzaldehyde ..... max. 0.15%
- Cyclohexylmethanol ..... max. 0.10%
- Ethylbenzene and dicyclohexyl ..... Passes Test
- Total Other Peaks <R_T of Benzyl Alcohol ..... max. 0.04%
- Total Other Peaks >R_T of Benzyl Alcohol ..... max. 0.3%

Refractive Index, η^{20}_D 1.538-1.541
Acidity ..... Passes Test
Nonvolatile Residue ..... max. 0.05%
Solubility ..... Passes Test

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_6H_5CH_2OH$) 98.0-100.5%
Identification ..... Passes Test
Acidity ..... Passes Test
Appearance of Solution ..... Passes Test
Refractive Index, η^{20}_D 1.538-1.541
Benzaldehyde and Other Related Substances:
- Benzaldehyde ..... max. 0.15%
- Cyclohexylmethanol ..... max. 0.10%
- Ethylbenzene (mg/L) ..... Passes Test
- Total Other Peaks <R_T of Benzyl Alcohol ..... max. 0.04%
- Total Other Peaks >R_T of Benzyl Alcohol ..... max. 0.3%

Peroxide Value ..... max. 5
Residue on Evaporation ..... max. 0.05%

Meets JP Chemical Specifications

Assay ($C_6H_5CH_2OH$) 98.0-100.5%
Identification ..... Passes Test
Refractive Index, η^{20}_D 1.538-1.541
Specific Gravity at 20°/20°C 1.043-1.049
Clarity and Color of Solution ..... Passes Test
Acidity ..... Passes Test
Benzaldehyde and Other Related Substances:
- Benzaldehyde ..... max. 0.15%
- Cyclohexylmethanol ..... max. 0.10%
- Total Other Peaks <R_T of Benzyl Alcohol ..... max. 0.04%
- Total Other Peaks >R_T of Benzyl Alcohol ..... max. 0.3%
- Ethylbenzene and dicyclohexyl ..... Passes Test

Peroxide Value ..... max. 5
Residue on Evaporation ..... max. 0.05%

This product is not intended for use in preparing parenteral dosage forms.

CAS: 100-51-6 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,1124
FLASH POINT: 93°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Benzyl Alcohol, NF
Multi-Compendial
Low Peroxide cGMP

9039-10	Septum-Seal Cap	100 mL	spr	68.95	
		6 x 100 mL	spr	55.15	330.90
9039-12	Septum-Seal Cap	1 L	spr	272.15	
		6 x 1 L	spr	217.70	1306.20

$C_6H_5CH_2OH$ FW: 108.14

Meets NF Requirements

Assay 98.0-100.5%
Clarity of Solution ..... Passes Test
Color of Solution ..... Passes Test
Identification ..... Passes Test
Peroxide Value ..... max. 5
Peroxide ..... max. 10 ppm
Related Compounds:
- Benzaldehyde ..... max. 0.05%
- Cyclohexylmethanol ..... max. 0.10%
- Ethylbenzene and dicyclohexyl ..... Passes Test
- Total Other Peaks <R_T of Benzyl Alcohol ..... max. 0.02%
- Total Other Peaks >R_T of Benzyl Alcohol ..... max. 0.2%

Refractive Index, η^{20}_D 1.538-1.541
Acidity ..... Passes Test
Nonvolatile Residue ..... max. 0.05%
Solubility ..... Passes Test

Meets BP/Ph.Eur. Chemical Specifications

Assay 98.0-100.5%
Identification ..... Passes Test
Acidity ..... Passes Test
Appearance of Solution ..... Passes Test
Refractive Index, η^{20}_D 1.538-1.541
Peroxide Value ..... max. 5
Residue on Evaporation ..... max. 0.05%
Benzaldehyde and Other Related Substances:
- Benzaldehyde ..... max. 0.05%
- Cyclohexylmethanol ..... max. 0.10%
- Ethylbenzene (mg/L) ..... Passes Test
- Total Other Peaks <R_T of Benzyl Alcohol ..... max. 0.02%
- Total Other Peaks >R_T of Benzyl Alcohol ..... max. 0.2%

Meets JP Chemical Specifications

Assay 98.0-100.5%
Identification ..... Passes Test
Refractive Index, η^{20}_D 1.538-1.541
Specific Gravity at 20°/20°C 1.043-1.049
Clarity and Color of Solution ..... Passes Test
Acidity ..... Passes Test
Benzaldehyde and Other Related Substances:
- Benzaldehyde ..... max. 0.05%
- Cyclohexylmethanol ..... max. 0.10%
- Total Other Peaks <R_T of Benzyl Alcohol ..... max. 0.02%
- Total Other Peaks >R_T of Benzyl Alcohol ..... max. 0.2%
- Ethylbenzene and dicyclohexyl ..... Passes Test

Peroxide Value ..... max. 5
Residue on Evaporation ..... max. 0.05%

Suitable for use in the manufacture of parenteral dosage forms.

CAS: 100-51-6 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,1124
FLASH POINT: 93°C

Solvent Spill Cleanup Products available. See pp. 378.

Benzyl Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Benzyl Chloride
BAKER ANALYZED Reagent
Stabilized

1076-01	Glass S/S	500 mL	non	314.05	

$C_6H_5CH_2Cl$ FW: 126.59

Assay ($C_6H_5CH_2Cl$) (by GC) .....min. 98.5%
Residue after Ignition .....max. 0.002%

CAS: 100-44-7 DENSITY: 1 L = 1.10 kg MERCK INDEX: 14,1129
IMO: 6.1:1738 FLASH POINT: 67°C

Solvent Spill Cleanup Products available. See pp. 378.

Beryllium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Beryllium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(beryllium acetate in 5% HNO_3)
Plasma Standard

5720-04		100 mL	spr	112.60	

Be AW: 9.01

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Beryllium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Beryllium Acetate in 5% HNO_3)
Plasma Standard

5706-04		100 mL	spr	69.65	

Be AW: 9.01

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Beryllium, 1000 µg/mL
BAKER INSTRA-ANALYZED Reagent
(Be metal in 5% HCl)
Plasma Standard

6444-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Be AW: 9.01

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Beta-naphthol
See 2-Naphthol

Biacetyl Dioxime
See Dimethylglyoxime

Biebrich Scarlet, Water Soluble
BAKER

C242-03	Glass	25 g	bio	70.35	

$HOC_{10}H_6N:NC_6H_3(SO_3Na)N:NC_6H_4SO_3Na$ FW: 556.47

Solubility in H_2O .....Passes Test

CAS: 4196-99-0 MERCK INDEX: 14,8393

Biformyl
See Glyoxal

Biochromatography Media and Columns
See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

Biological Buffers
See Drug Development and Manufacturing Section, p. 64-86

Biomolecule Purification
See Drug Development and Manufacturing Section, p. 64-86

D-Biotin
BAKER

C272-06	Glass	.25 g	non	157.35	
C272-00	Glass	1 g	non	368.10	

$C_{10}H_{16}N_2O_3S$ FW: 244.31

Melting Point .....229-232 °C.
Specific Rotation, $[\alpha]_D^{25}$(c = 1 in 0.1N NaOH) .....+89 - +93 °

CAS: 58-85-5 MERCK INDEX: 14,1231

2,2'-Bipyridine
BAKER ANALYZED Reagent

C323-02	Glass	10 g	non	78.25	
C323-03	Glass	25 g	non	117.80	

$C_{10}H_8N_2$ FW: 156.19

Insoluble Matter .....Passes Test
Sensitivity for Iron .....Passes Test

CAS: 366-18-7 MERCK INDEX: 14,3347 IMO: 6.1:2811

Bisacrylamide
See N,N'-Methylenebisacrylamide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Bis(2-ethylhexyl) Hydrogen Phosphate
BAKER

C533-07	Glass	500 mL	non	606.45	

$[CH_3(CH_2)_3CH(C_2H_5)CH_2O]_2PO_2H$ FW: 322.42

Assay ($C_{16}H_{35}O_4P$) .....min. 95%
CAS: 298-07-7 DENSITY: 1 L = 0.973 kg IMO: 8:3265
FLASH POINT: 385°C

Bismarck Brown Y
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology and Bacteriology (Staining) (C.I. 21000)

C548-03	Glass	25 g	non	101.55	

$C_{18}H_{18}N_8 \cdot 2HCl$ FW: 419.32

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum (2.0 mg/200 mL in
50% C_2H_5OH and 0.005 N HCl, 1-cm path) ...Actual Value Reported
Biological Test .....Passes Test
CAS: 10114-58-6 MERCK INDEX: 14,1253

Bis(2-methoxyethyl) Ether
BakerDRY
(diethylene glycol dimethyl ether)

9296-10	Septum-Seal Cap	100 mL	lws	70.70	
		6 x 100 mL	lws	56.55	339.30

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$(CH_3OCH_2CH_2)_2O$ FW: 134.17

Assay (by GC) .....min. 99.9%
Acidity (as CH_3COOH) .....max. 150 ppm
Water (H_2O) .....max. 50 ppm
Peroxide .....max. 15 ppm
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0005%
CAS: 111-96-6 DENSITY: 1 L = 0.94 kg MERCK INDEX: 14,3165
FLASH POINT: 70°C

Solvent Spill Cleanup Products available. See pp. 378.

Bis(2-methoxyethyl) Ether
BAKER ANALYZED Reagent
(diethylene glycol dimethyl ether)

C571-07	Glass	500 mL	non	109.75	

$(CH_3OCH_2CH_2)_2O$ FW: 134.17

Assay (by GC) .....min. 99.9%
Acidity (as CH_3COOH) .....max. 150 ppm
Water (H_2O) .....max. 250 ppm
Peroxide .....max. 15 ppm
Color (APHA) .....max. 10
CAS: 111-96-6 DENSITY: 1 L = 0.94 kg MERCK INDEX: 14,3165
FLASH POINT: 70°C

Solvent Spill Cleanup Products available. See pp. 378.

Bismuth, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Bismuth, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Bi metal in 5% HNO_3)
Plasma Standard

5721-04		100 mL	spr	112.60	

Bi AW: 208.98

DENSITY: 1 L = 1.0 kg IMO: 8:1760

Acid Spill Cleanup Products available. See pp. 378.

Bismuth, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Bi metal in 5% HNO_3)
Plasma Standard

5707-04		100 mL	spr	72.00	

Bi AW: 208.98

DENSITY: 1 L = 1.0 kg IMO: 8:1760

Acid Spill Cleanup Products available. See pp. 378.

Bismuth, 1000 µg/mL
BAKER INSTRA-ANALYZED Reagent
(Bi metal in 5% HNO_3)
Plasma Standard

6445-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Bi AW: 208.98

DENSITY: 1 L = 1.0 kg IMO: 8:1760

Acid Spill Cleanup Products available. See pp. 378.

Bismuth Nitrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Bismuth Nitrate, 5-Hydrate, Crystal

BAKER ANALYZED ACS Reagent
(bismuth(III) nitrate, pentahydrate)

1092-04	Glass	125 g	csa	144.00	
		4 x 125 g	csa	96.00	384.00
1092-01	Glass	500 g	csa	281.85	
		4 x 500 g	csa	187.90	751.60

$Bi(NO_3)_3 \cdot 5H_2O$ FW: 485.07

Exceeds ACS Specifications

Assay ($Bi(NO_3)_3 \cdot 5H_2O$) (by EDTA titrn) 99.0-101.0%
Insoluble in HNO_3 .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.002%
Arsenic (As) .....max. 0.001%
Calcium (Ca) .....max. 0.005%
Copper (Cu) .....max. 0.002%
Iron (Fe) .....max. 0.001%
Lead (Pb) .....max. 0.002%
Potassium (K) .....max. 0.01%
Silver (Ag) .....max. 0.001%
Sodium (Na) .....max. 0.02%

CAS: 10035-06-0 MERCK INDEX: 14,1271 IMO: 5.1:1477

Bismuth(III) Oxide

See Bismuth Trioxide

Bismuth Trioxide, Powder

BAKER ANALYZED Reagent
(bismuth(III) oxide)

1158-01	Poly	500 g	csa	483.30	
		4 x 500 g	csa	322.20	1288.80
1158-09	Lined Fiber Dr	100 lb	bul	Inquire	

Bi_2O_3 FW: 465.96

Assay (Bi_2O_3) (by EDTA titrn) .....min. 99.0%
Chloride (Cl) .....max. 0.001%
Nitrate (NO_3) .....max. 0.03%
Sulfur Compounds (as SO_4) .....max. 0.002%
Iron (Fe)(by AAS) .....max. 0.005%
Lead (Pb)(by AAS) .....max. 0.003%

CAS: 1304-76-3 MERCK INDEX: 14,1273

Blue Tetrazolium

See Tetrazolium Blue (Chloride)

Borax

See Sodium Borate, 10-Hydrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Boric Acid

ULTREX Ultrapure Reagent
For Application in Fiber Optics Manufacture

5168-05	Poly	100 g	spr	318.20	

H_3BO_3 FW: 61.83

Certificate Provided Reports Actual Lot Analysis
Assay (H_3BO_3) (by acid-base titration) 100%
Particulate Matter .....< 0.002%
Nonvolatile with Methanol .....< 0.004%
Non-Metallic Impurities (in ppm)(µg/g):
Arsenic (As) .....< 0.04
Halide (as Cl) .....< 2
Phosphate (PO_4) .....< 0.4
Sulfur Compounds (as SO_4) .....< 0.4
Metallic Impurities (in ppm)(µg/g):
Aluminum (Al) .....< 0.2
Barium (Ba) .....< 0.2
Calcium (Ca) .....< 0.1
Chromium (Cr) .....< 0.2
Cobalt (Co) .....< 0.2
Copper (Cu) .....< 0.1
Iron (Fe) .....< 0.2
Manganese (Mn) .....< 0.1
Nickel (Ni) .....< 0.1
Tin (Sn) .....< 0.2
Titanium (Ti) .....< 0.1
Vanadium (V) .....< 0.1
Zirconium (Zr) .....< 0.2

CAS: 10043-35-3 MERCK INDEX: 14,1336

Boric Acid, Granular

BAKER ANALYZED ACS Reagent

0084-01	Poly	500 g	csa	79.95	
		4 x 500 g	csa	53.30	213.20
0084-19	Poly	1 kg	csa	135.10	
		4 x 1 kg	csa	90.05	360.20
0084-05	Poly	2.5 kg	csa	299.65	
		4 x 2.5 kg	csa	199.75	799.00
0084-07	Poly Pail	12 kg	bks	Inquire	
0084-08	Poly Drum	300 lb	bul	Inquire	

H_3BO_3 FW: 61.83

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (H_3BO_3) (by acidimetry) .....min. 99.5%
Insoluble in Methanol .....max. 0.005%
Nonvolatile with Methanol .....max. 0.05%
Chloride (Cl) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Sulfate (SO_4) .....max. 0.005%
Calcium (Ca) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%

CAS: 10043-35-3 MERCK INDEX: 14,1336

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Boric Acid, Granular
ULTRAPURE BIOREAGENT
For Molecular Biology Buffers

4035-01	Poly	500 g	upr	42.30	
4035-05	Poly	2.5 kg	upr	145.95	

H_3BO_3 FW: 61.83

Assay (H_3BO_3) (by acidimetry) ..... min. 99.5%
RNase Activity ..... None Detected
DNase Activity ..... None Detected
Protease Activity ..... None Detected
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble in Methanol ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1
Magnesium (Mg) ..... max. 5

CAS: 10043-35-3 MERCK INDEX: 14,1336

Boric Acid, Granular
NF

0091-01	Poly	500 g	rnc	79.20	
0091-05	Poly	2.5 kg	rss	367.90	
		4 x 2.5 kg	rss	245.25	981.00

H_3BO_3 FW: 61.83

Meets NF Requirements
Completeness of Solution ..... Passes Test
Identification ..... Passes Test
Solubility in Alcohol ..... Passes Test
Loss on Drying ..... max. 0.5%
Heavy Metals (as Pb) ..... max. 0.002%
Assay (H_3BO_3) (dried basis) 99.5-100.5%

CAS: 10043-35-3 MERCK INDEX: 14,1336

Boric Acid, Granular, NF
Multi-Compendial

0092-05	Poly	2.5 kg	rss	443.65	
		4 x 2.5 kg	rss	295.75	1183.00

H_3BO_3 FW: 61.83

Meets NF Requirements
Completeness of Solution ..... Passes Test
Identification ..... Passes Test
Solubility in Alcohol ..... Passes Test
Loss on Drying ..... max. 0.5%
Heavy Metals (as Pb) ..... max. 0.002%
Assay (H_3BO_3) (dried basis) 99.5-100.5%
Endotoxin Concentration (EU/g) ..... max. 35
Meets BP/Ph.Eur. Chemical Specifications
Assay (H_3BO_3) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
pH 3.8-4.8
Solubility in Alcohol ..... Passes Test
Organic Matter ..... Passes Test
Sulfate (SO_4) ..... max. 450 ppm
Heavy Metals (as Pb) ..... max. 15 ppm
Meets JP Chemical Specifications
Assay (H_3BO_3) (dried basis) 99.5-101.0%
Identification ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Arsenic (As) ..... max. 5 ppm
Loss on Drying ..... max. 0.5%

CAS: 10043-35-3 MERCK INDEX: 14,1336

Boric Anhydride
Purified
(diboron trioxide)

1176-01	Poly	500 g	csa	90.10	
		4 x 500 g	csa	60.05	240.20
1176-05	Poly	2.5 kg	csa	322.95	
		4 x 2.5 kg	csa	215.30	861.20

B_2O_3 FW: 69.62

Assay (B_2O_3) (ignited basis) ..... min. 98.0%
Loss on Ignition ..... max. 10.0%
Sulfate (SO_4) ..... max. 0.05%

CAS: 1303-86-2 MERCK INDEX: 14,1337

Boron, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Boron, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Boric Acid in 1% NH_4OH)
Plasma Standard

5722-04		100 mL	spr	112.60	

B AW: 10.81

Boron, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Boric Acid in 1% NH_4OH)
Plasma Standard

5708-04		100 mL	spr	72.00	

B AW: 10.81

Boron

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Boron,1000 µg/mL
BAKER INSTRA-ANALYZED Reagent
(Boric Acid in H_2O)

6446-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

B AW: 10.81

DENSITY: 1 L = 1.00 kg

Boron Trifluoride (12% w/v in Methanol)
BAKER

C701-07	Glass	500 g	org	292.50	

BF_3 FW: 67.81

Assay (BF_3) 10-15%
Appearance .....Passes Test

CAS: 7637-07-2 DENSITY: 1 L = 0.87 kg MERCK INDEX: 14,1349
IMO: 3:3286 FLASH POINT: 11°C

Brilliant Blue G-250
See COOMASSIE Brilliant Blue G-250

Brilliant Blue R-250
See COOMASSIE Brilliant Blue R-250

Brilliant Green
BAKER ANALYZED Reagent
For Photometric Determination of Antimony (C.I. 42040)

C710-02	Glass	10 g	bio	97.80	

$(C_2H_5)_2NC_6H_4C(C_6H_5):C_6H_4:N(C_2H_5)_2HSO_4$ FW: 482.64

Meets Reagent Specifications for testing USP/NF monographs
Absorptivity in Benzene for Sb at 625 nm L/g-cm .....min. 125
Absorption Maximum .....Passes Test

CAS: 633-03-4 MERCK INDEX: 14,1374

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Bromine
BAKER ANALYZED ACS Reagent

9760-04		30 mL	non	161.25	
9760-02		120 mL	non	169.80	

Br_2 FW: 159.81

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (Br_2) .....min. 99.5%
Residue after Evaporation .....max. 0.005%
Chlorine (as Cl) .....max. 0.05%
Iodine (I_2) .....max. 0.001%
Sulfur Compounds (as S) .....max. 0.001%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 2
Nickel (Ni) .....max. 5

CAS: 7726-95-6 DENSITY: 1 L = 3.1 kg MERCK INDEX: 14,1394
IMO: 8:1744

Bromine (Bromide-Bromate), 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5625-02	Poly	1 L	sol	52.10	
		6 x 1 L	sol	43.40	260.40

Br AW: 79.90

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.095-0.105

CAS: 7758-01-2 DENSITY: 1 L = 1.0 kg MERCK INDEX: 14,1394

Bromocresol Green
BAKER ANALYZED ACS Reagent
(3',3",5',5"-tetrabromo-m-cresolsulfonphthalein)

C946-01	Glass	5 g	bio	100.55	
C946-03	Glass	25 g	bio	396.25	
C946-07	Poly	500 g	bio	6093.00	

$C_{21}H_{14}Br_4O_5S$ FW: 698.02

Meets ACS Specifications
Clarity of Solution .....Passes Test
Visual Transition Interval:
pH .....(Yellow) 3.8
pH .....(Blue) 5.4

CAS: 76-60-8

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Bromocresol Green, Sodium Salt
BAKER ANALYZED ACS Reagent
(3′,3″,5′,5″-tetrabromo-m-cresolsulfonphthalein, sodium salt)

C948-03	Glass	25 g	bio	387.85	

$NaOSO_2C_6H_4C[C_6HCH_3Br_2OH]:C_6HCH_3Br_2(:O)$ FW: 720.00

Meets ACS Specifications
Clarity of Solution .....Passes Test
Visual Transition Interval:
pH .....(Yellow) 3.8
pH .....(Blue) 5.4
CAS: 62625-32-5

Bromocresol Green, T.S.
BAKER ANALYZED Reagent

5908-02	Glass	1 L	sol	60.70	

Visual Transition Interval:
pH .....(Yellow) 4.0
pH .....(Blue) 5.4
Product Information (not specifications):
Appearance (Clear, amber solution)
DENSITY: 1 L = 0.83 kg IMO: 3:1170 FLASH POINT: 13°C

Bromocresol Purple
BAKER
(5′,5″-dibromo-o-cresolsulfonphthalein)

C949-01	Glass	5 g	bio	54.15	
C949-02	Glass	10 g	bio	79.65	

$C_{21}H_{16}Br_2O_5S$ FW: 540.22

Visual Transition Interval:
pH .....(Yellow) 5.2
pH .....(Purple) 6.8
Identification (by IR) .....Passes Test
CAS: 115-40-2

Bromocresol Purple, T.S.
BAKER ANALYZED Reagent

5909-02	Glass	1 L	sol	52.65	

Visual Transition Interval:
pH .....(Yellow) 5.2
pH .....(Purple) 6.8
Product Information (not specifications):
Appearance (Dark purple solution)

Bromocyanogen
See Cyanogen Bromide

1-Bromonaphthalene
BAKER

D184-05	Glass	150 mL	non	135.75	

$C_{10}H_7Br$ FW: 207.07

Identification (by IR) .....Passes Test
CAS: 90-11-9 DENSITY: 1 L = 1.489 kg MERCK INDEX: 14,1425
FLASH POINT: 113°C

Bromophenol Blue
BAKER ANALYZED ACS Reagent
(3′,3″,5′,5″-tetrabromophenolsulfonphthalein)

D293-01	Glass	5 g	bio	56.20	
D293-03	Glass	25 g	bio	100.45	

$C_{19}H_{10}Br_4O_5S$ FW: 669.97

Meets ACS Specifications
Clarity of Solution .....Passes Test
Visual Transition Interval:
pH .....(Yellow) 3.0
pH .....(Blue) 4.6
CAS: 115-39-9 MERCK INDEX: 14,1444

Bromophenol Blue, Sodium Salt
BAKER ANALYZED ACS Reagent
(3′,3″,5′,5″-tetrabromophenolsulfonphthalein, sodium salt)

D294-03	Glass	25 g	bio	136.00	

$NaOSO_2C_6H_4C[C_6H_2Br_2OH]:C_6H_2Br_2(:O)$ FW: 691.94

Meets ACS Specifications
Clarity of Solution .....Passes Test
Visual Transition Intervals:
pH .....(Yellow) 3.0
pH .....(Blue) 4.6
CAS: 62625-28-9

Bromophenol Blue, T.S.
BAKER ANALYZED Reagent

5910-04	Glass	100 mL	sol	20.50	

Visual Transition Interval:
pH .....(Yellow) 3.0
pH .....(Blue) 4.6
Product Information (not specifications):
Appearance (Clear, reddish-orange solution)
IMO: 3:1170 FLASH POINT: 13°C

Bromothymol Blue

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Bromothymol Blue
BAKER ANALYZED ACS Reagent
(3',3"-dibromothymolsulfonphthalein)

D470-01	Glass	5 g	bio	75.60	
D470-03	Glass	25 g	bio	138.80	

$C_{27}H_{28}Br_2O_5S$ FW: 624.39

Meets ACS Specifications

Clarity of Solution .....Passes Test

Visual Transition Interval:

pH .....(Yellow) 6.0

pH .....(Green) 6.7

pH .....(Blue) 7.6

Alkali Consumption .....Passes Test

CAS: 76-59-5

Bromothymol Blue Solution
BAKER

D472-07	Glass	500 mL	bio	176.45	

Visual Transition Intervals:

pH .....(Yellow) 6.0

pH .....(Green) 6.7

pH .....(Blue) 7.6

Alkali Consumption .....Passes Test

CAS: 34722-90-2 DENSITY: 1 L = 1.0 kg

Brucine Sulfate, 7-Hydrate
BAKER ANALYZED ACS Reagent

D545-03	Glass	25 g	non	76.20	

$(C_{23}H_{26}N_2O_4)_2{\cdot}H_2SO_4{\cdot}7H_2O$ FW: 1013.13

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Clarity of Solution .....Passes Test

Loss on Drying at 105°C .....max. 13.0%

Residue after Ignition .....max. 0.1%

Sensitivity for Nitrate .....Passes Test

CAS: 5787-00-8 IMO: 6.1:1544

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Buffer Concentrate (Biphthalate), pH 4, DILUT-IT
(ampoule for dilution to 500 mL)

4795-01	Ampoule	1 pk	spr	28.75	
		6 x 1 pk	spr	23.95	143.70

Insert enclosed with each ampoule provides directions for dilution and product data.

pH at 25°C (after dilution to 500 mL) .....Passes Test

Buffer Concentrate (Carbonate), pH 10, DILUT-IT
(ampoule for dilution to 500 mL)

4797-01	Ampoule	1 pk	spr	28.75	
		6 x 1 pk	spr	23.95	143.70

Insert enclosed with each ampoule provides directions for dilution and product data.

pH at 25°C (after dilution to 500 mL) .....Passes Test

Buffer Concentrate (Phosphate), pH 7, DILUT-IT
(ampoule for dilution to 500 mL)

4796-01	Ampoule	1 pk	spr	28.75	
		6 x 1 pk	spr	23.95	143.70

Insert enclosed with each ampoule provides directions for dilution and product data.

pH at 25°C (after dilution to 500 mL) .....Passes Test

Buffer Solution (Biphthalate), pH 4
BAKER ANALYZED Reagent

5606-01	Poly	500 mL	sol	27.10	
		12 x 500 mL	sol	22.60	271.20
5606-03	Cubitainer	4 L	sol	92.95	
		4 x 4 L	sol	77.45	309.80
5606-07	Cubitainer	20 L	sol	202.15	

Each lot compared to NIST Standard Reference Buffer.

pH at 25°C 3.96-4.04

Appearance .....Passes Test

Product Information (not specifications):

Potassium Biphthalate, Molarity (typical range) 0.0498-0.0502

Buffer Solution (Biphthalate), pH 4 (Color Coded Red)

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5657-01	Poly	500 mL	sol	27.10	
		12 x 500 mL	sol	22.60	271.20
5657-03	Cubitainer	4 L	sol	89.80	
		4 x 4 L	sol	74.85	299.40
5657-07	Cubitainer	20 L	sol	212.80	

Each lot compared to NIST Standard Reference Buffer.
pH at 25°C 3.96-4.04
Appearance ..... Passes Test
Product Information (not specifications):
Potassium Biphthalate, Molarity (typical range) 0.0498-0.0502

Buffer Solution (Borate), pH 10

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5609-01	Poly	500 mL	sol	27.10	
		12 x 500 mL	sol	22.60	271.20
5609-03	Cubitainer	4 L	sol	92.95	
		4 x 4 L	sol	77.45	309.80
5609-07	Cubitainer	20 L	sol	202.15	

Each lot compared to NIST Standard Reference Buffer.
pH at 25°C 9.96-10.04
Appearance ..... Passes Test
Product Information (not specifications):
Potassium (K), Molarity (typical range) 0.094-0.114
IMO: 8:3266

Buffer Solution (Borate), pH 10 (Color Coded Blue)

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5655-01	Poly	500 mL	sol	27.10	
		12 x 500 mL	sol	22.60	271.20
5655-03	Cubitainer	4 L	sol	89.80	
		4 x 4 L	sol	74.85	299.40
5655-07	Cubitainer	20 L	sol	202.15	

Each lot compared to NIST Standard Reference Buffer.
pH at 25°C 9.99-10.01
Appearance ..... Passes Test
Product Information (not specifications):
Potassium (K), Molarity (typical range) 0.094-0.114
IMO: 8:3266

Buffer Solution (Phosphate), pH 7

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5608-01	Poly	500 mL	sol	27.10	
		12 x 500 mL	sol	22.60	271.20
5608-03	Cubitainer	4 L	sol	92.95	
		4 x 4 L	sol	77.45	309.80
5608-07	Cubitainer	20 L	sol	195.50	

Each lot compared to NIST Standard Reference Buffer.
pH at 25°C 6.96-7.04
Appearance ..... Passes Test
Product Information (not specifications):
Phosphate (PO_4), Molarity (typical range) 0.046-0.050
Potassium (K), Molarity (typical range) 0.023-0.025
Sodium (Na), Molarity (typical range) 0.050-0.056

Buffer Solution (Phosphate), pH 7 (Color Coded Yellow)

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5656-01	Poly	500 mL	sol	27.10	
		12 x 500 mL	sol	22.60	271.20
5656-03	Cubitainer	4 L	sol	89.80	
		4 x 4 L	sol	74.85	299.40
5656-07	Cubitainer	20 L	sol	195.50	

Each lot compared to NIST Standard Reference Buffer.
pH at 25°C 6.96-7.04
Appearance ..... Passes Test
Product Information (not specifications):
Phosphate (PO_4), Molarity (typical range) 0.046-0.050
Potassium (K), Molarity (typical range) 0.023-0.025
Sodium (Na), Molarity (typical range) 0.050-0.056

Buffers, Biological

See Drug Development and Manufacturing Section, p. 64-86

For more information on products for drug discovery, see pages 58-63.

Butanediol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1,4-Butanediol
Practical

D570-07	Glass	500 mL	non	82.90	

$HO(CH_2)_4OH$ FW: 90.12

Identification (by IR) ..... Passes Test

CAS: 110-63-4 DENSITY: 1 L = 1.0171 kg FLASH POINT: 121°C

2,3-Butanedione Dioxime
See Dimethylglyoxime

2,3-Butanedione Monoxime
See Diacetyl Monoxime

1-Butanesulfonic Acid, Sodium Salt
BAKER

D600-03	Glass	25 g	org	253.20	

$CH_3(CH_2)_3SO_3Na$ FW: 160.16

Assay ($C_4H_9NaO_3$) (by titration) ..... min. 98%
Appearance ..... Passes Test

CAS: 2386-54-1

1-Butanol
BAKER ANALYZED ACS Reagent (butyl alcohol)

9054-01	Glass	500 mL	cso	61.30	
		12 x 500 mL	cso	40.85	490.20
9054-03	Glass	4 L	cso	209.25	
		4 x 4 L	cso	139.50	558.00
9054-33	Poly Coated	4 L	cso	234.25	
		4 x 4 L	cso	156.15	624.60
9054-07	Steel Pail	20 L	sbk	437.45	
9054-R	Steel Drum	370 lb	bul	Inquire	

$CH_3CH_2CH_2CH_2OH$ FW: 74.12

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($CH_3CH_2CH_2CH_2OH$) (by GC, corrected for water) ..... min. 99.4%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.005%
Titrable Acid (meq/g) ..... max. 0.0008
Butyl Ether ($C_8H_{18}O$)(by GC) ..... max. 0.2%
Carbonyl Compounds:
Butyraldehyde ..... max. 0.01%
Water (by KF, coulometric) ..... max. 0.1%

CAS: 71-36-3 DENSITY: 1 L = 0.81 kg MERCK INDEX: 14,1540
IMO: 3:1120 FLASH POINT: 37°C

Solvent Spill Cleanup Products available. See pp. 378.

1-Butanol
PHOTREX Reagent (butyl alcohol) For Spectrophotometry

9189-01	Glass	500 mL	cso	97.90	
		12 x 500 mL	cso	65.25	783.00

$CH_3CH_2CH_2CH_2OH$ FW: 74.12

Meets ACS Specifications
Assay ($CH_3CH_2CH_2CH_2OH$) (by GC, corrected for water) ..... min. 99.4%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0005%
Titrable Acid (µeq/g) ..... max. 0.8
Butyl Ether ($C_8H_{18}O$)(by GC) ..... max. 0.2%
Carbonyl Compounds:
Butyraldehyde ..... max. 0.01%
Water (by KF, coulometric) ..... max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
400-300 nm ..... max. 0.01
280 nm ..... max. 0.02
260 nm ..... max. 0.04
240 nm ..... max. 0.10
220 nm ..... max. 0.50
215 nm ..... max. 1.00
Product Information (not specifications):
Boiling Point (typical) ..... 117.7 °C.
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:
2.0-2.8 4.3-6.0

CAS: 71-36-3 DENSITY: 1 L = 0.81 kg MERCK INDEX: 14,1540
IMO: 3:1120 FLASH POINT: 37°C

Solvent Spill Cleanup Products available. See pp. 378.

Iso-Butanol
See Isobutyl Alcohol

tert-Butanol
See tert-Butyl Alcohol

2-Butanone
See Methyl Ethyl Ketone

cis-Butenedioic Acid
See Maleic Acid

2-Butoxyethanol
Practical

D648-07	Glass	500 mL	non	30.00	
D648-09	Glass	4 L	non	102.05	

$CH_3(CH_2)_3OCH_2CH_2OH$ FW: 118.18

Assay ($CH_3(CH_2)_3OCH_2CH_2OH$) (by GC) ..... min. 99%
Color (APHA) ..... max. 10

CAS: 111-76-2 DENSITY: 1 L = 0.90 kg MERCK INDEX: 14,1559
IMO: 6.1:2810 FLASH POINT: 62°C

Solvent Spill Cleanup Products available. See pp. 378.

Butyl Carbitol Acetate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2-(2-Butoxyethoxy)ethanol
Practical

D654-09	Glass	4 L	non	215.45	

$CH_3(CH_2)_3OCH_2CH_2OCH_2CH_2OH$ FW: 162.23

Identification (by IR) ..... Passes Test

CAS: 112-34-5 DENSITY: 1 L = 0.95 kg MERCK INDEX: 14,1557
FLASH POINT: 78°C

2-(2-Butoxyethoxy)ethyl Acetate
Practical

D660-09	Glass	4 L	non	181.40	

$CH_3COOCH_2CH_2OCH_2CH_2O(CH_2)_3CH_3$ FW: 204.27

Identification (by IR) ..... Passes Test

CAS: 124-17-4 DENSITY: 1 L = 0.985 kg FLASH POINT: 116°C

Butyl Acetate
BAKER ANALYZED ACS Reagent

D683-07	Glass	500 mL	cor	94.15	
		12 x 500 mL	cor	62.75	753.00
D683-08	Glass	4 L	cor	269.80	
		4 x 4 L	cor	179.85	719.40

$CH_3COOCH_2CH_2CH_2CH_3$ FW: 116.16

Meets ACS Specifications

Assay ($C_6H_{12}O_2$) (by GC, corrected for water) ..... min. 99.5%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.001%
Titrable Acid (meq/g) ..... max. 0.0016
Substances Darkened by H_2SO_4 ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.1%
n-Butanol (by GC) ..... max. 0.2%

CAS: 123-86-4 DENSITY: 1 L = 0.8822 kg MERCK INDEX: 14,1535
IMO: 3:1123 FLASH POINT: 26°C

Solvent Spill Cleanup Products available. See pp. 378.

n-Butyl Acetate
PHOTREX Reagent
For Spectrophotometry

9191-03	Glass	4 L	cso	398.25	
		4 x 4 L	cso	265.50	1062.00

$CH_3COOCH_2CH_2CH_2CH_3$ FW: 116.16

Meets ACS Specifications

Assay ($CH_3COOCH_2CH_2CH_2CH_3$)
(by GC, corrected for water) ..... min. 99.5%
n-Butyl Alcohol (by GC) ..... max. 0.2%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0005%
Substances Darkened by H_2SO_4 ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Titrable Acid (meq/g) ..... max. 0.0016
Water (by KF, volumetric) ..... max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water) (curve smooth through-out stated range with no extraneous impurity peaks):
400-320 nm ..... max. 0.01
300 nm ..... max. 0.02
275 nm ..... max. 0.04
263 nm ..... max. 0.08
259 nm ..... max. 0.20
256 nm ..... max. 0.40
254 nm ..... max. 1.0
Product Information (not specifications):
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:
2.0-3.2 12.5-13.0
3.6-5.3 13.6-15.0

CAS: 123-86-4 DENSITY: 1 L = 0.8822 kg MERCK INDEX: 14,1535
IMO: 3:1123 FLASH POINT: 26°C

Solvent Spill Cleanup Products available. See pp. 378.

Butyl Alcohol
See 1-Butanol

tert-Butyl Alcohol
BAKER ANALYZED ACS Reagent
(2-methyl-2-propanol)

9056-01	Poly	500 mL	cso	78.90	
		12 x 500 mL	cso	52.60	631.20
9056-05	Poly	4 L	cso	232.60	
		4 x 4 L	cso	155.05	620.20
9056-07	Steel Pail	20 L	sbk	535.25	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$(CH_3)_3COH$ FW: 74.12

Meets ACS Specifications

Assay ($(CH_3)_3COH$) (by GC, corrected for water) ..... min. 99.0%
Carbonyl Compounds:
Formaldehyde ..... max. 0.01%
Color (APHA) ..... max. 20
Residue after Evaporation ..... max. 0.003%
Titrable Acid (meq/g) ..... max. 0.001
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.1%
Product Information (not specifications):
Boiling Range: ..... 81.5°C. - 83.0°C.
Freezing Point (typical) ..... 24.0°C.
Specific Gravity at 25°/25°C 0.781-0.785
NOTE: Product freezes at about 25°C (77°F).

CAS: 75-65-0 DENSITY: 1 L = 0.78 kg MERCK INDEX: 14,1542
IMO: 3:1120 FLASH POINT: 11°C

Solvent Spill Cleanup Products available. See pp. 378.

Butyl Carbitol
See 2-(2-Butoxyethoxy)ethanol

Butyl Carbitol Acetate
See 2-(2-Butoxyethoxy)ethyl Acetate

Butyl Cellosolve

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Butyl Cellosolve
See 2-Butoxyethanol

tert-Butyl Methyl Ether
See under Methyl tert-Butyl Ether

Butyl Methyl Ketone
See 2-Hexanone

iso-Butyl Methyl Ketone
See under Methyl iso-Butyl Ketone

Butyl Phosphate
See Tributyl Phosphate

Butyl Phthalate
See Dibutyl Phthalate

Butyric Acid, Sodium Salt
BAKER

E186-05	Poly	100 g	non	188.95	
E186-07	Poly Pail	12 kg	bks	Inquire	

$CH_3CH_2CH_2COONa$ FW: 110.09

Assay 98.0-101.0%
Identification (by IR) .....Passes Test
Water (H_2O) .....max. 1%
Preserve in well-closed containers.

CAS: 156-54-7 MERCK INDEX: 14,1593

Cacodylic Acid, Sodium Salt, Trihydrate
BAKER
(sodium cacodylate)

E258-05	Glass	100 g	bio	199.75	
E258-08	Poly	1 kg	bio	1174.00	

$(CH_3)_2AsO_2Na{\cdot}3H_2O$ FW: 214.03

Identification (by IR) .....Passes Test

CAS: 124-65-2 MERCK INDEX: 14,8595 IMO: 6.1:1688

Cadmium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Cadmium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Cd metal in 5% HNO_3)
Plasma Standard

5723-04		100 mL	spr	112.60	

Cd AW: 112.41

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Cadmium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Cd metal in 5% HNO_3)
Plasma Standard

5709-04		100 mL	spr	72.00	

Cd AW: 112.41

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Cadmium, 1000 µg/mL
BAKER INSTRA-ANALYZED Reagent
(Cd metal in 5% HNO_3)
Plasma Standard

6447-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Cd AW: 112.41

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Cadmium Acetate, Dihydrate, Crystal
BAKER ANALYZED Reagent

1190-04	Poly	125 g	csa	189.75	
		4 x 125 g	csa	126.50	506.00
1190-01	Poly	500 g	non	361.55	

$(CH_3COO)_2Cd{\cdot}2H_2O$ FW: 266.52

Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Nitrate (NO_3) .....max. 0.003%
Sulfate (SO_4) .....max. 0.005%
Copper (Cu) .....max. 0.001%
Iron (Fe) .....max. 0.001%
Lead (Pb) .....max. 0.003%
Zinc (Zn) .....max. 0.05%

CAS: 5743-04-4 MERCK INDEX: 14,1614 IMO: 6.1:2570

Cadmium Chloride, 2.5-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

1208-01	Poly	500 g	non	250.65	

$CdCl_2{\cdot}2.5H_2O$ FW: 228.35

Exceeds ACS Specifications
Assay ($CdCl_2$) (by Ag titrn) 79.5-81.0%
Insoluble Matter .....max. 0.005%
Nitrate and Nitrite (as NO_3) .....max. 0.003%
Sulfate (SO_4) .....max. 0.005%
Ammonium (NH_4) .....max. 0.002%
Calcium (Ca) .....max. 0.005%
Lead (Pb) .....max. 0.005%
Potassium (K) .....max. 0.02%
Sodium (Na) .....max. 0.05%
Zinc (Zn) .....max. 0.05%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppm):
Copper (Cu) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 7790-78-5 MERCK INDEX: 14,1617 IMO: 6.1:2570

Cadmium Chloride, Anhydrous, Powder
BAKER ANALYZED ACS Reagent

1212-04	Poly	125 g	non	123.25	
1212-01	Poly	500 g	non	374.15	

$CdCl_2$ FW: 183.31

Meets ACS Requirements

Assay ($CdCl_2$) (by Ag titrn) ..... min. 99.0%
Insoluble Matter ..... max. 0.01%
Nitrate and Nitrite (as NO_3) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.01%
Ammonium (NH_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.01%
Copper (Cu) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Lead (Pb) ..... max. 0.005%
Potassium (K) ..... max. 0.02%
Sodium (Na) ..... max. 0.05%
Zinc (Zn) ..... max. 0.05%

CAS: 10108-64-2 MERCK INDEX: 14,1617 IMO: 6.1:2570

Cadmium Nitrate, 4-Hydrate
BAKER ANALYZED Reagent

1226-04	Glass	125 g	non	116.30	
1226-01	Poly	500 g	non	346.55	

$Cd(NO_3)_2 \cdot 4H_2O$ FW: 308.48

Assay ($Cd(NO_3)_2 \cdot 4H_2O$) (by EDTA titrn) 99.0-101.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.002%
Calcium (Ca) ..... max. 0.02%
Copper (Cu) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Lead (Pb) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.02%
Zinc (Zn) ..... max. 0.05%

CAS: 10022-68-1 MERCK INDEX: 14,1622 IMO: 5.1:3087

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cadmium Oxide, Powder
BAKER ANALYZED Reagent

1234-01	Poly	500 g	csa	349.30	
		4 x 500 g	csa	232.85	931.40

CdO FW: 128.41

Assay (CdO) (by EDTA titrn) ..... min. 99.0%
Insoluble in CH_3COOH ..... max. 0.05%
Chloride (Cl) ..... max. 0.002%
Nitrate (NO_3) ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.20%
Copper (Cu) ..... max. 0.005%
Iron (Fe)(by AAS) ..... max. 0.002%
Lead (Pb)(by AAS) ..... max. 0.01%

CAS: 1306-19-0 MERCK INDEX: 14,1623 IMO: 6.1:2570

Cadmium Sulfate, Hydrate, Crystal
BAKER ANALYZED ACS Reagent

1243-04	Glass	125 g	csa	135.00	
		4 x 125 g	csa	90.00	360.00
1243-01	Glass	500 g	csa	390.30	
		4 x 500 g	csa	260.20	1040.80

$CdSO_4 \cdot 2H_2O$ FW: 256.57

Exceeds ACS Specifications

Assay ($3CdSO_4 \cdot 8H_2O$) (by EDTA titrn) 99.0-102.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Nitrate and Nitrite (as NO_3) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Copper (Cu) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Lead (Pb) ..... max. 0.001%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%
Zinc (Zn) ..... max. 0.05%

CAS: 7790-84-3 MERCK INDEX: 14,1627 IMO: 6.1:2570

Caffeine
BAKER

E268-07	Poly	500 g	non	90.40	

$C_8H_{10}N_4O_2$ FW: 194.19

Melting Point ..... 233-237 °C.
Identification (by IR) ..... Passes Test

CAS: 58-08-2 MERCK INDEX: 14,1636 IMO: 6.1:2811

Calcium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Calcium

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent (calcium carbonate in 5% HNO_3) Plasma Standard

5724-04		100 mL	spr	112.60	

Ca AW: 40.08

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Calcium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent (calcium carbonate in 5% HNO_3) Plasma Standard

5710-04	Poly	100 mL	spr	72.00	

Ca AW: 40.08

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Calcium 1,000 µg/mL
BAKER INSTRA-ANALYZED Reagent (calcium carbonate in 5% HNO_3)

6448-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Ca AW: 40.08

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Calcium Acetate, Monohydrate, Powder
BAKER ANALYZED ACS Reagent

1266-01	Glass	500 g	csa	213.25	
		4 x 500 g	csa	142.15	568.60
1266-05	Poly Pail	2.5 kg	non	560.05	

$(CH_3COO)_2Ca{\cdot}H_2O$ FW: 176.19

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3COO)_2Ca{\cdot}H_2O$) 99.0-101.0%
Alkalinity .....Passes Test
Titrable Acid (meq/g) .....max. 0.035
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.01%
Barium (Ba) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%
Nitrate (NO_3) .....max. 0.003%
Magnesium (Mg) .....max. 0.05%
Potassium (K) .....max. 0.01%
Sodium (Na) .....max. 0.02%
Strontium (Sr) .....max. 0.05%

CAS: 5743-26-0 MERCK INDEX: 14,1645

Calcium Acid Phosphate
See Calcium Phosphate

Calcium Biphosphate
See Calcium Phosphate

Calcium Carbonate
ULTREX Ultrapure Reagent

4918-03	Glass	25 g	spr	262.25	

$CaCO_3$ FW: 100.09

Certificate Provided Reports Actual Lot Analysis
Assay ($CaCO_3$) (dried basis) .....99.96 - 99.96%
Loss on Drying at 200°C 0.01%
Particulate Matter 0.004%
Alkalinity .....Passes Test
Non-Metallic Impurities (in ppm)(µg/g):
Arsenic (As) .....< 1
Fluoride (F) .....< 1
Halide (as Cl) .....< 1
Nitrogen Compounds (as N) 234
Phosphate (PO_4) .....< 2
Silicon (Si) .....< 5
Sulfur Compounds (as SO_4) .....< 5
Metallic Impurities (in ppm)(µg/g):
Aluminum (Al) .....< 1
Barium (Ba) .....< 1
Bismuth (Bi) .....< 1
Cadmium (Cd) .....< 1
Chromium (Cr) .....< 1
Cobalt (Co) .....< 1
Copper (Cu) .....< 1
Iron (Fe) 1
Lead (Pb) .....< 1
Lithium (Li) .....< 1
Magnesium (Mg) 2
Manganese (Mn) .....< 1
Mercury (Hg) .....< 1
Molybdenum (Mo) .....< 5
Nickel (Ni) .....< 1
Niobium (Nb) .....< 1
Potassium (K) .....< 1
Silver (Ag) .....< 1
Sodium (Na) .....< 1
Strontium (Sr) 8
Tin (Sn) .....< 1
Titanium (Ti) .....< 1
Vanadium (V) .....< 1
Zinc (Zn) .....< 1
Zirconium (Zr) .....< 1

CAS: 471-34-1 MERCK INDEX: 14,1657

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Carbonate

See also Marble Chips

Calcium Carbonate, Light Powder

cGMP

USP, FCC

1301-01	Poly	500 g	rss	237.45	
		4 x 500 g	rss	158.30	633.20
1301-05	Poly Pail	2.5 kg	rnc	633.95	

$CaCO_3$ FW: 100.09

Meets USP & FCC Requirements

Assay ($CaCO_3$) (dried basis) 98.0-100.5%
Identification ..... Passes Test
Loss on Drying ..... max. 2.0%
Acid-Insoluble Matter ..... max. 0.2%
Fluoride (F) ..... max. 0.005%
Arsenic (As) ..... max. 3 ppm
Barium (Ba) ..... Passes Test
Iron (Fe) ..... max. 0.1%
Lead (Pb) ..... max 3 mg/kg
Heavy Metals (as Pb) ..... max. 0.002%
Magnesium and Alkali Salts ..... max. 1.0%
Mercury (Hg) ..... max. 0.5 ppm
Bulk Density (lb/cu ft) 32-36

CAS: 471-34-1 MERCK INDEX: 14,1657

Calcium Carbonate, Powder

BAKER ANALYZED ACS Reagent

1288-01	Poly	500 g	csa	206.85	
		4 x 500 g	csa	137.90	551.60
1288-05	Poly	1.5 kg	csa	523.75	
		4 x 1.5 kg	csa	349.15	1396.60
1288-R	Lined Fiber Dr	100 lb	bul	Inquire	

$CaCO_3$ FW: 100.09

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CaCO_3$) (dried basis) ..... min. 99.0%
Insoluble in Dilute HCl ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Fluoride (F) ..... max. 0.0015%
Sulfate (SO_4) ..... max. 0.01%
Ammonium (NH_4) ..... max. 0.003%
Barium (Ba) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.02%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.1%
Strontium (Sr) ..... max. 0.1%

CAS: 471-34-1 MERCK INDEX: 14,1657

Calcium Carbonate, Powder

BAKER ANALYZED ACS Reagent
Low in Alkalies

1294-01	Poly	500 g	csa	153.30	
		4 x 500 g	csa	102.20	408.80
1294-05	Poly	2 kg	csa	404.05	
		4 x 2 kg	csa	269.35	1077.40

$CaCO_3$ FW: 100.09

Exceeds ACS Specifications

Assay ($CaCO_3$) (dried basis) ..... min. 99.0%
Insoluble in Dilute HCl ..... max. 0.01%
Ammonium (NH_4) ..... max. 0.003%
Chloride (Cl) ..... max. 0.001%
Fluoride (F) ..... max. 0.0015%
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.01%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.01%
Strontium (Sr) ..... max. 0.1%
Average Particle Diameter, µm (APD) ..... Actual Value Reported
Specific Surface Area, m^2/g ..... Actual Value Reported
Bulk Density (g/cc) ..... Actual Value Reported
Mesh (Wet Screen Analysis):
On U.S. No. 325 Sieve ..... Actual Value Reported

CAS: 471-34-1 MERCK INDEX: 14,1657

Calcium Carbonate, Powder

cGMP

USP, FCC

1300-05	Poly Pail	2.5 kg	rnc	418.35
1300-09	Lined Fiber Dr	150 lb	bul	Inquire

$CaCO_3$ FW: 100.09

Meets USP & FCC Requirements

Assay ($CaCO_3$) (dried basis) 98.0-100.5%
Identification ..... Passes Test
Loss on Drying ..... max. 2.0%
Acid-Insoluble Substances ..... max. 0.2%
Fluoride (F) ..... max. 0.005%
Arsenic (As) ..... max. 3 ppm
Barium (Ba) ..... Passes Test
Iron (Fe) ..... max. 0.1%
Lead (Pb) (FCC) ..... max 3 mg/kg
Lead (Pb) (USP) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 0.002%
Magnesium and Alkali Salts (as SO_4) ..... max. 1.0%
Mercury (Hg) ..... max. 0.5 ppm
Bulk Density (lb/cu ft) ..... min. 28

CAS: 471-34-1 MERCK INDEX: 14,1658

Calcium Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Chloride, Anhydrous

BAKER ANALYZED ACS Reagent
20 mesh and finer, for desiccant use

1311-01	Poly	500 g	csa	187.05	
		4 x 500 g	csa	124.70	498.80
1311-05	Poly	2.5 kg	csa	733.80	
		4 x 2.5 kg	csa	489.20	1956.80
1311-07	Poly Pail	12 kg	bks	Inquire	

$CaCl_2$ FW: 110.98

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($CaCl_2$) (by Ag titrn) ..... min. 96.0%
Titrable Base (meq/g) ..... max. 0.006
Mesh:
On U.S. No. 20 Sieve ..... max. 10%
Thru U.S. No. 200 Sieve ..... max. 30%

CAS: 10043-52-4 MERCK INDEX: 14,1659

Calcium Chloride, Dihydrate, Granular

BAKER ANALYZED ACS Reagent

1332-01	Poly	500 g	csa	84.15	
		4 x 500 g	csa	56.10	224.40
1332-05	Poly	2.5 kg	csa	291.75	
		4 x 2.5 kg	csa	194.50	778.00
1332-07	Poly Pail	12 kg	bks	Inquire	

$CaCl_2 \cdot 2H_2O$ FW: 147.01

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($CaCl_2$) 74.0-78.0%
Assay ($CaCl_2 \cdot 2H_2O$) 99.0-105.0%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 4.5-8.5
Oxidizing Substances (as NO_3) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.01%
Ammonium (NH_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%
Strontium (Sr) ..... max. 0.1%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 10035-04-8 MERCK INDEX: 14,1659

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Chloride, Dihydrate, Granular

cGMP

USP, FCC

1336-01	Glass	500 g	rss	98.10	
		4 x 500 g	rss	65.40	261.60
1336-05	Poly Coated	2.5 kg	rss	339.55	
		4 x 2.5 kg	rss	226.35	905.40
1336-07	Poly Pail	12 kg	bks	Inquire	
1336-08	Poly Drum	70 lb	bul	Inquire	
1336-09	Lined Fiber Dr	100 lb	bul	Inquire	
1336-R	Lined Fiber Dr	300 lb	bul	Inquire	

$CaCl_2 \cdot 2H_2O$ FW: 147.01

Meets USP & FCC Requirements
Assay ($CaCl_2 \cdot 2H_2O$) 99.0-107.0%
Appearance (White crystals or granules) ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
pH of 5% Solution at 25°C 4.5-9.2
Arsenic (As) ..... max 3 mg/kg
Heavy Metals (as Pb) ..... max. 0.001%
Iron, Aluminum, and Phosphate ..... Passes Test
Magnesium and Alkali Salts ..... max. 1.0%
Lead (Pb) ..... max 5 mg/kg
Fluoride (F) ..... max. 0.004%

CAS: 10035-04-8 MERCK INDEX: 14,1659

Calcium Chloride, Dihydrate, Granular, USP

cGMP

Multi-Compendial

1335-07	Poly Pail	12 kg	bks	Inquire	

$CaCl_2 \cdot 2H_2O$ FW: 147.01

Meets USP Requirements
Identification ..... Passes Test
pH of 5% Solution at 25°C 4.5-9.2
Heavy Metals (as Pb) ..... max. 0.001%
Iron, Aluminum, and Phosphate ..... Passes Test
Magnesium and Alkali Salts ..... max. 1.0%
Assay ($CaCl_2 \cdot 2H_2O$) 99.0-107.0%
Endotoxin Concentration (EU/g) ..... max. 10
Meets BP/Ph.Eur. Chemical Specifications
Assay ($CaCl_2 \cdot 2H_2O$) 97.0-103.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Sulfate (SO_4) ..... max. 300 ppm
Aluminum (Al) ..... Passes Test
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 20 ppm
Iron (Fe) ..... max. 10 ppm
Magnesium and Alkali Metals ..... max. 0.5%
Meets JP Chemical Specifications
Assay ($CaCl_2 \cdot 2H_2O$) 96.7-103.3%
Identification ..... Passes Test
pH (1 in 20) 4.5-9.2
Heavy Metals (as Pb) ..... max. 10 ppm
Clarity and Color of Solution ..... Passes Test
Sulfate (SO_4) ..... max. 0.024%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hypochlorite ..... Passes Test
Iron, Aluminum or Phosphate ..... Passes Test
Barium (Ba) ..... Passes Test
Arsenic (As) ..... max. 2 ppm

CAS: 10035-04-8 MERCK INDEX: 14,1659

Calcium Chloride, Pellets
Purified
4-8 Mesh. For Desiccant Use.

1313-01	Poly	500 g	csa	100.20	
		4 x 500 g	csa	66.80	267.20
1313-05	Poly	2.5 kg	csa	309.30	
		4 x 2.5 kg	csa	206.20	824.80
1313-07	Poly Pail	12 kg	bks	Inquire	

$CaCl_2$ FW: 110.98

Assay ($CaCl_2$) ..... min. 89%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.02%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1

CAS: 10043-52-4 MERCK INDEX: 14,1659

Calcium Chloride, T.S.
BAKER ANALYZED Reagent

5912-04	Poly	100 mL	sol	14.15
5912-01	Poly	500 mL	sol	31.70
5912-02	Poly	1 L	sol	50.15

Assay ($CaCl_2 \cdot 2H_2O$), w/v 7.3-7.7%
Product Information (not specifications):
Appearance (clear, colorless solution)
DENSITY: 1 L = 1.01 kg

Calcium Fluoride, Powder
BAKER ANALYZED Reagent

1354-01	Poly	500 g	non	149.95

CaF_2 FW: 78.08

Assay (CaF_2) (by EDTA titrn) ..... min. 95.0%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.005%

CAS: 7789-75-5 MERCK INDEX: 14,1667

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Gluconate, Anhydrous, Powder
USP, FCC cGMP

1272-01	Glass	500 g	rss	123.85	
		4 x 500 g	rss	82.55	330.20

$(HOCH_2(CHOH)_4COO)_2Ca$ FW: 430.38

Meets USP & FCC Requirements
Assay ($C_{12}H_{22}O_{14}Ca$) (dried basis) 98.0-102.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Loss on Drying ..... max. 3.0%
Chloride (Cl) ..... max. 0.07%
Sulfate (SO_4) ..... max. 0.05%
Arsenic (As) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Reducing Substances ..... max. 1.0%
Lead (Pb) ..... max 2 mg/kg
This product is not intended for use in the preparation of injectable dosage forms.

CAS: 299-28-5 MERCK INDEX: 14,1669

Calcium Hydroxide, Powder
BAKER ANALYZED ACS Reagent

1372-01	Poly	500 g	csa	62.10	
		4 x 500 g	csa	41.40	165.60
1372-05	Poly Pail	2 kg	non	104.10	
1372-09	Lined Fiber Dr	110 lb	bul	Inquire	

$Ca(OH)_2$ FW: 74.09

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Ca(OH)_2$) ..... min. 95.0%
Calcium Carbonate ($CaCO_3$) ..... max. 3.0%
Insoluble in HCl ..... max. 0.03%
Chloride (Cl) ..... max. 0.03%
Sulfur Compounds (as SO_4) ..... max. 0.1%
Iron (Fe) ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.5%
Potassium (K) ..... max. 0.05%
Sodium (Na) ..... max. 0.05%
Strontium (Sr) ..... max. 0.05%

CAS: 1305-62-0 MERCK INDEX: 14,1673

Calcium Hydroxide, Powder
USP cGMP

1374-01	Glass	500 g	rnc	73.65	
1374-05	Poly Pail	2.5 kg	rnc	209.15	
1374-R	Lined Fiber Dr	100 lb	bul	Inquire	

$Ca(OH)_2$ FW: 74.09

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Acid-Insoluble Substances ..... max. 0.5%
Carbonate (CO_3) ..... Passes Test

Calcium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Heavy Metals (as Pb) ..... max. 20 ppm
Magnesium and Alkali Salts ..... max. 4.8%
Assay 95.0-100.5%

CAS: 1305-62-0 MERCK INDEX: 14,1673

Calcium Hydroxide, Powder, USP

cGMP

Multi-Compendial

1375-01	Glass	500 g	rnc	81.05	
1375-05	Poly Pail	2.5 kg	rnc	230.20	

$Ca(OH)_2$ FW: 74.09

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Acid-Insoluble Substances ..... max. 0.5%
Carbonate (CO_3) ..... Passes Test
Heavy Metals (as Pb) ..... max. 20 ppm
Magnesium and Alkali Salts ..... max. 4.8%
Assay ($Ca(OH)_2$) 95.0-100.5%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble in HCl ..... max. 0.5%
Calcium Carbonate ($CaCO_3$) ..... max. 5.0%
Chloride (Cl) ..... max. 330 ppm
Sulfate (SO_4) ..... max. 0.4%
Arsenic (As) ..... max. 4 ppm
Magnesium and Alkali Metals ..... max. 4.0%
Heavy Metals (as Pb) ..... max. 20 ppm
Assay ($Ca(OH)_2$) 95.0-100.5%

Meets JP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Acid-Insoluble Substances ..... max. 0.5%
Heavy Metals (as Pb) ..... max. 40 ppm
Magnesium and Alkali Metals ..... max. 4.8%
Arsenic (As) ..... max. 4 ppm
Assay ($Ca(OH)_2$) ..... min. 90.0%

CAS: 1305-62-0 MERCK INDEX: 14,1673

Calcium Hypochlorite, Powder

Purified
65% minimum Available Chlorine

1378-01	Glass	500 g	csa	56.35	
		4 x 500 g	csa	37.55	150.20
1378-05	Poly	2.5 kg	csa	150.70	
		4 x 2.5 kg	csa	100.45	401.80

$CaCl_2O_2$ FW: 142.98

Assay (Cl) ..... min. 65%

CAS: 7778-54-3 MERCK INDEX: 14,1674 IMO: 5.1:1748

Calcium Monohydrogen Phosphate, Anhydrous

See Calcium Phosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Nitrate, 4-Hydrate, Granular

BAKER ANALYZED ACS Reagent

1395-01	Poly	500 g	csa	79.05	
		4 x 500 g	csa	52.70	210.80
1395-05	Poly	2.5 kg	csa	311.65	
		4 x 2.5 kg	csa	207.75	831.00
1395-07	Lined Fiber Dr	12 kg	bks	Inquire	
1395-09	Lined Fiber Dr	110 lb	bul	Inquire	

$Ca(NO_3)_2 \cdot 4H_2O$ FW: 236.15

Exceeds ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Assay ($Ca(NO_3)_2 \cdot 4H_2O$) (by EDTA titrn) 99.0-103.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 5.0-7.0
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.002%
Barium (Ba) ..... max. 0.005%
Nitrite (NO_2) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.05%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.01%
Strontium (Sr) ..... max. 0.05%

Trace Impurities (in ppm):

Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 13477-34-4 MERCK INDEX: 14,1682 IMO: 5.1:1454

Calcium Oxide, Powder

BAKER ANALYZED Reagent

1410-01	Poly	500 g	csa	61.50	
		4 x 500 g	csa	41.00	164.00
1410-05	Poly	2.5 kg	csa	205.45	
		4 x 2.5 kg	csa	136.95	547.80
1410-07	Poly Pail	12 kg	bks	Inquire	

CaO FW: 56.08

Insoluble in CH_3COOH and NH_4OH Precipitate ..... max. 1.0%
Loss on Ignition ..... max. 5.0%
Chloride (Cl) ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.1%

CAS: 1305-78-8 MERCK INDEX: 14,1686

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Pantothenate
cGMP
USP
(calcium D-(+)-pantothenate)

1443-03	Glass	25 g	rnc	70.10	
1443-08	Glass	1 kg	rnc	1949.25	

$(HOCH_2C(CH_3)_2CHOHCONHCH_2CH_2COO)_2Ca$ FW: 476.54

Meets USP Requirements
Meets Reagent Specifications for testing USP/NF monographs

Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +25.0 - +27.5 °
Alkalinity ..... Passes Test
Loss on Drying ..... max. 5.0%
Heavy Metals (as Pb) ..... max. 0.002%
Ordinary Impurities ..... max. 1.0%
Nitrogen Content (N) (calculated on dried basis) 5.7-6.0%
Calcium Content (Ca) (calculated on dried basis) 8.2-8.6%
Solution Test ..... Passes Test

CAS: 137-08-6

Calcium Phosphate, Monobasic, Monohydrate, Crystal
BAKER ANALYZED Reagent
(calcium dihydrogen phosphate, monohydrate)

1426-01	Poly	500 g	non	139.60	
1426-05	Poly	2.5 kg	non	511.95	

$Ca(H_2PO_4)_2{\cdot}H_2O$ FW: 252.07

Assay $(Ca(H_2PO_4)_2{\cdot}H_2O)$ 99-105%
Insoluble in HCl ..... max. 0.01%
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.01%
Ammonium (NH_4) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.002%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1

CAS: 7758-23-8 MERCK INDEX: 14,1693

Calcium Phosphate, Dibasic, Anhydrous, Powder
BAKER ANALYZED Reagent
(calcium monohydrogen phosphate, anhydrous)

1430-01	Poly	500 g	non	79.70	
1430-05	Poly	2.5 kg	non	238.70	
1430-07	Poly Pail	12 kg	bks	Inquire	

$CaHPO_4$ FW: 136.06

Assay ($CaHPO_4$) ..... min. 98.0%
Insoluble in HCl ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.04%
Heavy Metals (as Pb) ..... max. 0.003%
Iron (Fe) ..... max. 0.005%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 2

CAS: 7757-93-9 MERCK INDEX: 14,1692

Calcium Sulfate, Anhydrous, Powder
BAKER ANALYZED Reagent

1458-01	Glass	500 g	csa	267.70	
		4 x 500 g	csa	178.45	713.80

$CaSO_4$ FW: 136.14

Assay ($CaSO_4$) ..... min. 98.0%
Insoluble in HCl ..... max. 0.2%
Chloride (Cl) ..... max. 0.003%
Nitrogen Compounds (as N) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.003%
Iron (Fe) ..... max. 0.005%
Magnesium and Alkali Salts (as SO_4) ..... max. 0.30%

CAS: 7778-18-9 MERCK INDEX: 14,1707

Calcium Sulfate, Anhydrous
See also DRIERITE

Calcium Sulfate, Dihydrate, Powder
BAKER ANALYZED ACS Reagent

1452-01	Poly	500 g	csa	161.85	
		4 x 500 g	csa	107.90	431.60
1452-05	Poly	1 kg	csa	291.30	
		4 x 1 kg	csa	194.20	776.80

$CaSO_4{\cdot}2H_2O$ FW: 172.17

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CaSO_4{\cdot}2H_2O$) (by EDTA titrn) 98.0-102.0%
Carbonate (CO_3) ..... Passes Test
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.002%
Insoluble in Dilute HCl ..... max. 0.02%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.02%
Nitrate (NO_3) ..... Passes Test
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Strontium (Sr) ..... max. 0.05%

CAS: 10101-41-4 MERCK INDEX: 14,1706

Calcium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Sulfate, 1/2-Hydrate, Powder
BAKER TLC Reagent

1463-01	Poly	500 g	spr	57.60	
1463-07	Poly Pail	12 kg	spr	378.95	

$CaSO_4 \cdot 1/2H_2O$ FW: 145.15

Chloride (Cl) .....max. 0.01%
Iron (Fe) .....max. 0.01%
Suitability for TLC .....Passes Test

CAS: 7778-18-9 MERCK INDEX: 14,1706

Calcon, Powder
BAKER ANALYZED Reagent
(3-hydroxy-4-[(2-hydroxy-1-naphthyl)azo]-1-naphthalenesulfonic acid, Na salt)
(C.I. 15705)

E278-03	Glass	25 g	bio	75.90	

$HOC_{10}H_6N{:}NC_{10}H_5(OH)SO_3Na$ FW: 416.38

Sensitivity as Indicator .....Passes Test
Identification (by IR) .....Passes Test

CAS: 2538-85-4

Calibration Standards
See Analytical Standards Section, p. 94-98

Calmagite
BAKER
(3-hydroxy-4-[(6-hydroxy-m-tolyl)azo]-1-naphthalenesulfonic acid)

E280-03	Glass	25 g	non	207.60	

$HO(CH_3)C_6H_3N{:}NC_{10}H_5(OH)SO_3H$ FW: 358.37

Sensitivity as Metal Indicator .....Passes Test
Identification (by IR) .....Passes Test

CAS: 3147-14-6 MERCK INDEX: 14,1718

Caprylic Acid
See Octanoic Acid

Capryl or Caprylic Alcohol
See 1-Octanol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

CAPS
ULTRAPURE BIOREAGENT
(3-(cyclohexylamino)-1-propanesulfonic acid)

4118-01	Poly	100 g	upr	53.05	
4118-04	Poly	1 kg	upr	397.15	

$C_9H_{19}NO_3S$ FW: 221.31

Assay ($C_9H_{19}NO_3S$) .....min. 98.0%
Appearance .....Passes Test
Insoluble Matter .....max. 0.5%
Heavy Metals (as Pb) .....max. 5 ppm
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Product Information (not specifications):
pK_a at 20°C 10.40

CAS: 1135-40-6

Carbitol
See 2-(2-Ethoxyethoxy)ethanol

Carbolic Acid
See Phenol

Carbon, Activated, Powder
Acid-Washed, Steam-Activated
(DARCO G-60)

E343-07	Glass	500 g	non	92.60	
E343-09	Poly Pail	3 kg	non	271.70	

CAS: 7440-44-0 MERCK INDEX: 14,1808

Carbon, Activated, Powder
Acid-Washed, Steam-Activated
(NORIT SX 2, formerly NORIT SG EXTRA)

E345-07	Glass	500 g	non	83.35	

CAS: 7440-44-0 MERCK INDEX: 14,1808

Carbon Disulfide
ULTRA RESI-ANALYZED
Suitable for Use with NIOSH Analytical Methods 1003, 1500, & 1501 for Hydrocarbon Analysis and for Spectrophotometry

E350-01	Poly Coated	500 mL	spr	293.70	
		6 x 500 mL	spr	244.75	1468.50

CS_2 FW: 76.13

Meets ACS Specifications

Assay (CS_2) (by GC, corrected for water) .....min. 99.9%
Trace Organic Impurities (as benzene) (by GC) .....max. 1 ppm
Color (APHA) .....max. 10
Residue after Evaporation .....max. 15 ppm
Hydrogen Sulfide (H_2S) .....max. 1.5 ppm
Sulfur Dioxide (SO_2) .....max. 2.5 ppm

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
750 nm .....max. 0.01
500 nm .....max. 0.01
410 nm .....max. 0.05
403 nm .....max. 0.10
394 nm .....max. 0.25
388 nm .....max. 0.50
385 nm .....max. 1.00
Product Information (not specifications):
Boiling Point (typical) .....46.3 °C.
Windows of Near Infrared Transmittance (10-mm path vs. air 80-90% T), µm:
2.68-3.34 2.23-2.68 0.75-2.19
Windows of Infrared Transmittance (10-mm path vs air, 60-100% T), µm:
2.5-4.3 4.8-6.2 7.1-16.0

CAS: 75-15-0 DENSITY: 1 L = 1.26 kg MERCK INDEX: 14,1811
IMO: 3:1131 FLASH POINT: -30°C

Solvent Spill Cleanup Products available. See pp. 378.

Carbon Disulfide
BAKER ANALYZED ACS Reagent

9172-01	Glass	500 mL	cso	109.75	
		12 x 500 mL	cso	73.15	877.80
9172-22	AI SAFETAINER	1 L	cso	199.65	
		6 x 1 L	cso	133.10	798.60
9172-05	AI SAFETAINER	2.5 L	cso	523.90	
		4 x 2.5 L	cso	349.25	1397.00

CS_2 FW: 76.13

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (CS_2) (by GC, corrected for water) .....min. 99.9%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Hydrogen Sulfide (H_2S) .....Passes Test
Sulfur Dioxide (SO_2) .....Passes Test
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Product Information (not specifications):
Boiling Point (typical) .....46.3 °C.

CAS: 75-15-0 DENSITY: 1 L = 1.26 kg MERCK INDEX: 14,1811
IMO: 3:1131 FLASH POINT: -30°C

Solvent Spill Cleanup Products available. See pp. 378.

Carbowax
See Polyethylene Glycol 200

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

[[(Carboxymethyl)imino]bis(ethylenenitrilo)] tetraacetic Acid
BAKER (DTPA)

E376-07	Glass	500 g	non	282.50	

$[(HOCOCH_2)_2NCH_2CH_2]_2NCH_2COOH$ FW: 393.35

Assay ($C_{14}H_{23}N_3O_{10}$) .....min. 98%
CAS: 67-43-6 MERCK INDEX: 14,7125

[[(Carboxymethyl)imino]bis(ethylenenitrilo)]tetraacetic Acid
See Diethylenetriaminepentaacetic Acid, Pentasodium Salt

[9-(o-Carboxyphenyl)-6-(diethylamino)-3H-xanthen-3-ylidene]diethylammonium Chloride
See Rhodamine B (or O)

9-(o-Carboxyphenyl)-6-hydroxy-3H-xanthen-3-one
See Fluorescein

Castor Oil
USP cGMP

1518-01	Glass	500 mL	rnc	74.95	

Meets USP Requirements
Specific Gravity at 25°/25°C 0.957-0.961
Distinction from Most Other Fixed Oils .....Passes Test
Heavy Metals (as Pb) .....max. 0.001%
Free Fatty Acids .....Passes Test
Hydroxyl Value 160-168
Iodine Value 83-88
Saponification Value 176-182

CAS: 8001-79-4 DENSITY: 1 L = 0.961-0.963 kg MERCK INDEX: 14,1898
FLASH POINT: 229°C

Catechol
See Pyrocatechol

Cation Exchange Resins
See under Ion Exchange Resins

Caustic Potash
See under Potassium Hydroxide

Caustic Soda
See under Sodium Hydroxide

Caustic Spill Cleanup Products
See under Spill Cleanup Products

Cedarwood Oil, For Immersion

E395-07	Glass	500 mL	bio	135.15	

CAS: 8000-27-9 DENSITY: 1 L = 0.940 kg

Celite 503

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Celite 503					
E406-08	Poly Pail	1 kg	spr	94.60	
E406-09	Poly Pail	3 kg	spr	278.95	

CAS: 68855-54-9 MERCK INDEX: 14,4973

Celite 545
BAKER ANALYZED Reagent
Suitable for use in Pesticide Residue Analysis after Extraction with Petroleum Ether

3371-01	Glass	500 g	spr	166.05	
		4 x 500 g	spr	110.70	442.80
3371-05	Poly Pail	2.5 kg	spr	194.65	

Loss on Drying at 110°C .....max. 0.2%
pH of 5% Slurry at 25°C 8.0-10.0

CAS: 68855-54-9 MERCK INDEX: 14,4973

Cellosolve
See 2-Ethoxyethanol

Cellulose
BAKER TLC Reagent
(native fibrous cellulose)

1528-01	Poly	500 g	spr	170.15	

Suitability for TLC .....Passes Test
Physical Data (not specifications):
Average Particle Diameter, µm (APD) 2-20
Bulk Density (g/cc)(untapped) 0.4

CAS: 9004-34-6 MERCK INDEX: 14,1965

Cellulose (Acid Washed, Ashless)
BAKER ANALYZED Reagent
Suitable For Chromatographic Use

1525-01	Poly	500 g	spr	225.75	

pH of 5% Slurry at 25°C 5.0-7.0
Suitability for Column Chromatography .....Passes Test
Physical Data (not specifications):
Average Particle Diameter, µm (APD) 20-75
Bulk Density (g/cc)(untapped) 0.4

CAS: 9004-34-6 MERCK INDEX: 14,1965

Cellulose, Microcrystalline
BAKER TLC Reagent

1529-01	Poly	500 g	spr	145.00	
1529-07	Lined Fiber Dr	12 kg	spr	1627.35	

Loss on Drying .....max. 10%
Residue after Ignition .....max. 0.05%
Iron (Fe) .....max. 0.001%
Suitability for TLC .....Passes Test
Mesh:
Thru U.S. No. 60 Sieve .....min. 99.0%
Physical Data (not specifications):
Average Particle Diameter, µm (APD) 2-20
Bulk Density (g/cc)(untapped) 0.4

CAS: 9004-34-6 MERCK INDEX: 14,1965

Ceric Ammonium Nitrate, Crystal
BAKER ANALYZED ACS Reagent
(ammonium hexanitratocerate(IV))

1534-01	Glass	500 g	csa	375.25	
		4 x 500 g	csa	250.15	1000.60

$(NH_4)_2Ce(NO_3)_6$ FW: 548.22

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($(NH_4)_2Ce(NO_3)_6$) .....min. 98.5%
Insoluble in Dilute H_2SO_4 .....max. 0.05%
Chloride (Cl) .....max. 0.01%
Phosphate (PO_4) .....max. 0.02%
Iron (Fe) .....max. 0.005%

CAS: 16774-21-3 MERCK INDEX: 14,1992 IMO: 5.1:1477

Ceric Ammonium Sulfate, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent
(ammonium tetrasulfatocerate(IV) dihydrate)

1535-01	Poly	500 g	csa	235.45	
		4 x 500 g	csa	156.95	627.80

$(NH_4)_4Ce(SO_4)_4{\cdot}2H_2O$ FW: 632.55

Meets ACS Specifications
Assay ($(NH_4)_4Ce(SO_4)_4{\cdot}2H_2O$) 94-106%
Insoluble in Dilute H_2SO_4 .....max. 0.05%
Iron (Fe) .....max. 0.01%
Phosphate (PO_4) .....max. 0.03%

CAS: 10378-47-9 MERCK INDEX: 14,1990

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ceric Sulfate, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5626-02	Poly	1 L	sol	73.20	
		6 x 1 L	sol	61.00	366.00

$H_4Ce(SO_4)_4$ FW: 528.40

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.095-0.105
CAS: 13590-82-4 DENSITY: 1 L = 1.11 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Ceric Sulfate
BAKER ANALYZED Reagent
(tetrasulfatoceric acid)

E453-07	Poly	500 g	non	342.80	

$Ce(SO_4)_2 \cdot 2H_2SO_4$ FW: 528.40

Assay ($Ce(SO_4)_2 \cdot 2H_2SO_4$) 85-115%
Insoluble Matter .....max. 0.1%
Iron (Fe) .....max. 0.10%
Phosphate (PO_4) .....max. 0.10%
CAS: 13590-82-4 MERCK INDEX: 14,1990 IMO: 5.1:1479

Cerium(IV) Ammonium Nitrate
See Ceric Ammonium Nitrate

Cerium(IV) Ammonium Sulfate
See Ceric Ammonium Sulfate

Cesium Chloride
ULTRAPURE BIOREAGENT
For Density Gradient Centrifugation

4042-04	Poly	100 g	upr	103.25	
4042-02	Poly	1 kg	upr	684.75	

CsCl FW: 168.36

Assay (as CsCl) .....min. 99.9%
Absorbance of 50% w/v Aqueous Solution at
260 nm (1-cm path) .....max. 0.02
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected
Trace Impurities (in ppm):
Sulfate (SO_4) .....max. 5
Aluminum (Al) .....max. 10
Barium (Ba) .....max. 5
Calcium (Ca) .....max. 10
Chromium (Cr) .....max. 5
Copper (Cu) .....max. 3
Iron (Fe) .....max. 2
Lead (Pb) .....max. 5
Lithium (Li) .....max. 5
Magnesium (Mg) .....max. 3
Manganese (Mn) .....max. 5
Potassium (K) .....Actual Value Reported
Rubidium (Rb) .....max. 10
Sodium (Na) .....Actual Value Reported
Strontium (Sr) .....max. 5
CAS: 7647-17-8 MERCK INDEX: 14,2011

Cetane
See Hexadecane

Cetrimonium Bromide
See Hexadecyltrimethylammonium Bromide

Cetyl Dimethyl Ethyl Ammonium Bromide
BAKER ANALYZED Reagent

N126-01	Poly Drum	12 kg	bks	Inquire

$C_{20}H_{44}NBr$ FW: 378.48

Assay ($C_{20}H_{44}NBr$) 99.0-101.0%
Appearance .....Passes Test
Color (APHA), 5% in Methanol .....max. 25
CAS: 124-03-8 IMO: 6.1:2811 FLASH POINT: 93°C

Cetyltrimethylammonium Bromide
See Hexadecyltrimethylammonium Bromide

CHAPS
ULTRAPURE BIOREAGENT
(3-(3-cholamidopropyl)dimethylammonio-1-propanesulfonate)

4145-00	Poly	5 g	upr	83.10
4145-01	Poly	25 g	upr	401.20
4145-02	Poly	100 g	upr	1069.75
4145-03	Poly	1 kg	upr	10589.30

$C_{32}H_{58}N_2O_7S$ FW: 614.89

Assay (by TLC) .....min. 98%
pH of 10% Aqueous Solution at 25°C 5.0-7.0
Conductivity, µmhos .....max. 100
Insoluble Matter .....max. 0.2%
Solubility .....Passes Test
CAS: 75621-03-3

Charcoal, Activated, Powder
USP cGMP

1560-04	Glass	125 g	rnc	58.95
1560-01	Glass	500 g	rnc	165.00

C AW: 12.01

Meets USP Requirements
Microbial Limits:
Escherichia coli .....Passes Test
Salmonella .....Passes Test
Reaction .....Passes Test

CHES

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Loss on Drying .....max. 15.0%
Residue on Ignition .....max. 4.0%
Acid-Soluble Substances .....max. 3.5%
Chloride (Cl) .....max. 0.2%
Sulfate (SO_4) .....max. 0.2%
Sulfide (S) .....Passes Test
Cyanogen Compounds .....Passes Test
Heavy Metals (as Pb) .....max. 0.005%
Uncarbonized Constituents .....Passes Test
Adsorptive Power: Alkaloids .....Passes Test
Adsorptive Power: Dyes .....Passes Test
Typical Particle Size,% through 150 microns .....min. 97

CAS: 7440-44-0 MERCK INDEX: 14,1808

CHES
ULTRAPURE BIOREAGENT
(2-(cyclohexylamino)ethanesulfonic acid)

4146-01	Poly	100 g	upr	101.30	
4146-04	Poly	1 kg	upr	614.35	

$C_8H_{17}NO_3S$ FW: 207.29

Assay ($C_8H_{17}NO_3S$) (dried basis) .....min. 99.0%
Appearance .....Passes Test
Insoluble Matter .....max. 0.01%
Heavy Metals (as Pb) .....max. 5 ppm
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Water (by KF, volumetric) .....max. 1.0%
Product Information (not specifications):
pK_a at 20°C 9.30

CAS: 103-47-9

CHES, Sodium Salt
ULTRAPURE BIOREAGENT
(2-(cyclohexylamino)ethanesulfonic acid, sodium salt)

4147-00	Poly	25 g	upr	42.10	
4147-01	Poly	100 g	upr	92.65	

$C_8H_{16}NNaO_3S$ FW: 229.27

Assay ($C_8H_{16}NNaO_3S$) (dried basis) .....min. 99.0%
Appearance .....Passes Test
Insoluble Matter .....max. 0.005%
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Heavy Metals (as Pb) .....max. 5 ppm
Water (by KF, volumetric) .....max. 8.0%
Product Information (not specifications):
pK_a at 20°C 9.30

CAS: 3076-05-9

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chloramine-T, Trihydrate
BAKER

E494-06	Glass	250 g	non	59.20	

$1\text{-}CH_3C_6H_4\text{-}4\text{-}SO_2NClNa\cdot 3H_2O$ FW: 281.69

Active Chlorine .....min. 11%

CAS: 7080-50-4 MERCK INDEX: 14,2075 FLASH POINT: 192°C

Chloroacetic Acid
BAKER ANALYZED ACS Reagent
(monochloroacetic acid)

0216-01	Glass	500 g	non	61.55	

$ClCH_2COOH$ FW: 94.50

Meets ACS Specifications
Assay ($ClCH_2COOH$) .....min. 99.0%
Insoluble Matter .....max. 0.01%
Residue on Ignition .....max. 0.02%
Chloride (Cl) .....max. 0.01%
Sulfate (SO_4) .....max. 0.02%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.002%
Substances Darkened by H_2SO_4 .....Passes Test
Carbonyl Compounds:
Acetone .....max. 0.02%
Other Carbonyl Compounds .....max. 0.01%

CAS: 79-11-8 MERCK INDEX: 14,2112 IMO: 6.1:1751
FLASH POINT: 126°C

Chloroauric(III) Acid, Trihydrate
See Gold Chloride, Trihydrate

Chlorobenzene
BAKER ANALYZED ACS Reagent

9179-01	Glass	500 mL	cso	53.80	
		12 x 500 mL	cso	35.85	430.20
9179-03	Glass	4 L	cso	292.35	
		4 x 4 L	cso	194.90	779.60
9179-08	Steel Pail	20 L	sbk	864.75	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

C_6H_5Cl FW: 112.56

Meets ACS Specifications
Assay (C_6H_5Cl) (by GC) .....min. 99.5%
Acidity (as HCl) .....max. 0.015%
Color (APHA) .....max. 30
Residue after Evaporation .....max. 0.010%
Titrable Acid (meq/g) .....max. 0.004
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.102

CAS: 108-90-7 MERCK INDEX: 14,2121 IMO: 3:1134
FLASH POINT: 28°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chloroform
BAKER ANALYZED ACS Reagent
For Histological Use
(Contains about 1% Ethanol as a Preservative)

9180-01	Glass	500 mL	cso	59.20	
		12 x 500 mL	cso	39.45	473.40
9180-22	Al SAFETAINER	1 L	cso	137.25	
		6 x 1 L	cso	91.50	549.00
9180-03	Glass	4 L	cso	303.75	
		4 x 4 L	cso	202.50	810.00
9180-05	Al SAFETAINER	4 L	cso	335.70	
		4 x 4 L	cso	223.80	895.20
9180-33	Poly Coated	4 L	cso	312.75	
		4 x 4 L	cso	208.50	834.00
9180-08	Steel Pail	20 L	sbk	592.60	
9180-R	Steel Drum	650 lb	bul	Inquire	

$CHCl_3$ FW: 119.38

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CHCl_3$) (by GC, exclusive of preservative, corrected for water) ..... min. 99.8%
Acetone, Aldehydes (as $(CH_3)_2CO$) ..... Passes Test
Acid and Chloride ..... Passes Test
Color (APHA) ..... max. 10
Ethanol (CH_3CH_2OH)(by GC) 0.7-1.0%
Free Chlorine ..... Passes Test
Lead (Pb) ..... max. 0.05 ppm
Residue after Evaporation ..... max. 2 ppm
Substances Darkened by H_2SO_4 ..... Passes Test
Suitability for Use in Dithizone Tests ..... Passes Test
Water (by KF, coulometric) ..... max. 0.01%

Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.474

CAS: 67-66-3 MERCK INDEX: 14,2141 IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform, Hydrocarbon Stabilized
HPLC
For Use in Liquid Chromatography and Spectrophotometry
(Contains about 0.015% Amylene as a Preservative)

9174-03	Glass	4 L	chp	187.20	
		4 x 4 L	chp	124.80	499.20

$CHCl_3$ FW: 119.38

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-280 nm ..... max. 0.01
254 nm ..... max. 0.15
UV Cut-off, nm ..... max. 245
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission ..... max. 0.2
at Emission Maximum for Impurities ..... max. 1.0
Assay (by GC, corrected for water, exclusive of preservative) ..... min. 99.8%
Chloride (Cl) ..... max. 10 ppm
Preservative (amylene)(by wt) 0.01-0.02%
Residue after Evaporation ..... max. 2 ppm
Titrable Acid (µeq/g) ..... max. 0.5
Water (by KF, coulometric) ..... max. 0.01%

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg MERCK INDEX: 14,2141
IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
HPLC
For Use in Liquid Chromatography and Spectrophotometry
(Contains about 0.75% Ethanol as a Preservative)

9175-02	Glass	1 L	chp	109.45	
		6 x 1 L	chp	72.95	437.70
9175-03	Glass	4 L	chp	184.60	
		4 x 4 L	chp	123.05	492.20
9175-33	Poly Coated	4 L	chp	199.45	
		4 x 4 L	chp	132.95	531.80

$CHCl_3$ FW: 119.38

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-280 nm ..... max. 0.01
254 nm ..... max. 0.15
UV Cut-off, nm ..... max. 245
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission ..... max. 0.2
at Emission Maximum for Impurities ..... max. 1.0
Assay ($CHCl_3$) (by GC, exclusive of preservative, corrected for water) ..... min. 99.8%
Chloride (Cl) ..... max. 10 ppm
Preservative (C_2H_5OH)(by GC), (v/v) 0.5-1.0%
Residue after Evaporation ..... max. 2 ppm
Substances Darkened by H_2SO_4 ..... Passes Test
Titrable Acid (µeq/g) ..... max. 0.5
Water (by KF, coulometric) ..... max. 100 ppm

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg MERCK INDEX: 14,2141
IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(Contains about 0.75% Ethanol as a Preservative)

9257-02	Glass	1 L	chp	82.90	
		6 x 1 L	chp	55.25	331.50
9257-03	Glass	4 L	chp	207.55	
		4 x 4 L	chp	138.35	553.40

$CHCl_3$ FW: 119.38

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) ..... max. 10
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) ..... max. 10
Assay ($CHCl_3$) (by GC, exclusive of preservative, corrected for water) ..... min. 99.8%
Chloride (Cl) ..... max. 10 ppm
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 2 ppm
Substances Darkened by H_2SO_4 ..... Passes Test

Chloroform

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Titrable Acid (µeq/g) ..... max. 0.5
Water (by KF, coulometric) ..... max. 0.05%

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg MERCK INDEX: 14,2141
IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
PHOTREX Reagent
For Spectrophotometry
(Contains about 1% Ethanol as a Preservative)

9183-01	Glass	500 mL	cso	67.35	
		12 x 500 mL	cso	44.90	538.80
9183-03	Glass	4 L	cso	368.85	
		4 x 4 L	cso	245.90	983.60

$CHCl_3$ FW: 119.38

Meets ACS Specifications

Assay ($CHCl_3$) (by GC) ..... min. 99.8%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 5 ppm
Acetone, Aldehydes (as $(CH_3)_2CO$) ..... Passes Test
Acid and Chloride ..... Passes Test
Free Chlorine ..... Passes Test
Lead (Pb) ..... max. 0.05 ppm
Substances Darkened by H_2SO_4 ..... Passes Test
Suitability for Use in Dithizone Tests ..... Passes Test
Water (by KF, coulometric) ..... max. 0.03%
Ultraviolet Absorbance (1.00-cm cell vs. water):
400-290 nm ..... max. 0.01
270 nm ..... max. 0.05
260 nm ..... max. 0.15
255 nm ..... max. 0.25
245 nm ..... max. 1.00
Product Information (not specifications):
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:
2.5-3.3 3.4-8.0 8.4-12.2

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg MERCK INDEX: 14,2141
IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
Purified

cGMP

9182-01	Glass	500 mL	cso	62.85	
		12 x 500 mL	cso	41.90	502.80
9182-03	Glass	4 L	cso	319.95	
		4 x 4 L	cso	213.30	853.20
9182-33	Poly Coated	4 L	cso	473.05	
		4 x 4 L	cso	315.35	1261.40
9182-07	Steel Pail	20 L	bks	Inquire	

$CHCl_3$ FW: 119.38

Specific Gravity at 25°/25°C 1.476-1.480
Nonvolatile Residue (w/v) ..... max. 0.002%
Free Chlorine ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Readily Carbonizable Substances ..... Passes Test
Chlorinated Decomposition Products and Chloride ..... Passes Test
Acid and Phosgene ..... Passes Test
Aldehydes and Ketones (as HCHO) ..... Passes Test

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg MERCK INDEX: 14,2141
IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroplatinic Acid, 6-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
(hexachloroplatinic acid, hexahydrate)

2890-03	Ampoule	1 g	spr	227.10	
		4 x 1 g	spr	151.40	605.60

$H_2PtCl_6 \cdot 6H_2O$ FW: 517.92

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Solubility in Alcohol ..... Passes Test
Assay (as Pt) ..... min. 37.50%
Alkalies and Other Salts (as SO_4) ..... max. 0.05%
Suitability for Potassium Determination ..... Passes Test

CAS: 16941-12-1 MERCK INDEX: 14,7526 IMO: 8:2507

Chloroplatinic Acid
See also Platinum Chloride

α-Chlorotoluene
See Benzyl Chloride

N-Chloro-p-toluenesulfonamide, N-Sodium Derivative
See Chloramine-T, Trihydrate

Cholesterol
BAKER

F676-05	Poly	100 g	non	97.15	
F676-07	Poly	500 g	non	352.35	

$C_{27}H_{45}OH$ FW: 386.65

Melting Point ..... 146-150 °C.

CAS: 57-88-5 MERCK INDEX: 14,2201

Choline Chloride
BAKER ANALYZED Reagent

1582-01	Poly	500 g	non	48.20	

$HOCH_2CH_2N(CH_3)_3Cl$ FW: 139.63

Assay (anhydrous basis) 98.0-100.5%
Residue after Ignition ..... max. 0.1%
Ammonium Compounds ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%
Iron (Fe) ..... max. 0.002%

CAS: 67-48-1 MERCK INDEX: 14,2206

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chromatography Media and Columns
See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

Chrome Black T
See Eriochrome Black T

Chromic Acid
See Chromium Trioxide

Chromic Acid Anhydride
See Chromium Trioxide

Chromium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Chromium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Cr metal in 5% HCl)
Plasma Standard

5727-04		100 mL	spr	112.60	

Cr AW: 52.00

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Chromium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Cr metal in 5% HCl)
Plasma Standard

5711-04		100 mL	spr	72.00	

Cr AW: 52.00

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Chromium, 1000 µg/mL
BAKER INSTRA-ANALYZED Reagent
(Cr metal in 5% HCl)
Plasma Standard

6449-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Cr AW: 52.00

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chromium Chloride, X-Hydrate
BAKER ANALYZED Reagent
(chromium(III) chloride, hexahydrate)

1588-01	Poly	500 g	csa	210.75	
		4 x 500 g	csa	140.50	562.00
1588-05	Poly	2.5 kg	csa	847.60	
		4 x 2.5 kg	csa	565.05	2260.20
1588-R		225 lb	bul	Inquire	

$CrCl_3 \cdot 6H_2O$ FW: 266.45

Assay ($CrCl_3 \cdot 6H_2O$) (by iodometry) 99.0-105.0%
Insoluble Matter .....max. 0.01%
pH of 5% Solution at 25°C 2.0-3.0
Sulfate (SO_4) .....max. 0.01%
Iron (Fe) .....max. 0.01%

CAS: 10060-12-5 MERCK INDEX: 14,2222

Chromium(III) Chloride, Hexahydrate
See Chromium Chloride, 6-Hydrate

Chromium(III) Oxide
See Chromium Oxide

Chromium(VI) Oxide
See Chromium Trioxide

Chromium Oxide, Powder
BAKER
(chromium(III) oxide)
Formerly C.P.

1616-01	Poly	500 g	non	127.20	
1616-05	Poly	2.5 kg	csa	471.85	
		4 x 2.5 kg	csa	314.55	1258.20

Cr_2O_3 FW: 151.99

Ammonium (NH_4) .....max. 0.01%
Chloride (Cl) .....max. 0.02%
Iron (Fe) .....max. 0.05%
Sodium (Na) .....max. 0.1%
Sulfate (SO_4) .....max. 0.7%

CAS: 1308-38-9 MERCK INDEX: 14,2234

Chromium Sesquioxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chromium Sesquioxide
See Chromium Oxide

Chromium Trioxide, Crystal
BAKER ANALYZED ACS Reagent
(chromium(VI) oxide)

1638-04	Glass	125 g	non	89.65	
1638-01	Glass	500 g	csa	268.20	
		4 x 500 g	csa	178.80	715.20

CrO_3 FW: 99.99

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (CrO_3) (by iodometry) ..... min. 98.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.005%
Aluminum (Al) ..... max. 0.02%
Barium (Ba) ..... max. 0.01%
Iron (Fe) ..... max. 0.02%
Sodium (Na) ..... max. 0.2%
CAS: 1333-82-0 MERCK INDEX: 14,2235 IMO: 5.1:1463

Chromotropic Acid, Disodium Salt, Dihydrate
BAKER ANALYZED ACS Reagent

J166-03	Glass	25 g	non	228.20	

$(HO)_2C_{10}H_4(SO_3Na)_2 \cdot 2H_2O$ FW: 400.29

Meets ACS Specifications
Appearance (tan to brown) ..... Passes Test
Clarity of Solution ..... Passes Test
Sensitivity for Nitrate ..... Passes Test
Sensitivity for Formaldehyde ..... Passes Test
CAS: 5808-22-0 MERCK INDEX: 14,2241

CINNASORB Elemental Mercury Absorbent, Base and Activator
See under Spill Cleanup Products

Citric Acid, Anhydrous, Powder
USP

0122-01	Poly	500 g	rss	89.10	
		4 x 500 g	rss	59.40	237.60
0122-05	Poly	2 kg	rss	258.70	
		4 x 2 kg	rss	172.45	689.80
0122-07	Poly Pail	12 kg	bks	Inquire	
0122-R	Lined Fiber Dr	200 lb	bul	Inquire	

$HOC(COOH)(CH_2COOH)_2$ FW: 192.12

Meets USP Requirements
Meets Reagent Specifications for testing USP/NF monographs
Assay (anhydrous basis) 99.5-100.5%
Clarity of Solution ..... Passes Test
Color of Solution ..... Passes Test
Identification ..... Passes Test
Residue on Ignition ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 0.001%
Oxalic Acid ..... max. 0.036%
Sulfate (SO_4) ..... max. 0.015%
Readily Carbonizable Substances ..... Passes Test
Water (H_2O) ..... max. 1.0%
Preserve in Tight Containers
Must be subjected to further processing during the preparation of injectable dosage forms
CAS: 77-92-9 MERCK INDEX: 14,2326

Citric Acid, Anhydrous, Powder, USP
cGMP
Multi-Compendial

0127-05	Poly	2.5 kg	rss	355.80	
		4 x 2.5 kg	rss	237.20	948.80
0127-07	Poly Pail	12 kg	bks	Inquire	

$HOC(COOH)(CH_2COOH)_2$ FW: 192.12

Meets USP Requirements
Assay ($HOC(COOH)(CH_2COOH)_2$) (anhydrous basis) 99.5-100.5%
Clarity of Solution ..... Passes Test
Color of Solution ..... Passes Test
Identification ..... Passes Test
Residue on Ignition ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 0.001%
Oxalic Acid ..... max. 0.036%
Sulfate (SO_4) ..... max. 0.015%
Readily Carbonizable Substances ..... Passes Test
Water (H_2O) ..... max. 1.0%
Meets BP/Ph.Eur. Chemical Specifications
Assay ($HOC(COOH)(CH_2COOH)_2$) (anhydrous basis) 99.5-100.5%
Identification B ..... Passes Test
Identification E ..... Passes Test
Appearance of Solution ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Oxalic Acid ..... max. 360 ppm
Sulfate (SO_4) ..... max. 150 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Water (H_2O) ..... max. 1.0%
Ash (sulfated) ..... max. 0.1%
Endotoxin Concentration, <0.5 IU/mg ..... Passes Test
Meets JP Chemical Specifications
Assay ($HOC(COOH)(CH_2COOH)_2$) (anhydrous basis) 99.5-100.5%
Clarity and Color of Solution ..... Passes Test
Identification ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Oxalic Acid ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Readily Carbonizable Substances ..... Passes Test
Residue on Ignition ..... max. 0.1%
Water (H_2O) ..... max. 1.0%
Preserve in Tight Containers
Must be subjected to further processing during the preparation of injectable dosage forms
CAS: 77-92-9 MERCK INDEX: 14,2326

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Citric Acid, Monohydrate, Granular
BAKER ANALYZED ACS Reagent

0110-01	Poly	500 g	csa	87.45	
		4 x 500 g	csa	58.30	233.20
0110-05	Poly	2.5 kg	csa	287.80	
		4 x 2.5 kg	csa	191.85	767.40
0110-07	Poly Pail	12 kg	bks	Inquire	
0110-R	Poly Drum	250 lb	bul	Inquire	

$HOC(COOH)(CH_2COOH)_2{\cdot}H_2O$ FW: 210.14

Exceeds ACS Specifications

Assay ($HOC(COOH)(CH_2COOH)_2{\cdot}H_2O$) (by acidimetry) 99.0-102.0%
Insoluble Matter .....max. 0.005%
Residue on Ignition .....max. 0.02%
Chloride (Cl) .....max. 0.001%
Oxalate (C_2O_4) .....Passes Test
Phosphate (PO_4) .....max. 0.001%
Sulfur Compounds (as SO_4) .....max. 0.002%
Substances Carbonizable by Hot H_2SO_4 .....Passes Test
Trace Impurities (in ppm):
Iron (Fe) .....max. 2
Lead (Pb) .....max. 2

CAS: 5949-29-1 MERCK INDEX: 14,2326

Citric Acid, Monohydrate, Powder
BAKER ANALYZED ACS Reagent

0118-01	Poly	500 g	csa	85.65	
		4 x 500 g	csa	57.10	228.40
0118-05	Poly	2.5 kg	csa	285.85	
		4 x 2.5 kg	csa	190.55	762.20

$HOC(COOH)(CH_2COOH)_2{\cdot}H_2O$ FW: 210.14

Exceeds ACS Specifications

Assay ($HOC(COOH)(CH_2COOH)_2{\cdot}H_2O$) (by acidimetry) 99.0-102.0%
Insoluble Matter .....max. 0.005%
Residue on Ignition .....max. 0.02%
Chloride (Cl) .....max. 0.001%
Oxalate (C_2O_4) .....Passes Test
Phosphate (PO_4) .....max. 0.001%
Sulfur Compounds (as SO_4) .....max. 0.002%
Substances Carbonizable by Hot H_2SO_4 .....Passes Test
Trace Impurities (in ppm):
Iron (Fe) .....max. 2
Lead (Pb) .....max. 2

CAS: 5949-29-1 MERCK INDEX: 14,2326

Citric Acid, Monohydrate, Crystalline Powder
USP, FCC

cGMP

0120-05	Poly	2.5 kg	rnc	293.80	

$HOC(COOH)(CH_2COOH)_2{\cdot}H_2O$ FW: 210.14

Meets USP & FCC Requirements

Assay ($C_6H_8O_7$) (anhydrous basis) 99.5-100.5%
Clarity of Solution .....Passes Test
Color of Solution .....Passes Test
Identification (USP) .....Passes Test
Identification (FCC) .....Passes Test
Water (H_2O) (USP) 7.5-9.0%
Water (H_2O) (FCC) .....max. 8.8%
Residue on Ignition .....max. 0.05%
Oxalate (C_2O_4) (FCC) .....Passes Test
Oxalic Acid (USP) .....max. 0.036%
Sulfate (SO_4) .....max. 0.015%
Heavy Metals (as Pb) .....max. 0.001%
Readily Carbonizable Substances .....Passes Test
Lead (Pb) .....max 0.5 mg/kg
Preserve in Tight Containers
Must be subjected to further processing during the preparation of injectable dosage forms

CAS: 5949-29-1 MERCK INDEX: 14,2326

Citric Acid, Monohydrate, Granular, USP
Multi-Compendial

cGMP

0116-07	Poly Pail	12 kg	bks	Inquire	

$HOC(COOH)(CH_2COOH)_2{\cdot}H_2O$ FW: 210.14

Meets USP Requirements

Assay ($C_6H_8O_7$) (anhydrous basis) 99.5-100.5%
Clarity of Solution .....Passes Test
Color of Solution .....Passes Test
Heavy Metals (as Pb) .....max. 0.001%
Identification .....Passes Test
Oxalic Acid .....max. 0.036%
Readily Carbonizable Substances .....Passes Test
Residue on Ignition .....max. 0.1%
Sulfate (SO_4) .....max. 0.015%
Water (H_2O) 7.5-9.0%

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_6H_8O_7$) (anhydrous basis) 99.5-100.5%
Appearance of Solution .....Passes Test
Ash (sulfated) .....max. 0.1%
Endotoxin Concentration, IU/mg .....max. 0.5
Heavy Metals (as Pb) .....max. 10 ppm
Identification B .....Passes Test
Identification E .....Passes Test
Oxalic Acid .....max. 360 ppm
Readily Carbonizable Substances .....Passes Test
Sulfate (SO_4) .....max. 150 ppm
Water (H_2O) 7.5-9.0%

Meets JP Chemical Specifications

Assay ($HOC(COOH)(CH_2COOH)_2{\cdot}H_2O$) 99.5-100.5%
Clarity and Color of Solution .....Passes Test
Heavy Metals (as Pb) .....max. 10 ppm
Identification .....Passes Test
Oxalic Acid .....Passes Test
Water (H_2O) 7.5-9.0%
Readily Carbonizable Substances .....Passes Test
Residue on Ignition .....max. 0.1%
Sulfate (SO_4) .....Passes Test
Iron (Fe) .....max. 3 ppm
Lead (Pb) .....max. 2 ppm
Preserve in Tight Containers
Must be subjected to further processing during the preparation of injectable dosage forms

CAS: 5949-29-1 MERCK INDEX: 14,2326

Citric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Citric Acid, Monohydrate, Granular
USP, FCC cGMP

0119-01	Glass	500 g	rss	97.45	
		4 x 500 g	rss	64.95	259.80
0119-05	Poly	2.5 kg	rss	307.00	
		4 x 2.5 kg	rss	204.65	818.60
0119-07	Poly Pail	12 kg	bks	Inquire	
0119-09	Poly Drum	110 lb	bul	Inquire	

$HOC(COOH)(CH_2COOH)_2 \cdot H_2O$ FW: 210.14

Meets USP & FCC Requirements

Assay (as $C_6H_8O_7$) (calculated on anhydrous basis) 99.5-100.5%
Appearance (White crystals or granules) .....Passes Test
Clarity of Solution .....Passes Test
Color of Solution .....Passes Test
Identification (USP) .....Passes Test
Identification (FCC) .....Passes Test
Water (H_2O) (USP) 7.5-9.0%
Water (H_2O) (FCC) .....max. 8.8%
Residue on Ignition .....max. 0.05%
Oxalate (C_2O_4) (FCC) .....Passes Test
Oxalic Acid (USP) .....max. 0.036%
Sulfate (SO_4) .....max. 0.015%
Heavy Metals (as Pb) .....max. 0.001%
Readily Carbonizable Substances .....Passes Test
Lead (Pb) .....max 0.5 mg/kg
Preserve in Tight Containers
Must be subjected to further processing during the preparation of injectable dosage forms

CAS: 5949-29-1 MERCK INDEX: 14,2326

Citric Acid, Monohydrate, Granular, USP
Multi-Compendial cGMP

0115-01	Glass	500 g	rss	117.00	
		4 x 500 g	rss	78.00	312.00
0115-05	Poly	2.5 kg	rss	367.45	
		4 x 2.5 kg	rss	244.95	979.80
0115-07	Poly Pail	12 kg	bks	Inquire	
0115-09	Poly Drum	50 kg	bul	Inquire	

$HOC(COOH)(CH_2COOH)_2 \cdot H_2O$ FW: 210.14

Meets USP Requirements

Clarity of Solution .....Passes Test
Color of Solution .....Passes Test
Identification .....Passes Test
Water (H_2O) 7.5-9.0%
Readily Carbonizable Substances .....Passes Test
Residue on Ignition .....max. 0.1%
Sulfate (SO_4) .....max. 0.015%
Heavy Metals (as Pb) .....max. 0.001%
Oxalic Acid .....max. 0.036%
Assay ($C_6H_8O_7$) (anhydrous basis) 99.5-100.5%

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_6H_8O_7$) (anhydrous basis) 99.5-100.5%
Identification B .....Passes Test
Identification E .....Passes Test
Appearance of Solution .....Passes Test
Readily Carbonizable Substances .....Passes Test
Oxalic Acid .....max. 360 ppm
Sulfate (SO_4) .....max. 150 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Water (H_2O) 7.5-9.0%
Ash (sulfated) .....max. 0.1%
Endotoxin Concentration, IU/mg .....max. 0.5

Meets JP Chemical Specifications

Assay ($C_6H_8O_7$) (anhydrous basis) 99.5-100.5%
Identification .....Passes Test
Sulfate (SO_4) .....Passes Test
Oxalic Acid .....Passes Test
Clarity and Color of Solution .....Passes Test
Heavy Metals (as Pb) .....max. 10 ppm
Water (H_2O) 7.5-9.0%
Readily Carbonizable Substances .....Passes Test
Residue on Ignition .....max. 0.1%
Preserve in Tight Containers
Must be subjected to further processing during the preparation of injectable dosage forms

CAS: 5949-29-1 MERCK INDEX: 14,2326

Citric Acid, 50%, Solution
Biotech Reagent cGMP

0341-07	Hedpak	19 L	bks	Inquire
0341-09	Poly Drum	200 L	bul	Inquire
0341-26	Poly Tote	1170 L	bul	Inquire

$HOC(COOH)(CH_2COOH)_2$ FW: 192.12

Made from Purified Water USP and Citric Acid, anhydrous USP/ACS
Assay ($HOC(COOH)(CH_2COOH)_2$) 48-52%
Identification .....Passes Test
Chloride (Cl) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 3 ppm
Phosphate (PO_4) .....max. 0.001%
Filtered through 0.2 micron filter

CLP (Contract Laboratory Program) Standards
See Analytical Standards Section, p. 94-98

Cobalt, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Cobalt, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Co metal in 5% HNO_3)
Plasma Standard

5728-04	100 mL	spr	112.60	

Co AW: 58.93

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Cobalt, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Co metal in 5% HNO_3)
Plasma Standard

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5712-04		100 mL	spr	72.00	

Co AW: 58.93

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Cobalt, 1000 µg/mL

BAKER INSTRA-ANALYZED Reagent
(Co metal in 5% HNO_3)
Plasma Standard

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
6450-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60
6450-01	Poly	500 mL	spr	68.65	
		4 x 500 mL	spr	57.20	228.80

Co AW: 58.93

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Cobalt Acetate, 4-Hydrate, Crystal

BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
1658-04	Poly	125 g	non	98.75	
1658-01	Poly	500 g	csa	273.15	
		4 x 500 g	csa	182.10	728.40

$(CH_3COO)_2Co{\cdot}4H_2O$ FW: 249.08

Exceeds ACS Specifications

Assay ($(CH_3COO)_2Co{\cdot}4H_2O$) (by EDTA titrn)	99.0-101.0%
Insoluble Matter	max. 0.01%
pH of 5% Solution at 25°C	6.0-7.5
Chloride (Cl)	max. 0.001%
Nitrate (NO_3)	max. 0.01%
Sulfate (SO_4)	max. 0.005%
Calcium (Ca)	max. 0.005%
Copper (Cu)	max. 0.002%
Iron (Fe)	max. 0.001%
Lead (Pb)	max. 0.001%
Magnesium (Mg)	max. 0.005%
Nickel (Ni)	max. 0.1%
Potassium (K)	max. 0.01%
Sodium (Na)	max. 0.05%
Zinc (Zn)	max. 0.01%

CAS: 6147-53-1 MERCK INDEX: 14,2433

Cobalt Chloride, 6-Hydrate, Crystal

BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
1670-04	Poly	125 g	non	116.45	
1670-01	Poly	500 g	non	245.45	
1670-05	Poly	2.5 kg	non	711.20	
1670-R	Lined Fiber Dr	250 lb	bul	Inquire	

$CoCl_2{\cdot}6H_2O$ FW: 237.93

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CoCl_2{\cdot}6H_2O$) (by EDTA titrn)	98.0-102.0%
Insoluble Matter	max. 0.01%
Nitrate (NO_3)	max. 0.01%
Sulfate (SO_4)	max. 0.01%
Calcium (Ca)	max. 0.005%
Copper (Cu)	max. 0.002%
Iron (Fe)	max. 0.005%
Magnesium (Mg)	max. 0.005%
Nickel (Ni)	max. 0.1%
Potassium (K)	max. 0.01%
Sodium (Na)	max. 0.05%
Zinc (Zn)	max. 0.03%

CAS: 7791-13-1 MERCK INDEX: 14,2437 IMO: 6.1:3288

Cobalt Nitrate, 6-Hydrate

BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
1680-01	Poly	500 g	csa	313.20	
		4 x 500 g	csa	208.80	835.20
1680-05	Poly	2.5 kg	non	586.05	

$Co(NO_3)_2{\cdot}6H_2O$ FW: 291.03

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Co(NO_3)_2{\cdot}6H_2O$) (by EDTA titrn)	99.0-102.0%
Insoluble Matter	max. 0.01%
pH of 5% Solution at 25°C	3.0-6.0
Chloride (Cl)	max. 0.002%
Sulfate (SO_4)	max. 0.005%
Calcium (Ca)	max. 0.005%
Copper (Cu)	max. 0.002%
Iron (Fe)	max. 0.001%
Lead (Pb)	max. 0.002%
Magnesium (Mg)	max. 0.005%
Nickel (Ni)	max. 0.15%
Potassium (K)	max. 0.01%
Sodium (Na)	max. 0.05%
Zinc (Zn)	max. 0.01%

CAS: 10026-22-9 MERCK INDEX: 14,2444 IMO: 5.1:1477

Cobalt Oxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cobalt Oxide, Powder
BAKER ANALYZED Reagent

1688-01	Glass	500 g	non	620.50	
1688-09	Lined Fiber Dr	100 lb	bul	Inquire	
1688-R	Lined Fiber Dr	400 lb	bul	Inquire	

Co_3O_4 FW: 240.80

Assay (Co) (by EDTA titrn) 70.0-74.0%
Insoluble in HCl ..... max. 0.05%
Chloride (Cl) ..... max. 0.02%
Nitrogen Compounds (as N) ..... max. 0.02%
Sulfur Compounds (as SO_4) ..... max. 0.1%
Iron (Fe)(by AAS) ..... max. 0.1%
Nickel (Ni)(by AAS) ..... max. 0.2%
Mesh:
Thru U.S. No. 30 Sieve ..... min. 100%
Surface Area (m^2/g) ..... Actual Value Reported

CAS: 1308-06-1 MERCK INDEX: 14,2446

Cobalt Sulfate, 7-Hydrate, Crystal
BAKER ANALYZED Reagent

1696-04	Poly	125 g	non	123.05	
1696-01	Poly	500 g	non	329.40	
1696-05	Poly	2.5 kg	non	1466.25	
1696-07	Poly Pail	12 kg	bks	Inquire	
1696-09	Lined Fiber Dr	100 lb	bul	Inquire	

$CoSO_4 \cdot 7H_2O$ FW: 281.10

Assay ($CoSO_4 \cdot 7H_2O$) (by EDTA titrn) 97.0-103.0%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 3.0-7.0
Chloride (Cl) ..... max. 0.001%
Nitrate (NO_3) ..... max. 0.005%
Copper (Cu) ..... max. 0.002%
Lead (Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.005%
Nickel (Ni) ..... max. 500 ppm
Zinc (Zn) ..... max. 0.02%

CAS: 10026-24-1 MERCK INDEX: 14,2448

Collodion
USP cGMP

9202-04	Glass	100 mL	rnc	44.70	
9202-01	Glass	500 mL	rss	86.95	
		12 x 500 mL	rss	57.95	695.40
9202-03	Glass	4 L	rss	386.20	
		4 x 4 L	rss	257.45	1029.80

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Gravity at 25°/25°C 0.765-0.775
Acidity ..... Passes Test
Assay ..... min. 5.0%
Alcohol (C_2H_5OH) 22.0-26.0%
Absence of Camphor ..... Passes Test

DENSITY: 1 L = 0.77 kg MERCK INDEX: 14,2484 IMO: 3:2059

Solvent Spill Cleanup Products available. See pp. 378.

Collodion, Flexible
USP cGMP

9204-04	Glass	100 mL	rnc	53.10	
9204-01	Glass	500 mL	rss	91.30	
		12 x 500 mL	rss	60.85	730.20

Meets USP Requirements

Alcohol Content 21.0-25.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Gravity at 25°/25°C 0.770-0.790
Presence of Camphor ..... Passes Test

DENSITY: 1 L = 0.78 kg MERCK INDEX: 14,2484 IMO: 3:2059

Solvent Spill Cleanup Products available. See pp. 378.

Congo Red, T.S.
BAKER ANALYZED Reagent

5914-01	Glass	500 mL	sol	42.65	

Sensitivity ..... Passes Test
Product Information (not specifications):
Appearance (Clear, red solution)

IMO: 3:1170 FLASH POINT: 49°C

Contract Laboratory Program (CLP) Standards
See Analytical Standards Section, p. 94-98

COOMASSIE Brilliant Blue G-250
BAKER
(C.I. 42655)

F789-03	Glass	25 g	bio	102.60	

$C_{47}H_{50}N_3NaO_7S_2$ FW: 854.02

Identification (by IR) ..... Passes Test

CAS: 6104-58-1 MERCK INDEX: 14,628

COOMASSIE Brilliant Blue R-250
BAKER
(C.I. 42660)

F792-01	Glass	5 g	bio	30.55	

CAS: 6104-59-2 MERCK INDEX: 14,628

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Copper, Granular (20-30 Mesh)
BAKER ANALYZED Reagent
Formerly C.P.

1720-01	Poly	500 g	non	176.75	
1720-05	Poly	2.5 kg	csa	665.55	
		4 x 2.5 kg	csa	443.70	1774.80
1720-07	Poly Pail	12 kg	bks	Inquire	

Cu AW: 63.55

Assay (Cu) .....min. 99.5%
Insoluble in HNO_3 .....max. 0.05%
Antimony and Tin (as Sn) .....max. 0.05%
Arsenic (As) .....max. 0.001%
Iron (Fe) .....max. 0.01%
Lead (Pb) .....max. 0.005%
Mesh:
Thru U.S. No. 20 Sieve .....min. 99%
on U.S. No. 30 Sieve .....min. 95%

CAS: 7440-50-8 MERCK INDEX: 14,2519

Copper, Powder
Purified

1728-01	Poly	500 g	csa	130.20	
		4 x 500 g	csa	86.80	347.20

Cu AW: 63.55

Assay (Cu) .....min. 99.0%
Insoluble in HNO_3 .....max. 0.05%

CAS: 7440-50-8 MERCK INDEX: 14,2519

Copper, Wire (0.020")
BAKER ANALYZED ACS Reagent

1736-01		454 g	csa	168.25	
		4 x 454 g	csa	112.15	448.60

Cu AW: 63.55

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (Cu) .....min. 99.90%
Insoluble in Dilute HNO_3 .....max. 0.02%
Antimony and Tin (as Sn) .....max. 0.005%
Iron (Fe) .....max. 0.005%
Lead (Pb) .....max. 0.005%
Manganese (Mn) .....max. 0.001%
Phosphorus (P) .....max. 0.001%
Silver (Ag) .....max. 0.002%
Trace Impurities (in ppm):
Arsenic (As) .....max. 5

CAS: 7440-50-8 MERCK INDEX: 14,2519

Copper, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Copper, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Cu metal in 5% HNO_3)
Plasma Standard

5729-04	100 mL	spr	112.60	
5729-01	500 mL	spr	218.15	

Cu AW: 63.55

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Copper, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Cu metal in 5% HNO_3)
Plasma Standard

5713-04	100 mL	spr	72.00	

Cu AW: 63.55

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Copper, 1000 µg/mL
BAKER INSTRA-ANALYZED Reagent
(Cu metal in 5% HNO_3)

6451-04	Poly	150 mL	spr	52.20	
		4 x 150 mL	spr	43.50	174.00

Cu AW: 63.55

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Copper(I) and Copper(II) Compounds
See Cuprous and Cupric listings

Copper(II) Sulfate, Pentahydrate
See under Cupric Sulfate, 5-Hydrate

Corallin, Free Acid (Spirit Soluble)
See Rosolic Acid

Cottonseed Oil
BAKER

F800-07	Glass S/S	500 g	org	65.00	

Identification .....Passes Test
Iodine Value 109-120
Appearance .....Passes Test

CAS: 8001-29-4 DENSITY: 1 L = 0.9 kg FLASH POINT: 228°C

Creatine

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Creatine, Monohydrate
BAKER

F812-03	Glass	25 g	bio	64.25	

$NH_2C(:NH)N(CH_3)CH_2COOH \cdot H_2O$ FW: 149.15

Identification (by IR) ..... Passes Test

CAS: 6020-87-7 MERCK INDEX: 14,2568

m-Cresol
Practical

F842-07	Glass	500 mL	non	76.55	
F842-09	Glass	4 L	non	156.75	

$CH_3C_6H_4OH$ FW: 108.14

Identification (by IR) ..... Passes Test

CAS: 108-39-4 DENSITY: 1 L = 1.034 kg MERCK INDEX: 14,2579
IMO: 6.1:2076 FLASH POINT: 86°C

Solvent Spill Cleanup Products available. See pp. 378.

m-Cresol Purple
BAKER ANALYZED Reagent
(m-cresolsulfonphthalein)

F860-00	Glass	1 g	bio	98.05	

$C_{21}H_{18}O_5S$ FW: 382.43

Insoluble Matter ..... Passes Test
Visual Transition Intervals:
pH ..... (Red) 1.2
pH ..... (Yellow) 2.8
pH ..... (Yellow) 7.4
pH ..... (Purple) 9.0

CAS: 2303-01-7

m-Cresol Purple, T.S.
BAKER ANALYZED Reagent

5915-04	Glass	100 mL	sol	17.25	
5915-01	Glass	500 mL	sol	35.50	
5915-02	Glass	1 L	sol	71.15	

Visual Transition Interval:
pH ..... (Red) 1.2
pH ..... (Yellow) 2.8
pH ..... (Yellow) 7.4
pH ..... (Purple) 9.0
Product Information (not specifications):
Appearance (Clear, purple solution)

Cresol Red, T.S.
BAKER ANALYZED Reagent

5916-04	Glass	100 mL	sol	15.80	
5916-02	Glass	1 L	sol	37.65	

Visual Transition Interval:
pH ..... (Yellow) 7.2
pH ..... (Red) 8.8
Product Information (not specifications):
Appearance (Clear, deep red solution)

Crocein Scarlet
See Biebrich Scarlet, Water Soluble

Crystal Violet
BAKER ANALYZED Reagent
(C.I. 42555)

F906-03	Glass	25 g	bio	52.75	

$[(CH_3)_2NC_6H_4]_2C{:}C_6H_4{:}N(CH_3)_2Cl$ FW: 407.99

Assay ($C_{25}H_{30}ClN_3$) (anhydrous basis) ..... min. 90.0%
Loss on Drying ..... max. 7.5%
Insoluble Matter ..... Passes Test
Absorbance Characteristics ..... Passes Test
Sensitivity as Indicator ..... Passes Test

CAS: 548-62-9 MERCK INDEX: 14,4395

Crystal Violet
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in: Histology; Cytology; Bacteriology (Staining) (C.I. 42555)

F907-03	Glass	25 g	non	61.75	

$[(CH_3)_2NC_6H_4]_2C{:}C_6H_4{:}N(CH_3)_2Cl$ FW: 407.99

Certified by the Biological Stain Commission
Biological Test ..... Passes Test

CAS: 548-62-9 MERCK INDEX: 14,4395

Crystal Violet, 0.1% Aqueous Solution
BAKER

0399-02	Glass	100 mL	sol	69.05	
		12 x 100 mL	sol	57.55	690.60

Crystal Violet, g/L 0.9-1.1
Triton X-100, mL/L 9-11
Citric Acid, g/L 17.3-21.1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Crystal Violet, T.S.
BAKER ANALYZED Reagent

5917-04	Glass	100 mL	sol	23.75	

Sensitivity ..... Passes Test

Product Information (not specifications):

Appearance (Clear, purple-blue solution)

DENSITY: 1 L = 1.05 kg IMO: 8:2789 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

CTAB
See under Hexadecyltrimethylammonium Bromide

Cupferron, Crystal
BAKER ANALYZED ACS Reagent
(N-nitroso-N-phenylhydroxylamine, ammonium derivative)

1760-04	Glass	125 g	non	245.85	

$C_6H_5N(NO)ONH_4$ FW: 155.16

Meets ACS Specifications

Appearance ..... Passes Test
Solubility in H_2O ..... Passes Test
Residue after Ignition ..... max. 0.05%
Suitability for Precipitation of Iron, etc ..... Passes Test

CAS: 135-20-6 MERCK INDEX: 14,2622

Cupric Acetate, Monohydrate, Crystal
BAKER ANALYZED ACS Reagent
(copper(II) acetate, monohydrate)

1766-01	Poly	500 g	csa	157.45	
		4 x 500 g	csa	104.95	419.80
1766-05	Poly	2.5 kg	csa	503.20	
		4 x 2.5 kg	csa	335.45	1341.80
1766-09		100 lb	bul	Inquire	

$(CH_3COO)_2Cu{\cdot}H_2O$ FW: 199.65

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3COO)_2Cu{\cdot}H_2O$) 98.0-102.0%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 5.0-6.0
Chloride (Cl) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 0.002%
Nickel (Ni) ..... max. 0.01%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%

CAS: 6046-93-1 MERCK INDEX: 14,2624 IMO: 9:3077

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cupric Bromide, Crystal
BAKER ANALYZED Reagent
(copper(II) bromide)

1780-01	Poly	500 g	non	288.70	

$CuBr_2$ FW: 223.35

Assay ($CuBr_2$) ..... min. 98%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 2.5-4.5
Chloride (Cl) ..... max. 0.3%
Sulfate (SO_4) ..... max. 0.01%
Iron (Fe) ..... max. 0.005%

CAS: 7789-45-9 MERCK INDEX: 14,2629

Cupric Carbonate, Powder
BAKER ANALYZED Reagent

1786-01	Poly	500 g	csa	233.95	
		4 x 500 g	csa	155.95	623.80
1786-R	Lined Fiber Dr	200 lb	bul	Inquire	

$CuCO_3Cu(OH)_2$ FW: 221.12

Assay (as Cu) ..... min. 55.0%
Insoluble in HCl ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Nitrate (NO_3) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.1%
Calcium (Ca) ..... max. 0.02%
Iron (Fe) ..... max. 0.01%
Lead (Pb) ..... max. 0.002%
Potassium (K) ..... max. 0.05%
Silicon (Si) ..... max. 0.005%
Sodium (Na) ..... max. 0.4%

Trace Impurities (in ppm):

Cadmium (Cd) ..... max. 5
Average Particle Diameter, µm (APD) ..... max. 15

CAS: 12069-69-1 MERCK INDEX: 14,2631

Cupric Chloride, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent
(copper(II) chloride, dihydrate)

1792-04	Poly	125 g	csa	105.55	
		4 x 125 g	csa	70.35	281.40
1792-01	Poly	500 g	csa	206.25	
		4 x 500 g	csa	137.50	550.00
1792-05	Poly	2.5 kg	csa	752.85	
		4 x 2.5 kg	csa	501.90	2007.60
1792-R		350 lb	bul	Inquire	

$CuCl_2{\cdot}2H_2O$ FW: 170.48

Meets ACS Specifications

Assay ($CuCl_2{\cdot}2H_2O$) 99.0-101.0%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 2.0-4.0

Cupric Nitrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nitrate (NO_3) ..... max. 0.015%
Sulfate (SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 0.005%
Nickel (Ni) ..... max. 0.01%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%

CAS: 10125-13-0 MERCK INDEX: 14,2633 IMO: 8:2802

Cupric Nitrate, 2.5-Hydrate

BAKER ANALYZED ACS Reagent
(copper(II) nitrate, 2.5 hydrate)

1800-01	Poly	500 g	csa	203.25	
		4 x 500 g	csa	135.50	542.00
1800-07	Lined Fiber Dr	12 kg	bks	Inquire	

$Cu(NO_3)_2 \cdot 2.5H_2O$ FW: 232.59

Exceeds ACS Specifications

Assay ($Cu(NO_3)_2 \cdot 2.5H_2O$) (by EDTA titrn) 98.0-102.0%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 3.0-4.0
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 0.005%
Lead (Pb) ..... max. 0.001%
Nickel (Ni) ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.01%

CAS: 19004-19-4 MERCK INDEX: 14,2643 IMO: 5.1:1477

Cupric Oxide, Powder

BAKER ANALYZED ACS Reagent
(copper(II) oxide)

1814-01	Poly	500 g	non	359.95	
1814-05	Poly	2.5 kg	csa	1748.10	
		4 x 2.5 kg	csa	1165.40	4661.60
1814-R	Lined Fiber Dr	100 lb	bul	Inquire	

CuO FW: 79.55

Exceeds ACS Specifications

Assay (CuO) (by EDTA titrn) ..... min. 99.0%
Insoluble in Dilute HCl ..... max. 0.02%
Carbon Compounds (as C) ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Lead (Pb) ..... max. 1 ppm
Nitrogen Compounds (as N) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.02%
Free Alkali ..... Passes Test
Calcium (Ca) ..... max. 0.01%
Iron (Fe) ..... max. 0.05%
Potassium (K) ..... max. 0.02%
Silicon (Si) ..... Actual Value Reported
Sodium (Na) ..... max. 0.05%
Average Particle Diameter, µm (APD) ..... Actual Value Reported
Specific Surface Area, m^2/g ..... Actual Value Reported
Bulk Density (g/cc) ..... Actual Value Reported
Mesh (Wet Screen Analysis):
On U.S. No. 325 Sieve ..... Actual Value Reported

CAS: 1317-38-0 MERCK INDEX: 14,2646

Cupric Oxide, Wire

BAKER ANALYZED ACS Reagent
(copper(II) oxide)

1820-01	Poly	500 g	csa	467.40	
		4 x 500 g	csa	311.60	1246.40
1820-R	Lined Fiber Dr	100 lb	bul	Inquire	

CuO FW: 79.55

Exceeds ACS Specifications

Carbon Compounds (as C) ..... max. 0.002%
Nitrogen Compounds (as N) ..... max. 0.001%
Sulfur Compounds (as SO_4) ..... max. 0.004%

CAS: 1317-38-0 MERCK INDEX: 14,2646

Cupric Subcarbonate

See Cupric Carbonate

Cupric Sulfate, Anhydrous, Powder

BAKER ANALYZED Reagent
(copper(II) sulfate)

1850-01	Poly	500 g	csa	297.85	
		4 x 500 g	csa	198.55	794.20
1850-05	Poly	2.5 kg	csa	1177.95	
		4 x 2.5 kg	csa	785.30	3141.20
1850-09	Lined Fiber Dr	100 lb	bul	Inquire	

$CuSO_4$ FW: 159.60

Assay ($CuSO_4$) (by iodometry) ..... min. 98.5%
Calcium (Ca) ..... max. 0.005%
Insoluble Matter ..... max. 0.005%
Nickel (Ni) ..... max. 0.005%
Nitrogen Compounds (as N) ..... max. 0.002%
pH of 5% Solution at 25°C 3.0-5.0
Potassium (K) ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Iron (Fe) ..... max. 0.003%
Sodium (Na) ..... max. 0.02%

CAS: 7758-98-7 MERCK INDEX: 14,2653 IMO: 6.1:3288

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cupric Sulfate, 5-Hydrate, Large Crystal

BAKER ANALYZED ACS Reagent
(copper(II) sulfate, pentahydrate)

1841-01	Poly	500 g	csa	98.25	
		4 x 500 g	csa	65.50	262.00
1841-05	Poly	2.5 kg	csa	352.20	
		4 x 2.5 kg	csa	234.80	939.20

$CuSO_4 \cdot 5H_2O$ FW: 249.68

Exceeds ACS Specifications

Assay ($CuSO_4 \cdot 5H_2O$) (by iodometry) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 3.0-5.0
Chloride (Cl) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 0.003%
Nickel (Ni) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%

CAS: 7758-99-8 MERCK INDEX: 14,2653 IMO: 6.1:3288

Cupric Sulfate, 5-Hydrate, Fine Crystal

BAKER ANALYZED ACS Reagent
(copper(II) sulfate, pentahydrate)

1843-01	Poly	500 g	csa	113.40	
		4 x 500 g	csa	75.60	302.40
1843-19	Poly	1 kg	csa	199.15	
		4 x 1 kg	csa	132.75	531.00
1843-05	Poly	2.5 kg	csa	371.25	
		4 x 2.5 kg	csa	247.50	990.00
1843-07	Poly Pail	12 kg	bks	Inquire	

$CuSO_4 \cdot 5H_2O$ FW: 249.68

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CuSO_4 \cdot 5H_2O$) (by iodometry) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 3.0-5.0
Chloride (Cl) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 0.003%
Nickel (Ni) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%

CAS: 7758-99-8 MERCK INDEX: 14,2653 IMO: 6.1:3288

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cupric Sulfate, 5-Hydrate

cGMP

USP
(copper(II) sulfate, pentahydrate)

1844-01	Glass	500 g	rnc	133.70	
1844-05	Glass	2.5 kg	rnc	432.40	

$CuSO_4 \cdot 5H_2O$ FW: 249.68

Meets USP Requirements

Calcium (Ca) ..... max. 0.005%
Identification ..... Passes Test
Iron (Fe) ..... max. 0.003%
Loss on Drying 33.0-36.5%
Nickel (Ni) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%
Assay ($CuSO_4$) (dried basis) 98.5-100.5%

Preserve in tight containers. Store at 25°C, excursions permitted between15°C and 30°C

CAS: 7758-99-8 MERCK INDEX: 14,2653 IMO: 6.1:3288

Cupric Sulfate, 5-Hydrate, USP

cGMP

Multi-Compendial
(copper(II) sulfate, pentahydrate)

1846-07	Poly Pail	12 kg	bks	Inquire

$CuSO_4 \cdot 5H_2O$ FW: 249.68

Meets USP Requirements

Calcium (Ca) ..... max. 0.005%
Identification ..... Passes Test
Iron (Fe) ..... max. 0.003%
Loss on Drying 33.0-36.5%
Nickel (Ni) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%
Assay ($CuSO_4$) (dried basis) 98.5-100.5%
Endotoxin Concentration (EU/g) ..... max. 10

Meets BP/Ph.Eur. Chemical Specifications

Assay 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Chloride (Cl) ..... max. 100 ppm
Iron (Fe) ..... max. 100 ppm
Lead (Pb) ..... max. 50 ppm
Loss on Drying 35.0-36.5%

Preserve in tight containers. Store at 25°C, excursions permitted between15°C and 30°C

CAS: 7758-99-8 MERCK INDEX: 14,2653 IMO: 6.1:3288

Cuprous Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cuprous Chloride, Powder
BAKER ANALYZED ACS Reagent
(copper(I) chloride)

1862-01	Glass	500 g	non	223.05	

CuCl FW: 99.00

Meets ACS Specifications

Assay (CuCl) ..... min. 90.0%
Insoluble in Acid ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.1%
Calcium (Ca) ..... max. 0.01%
Iron (Fe) ..... max. 0.005%
Potassium (K) ..... max. 0.02%
Sodium (Na) ..... max. 0.05%

CAS: 7758-89-6 MERCK INDEX: 14,2660 IMO: 8:2802

Cuprous Oxide, Powder
BAKER ANALYZED Reagent
(copper(I) oxide)

1878-01	Poly	500 g	csa	105.70	
		4 x 500 g	csa	70.45	281.80

Cu_2O FW: 143.09

Assay (Cu_2O) ..... min. 96.0%
Preservative (zinc stearate) 0.2-0.5%
Insoluble in HNO_3 ..... max. 0.3%
Chloride (Cl) ..... max. 0.5%
Sulfate (SO_4) ..... max. 0.05%
Iron (Fe) ..... max. 0.05%
Free Copper (Cu) ..... Actual Value Reported

CAS: 1317-39-1 MERCK INDEX: 14,2664

Curcumin, Crystalline
BAKER
(C.I. 75300)

F916-03	Glass	25 g	non	101.20	

$[HOC_6H_3(OCH_3)CH:CHCO]_2CH_2$ FW: 368.39

Sensitivity for Boric Acid ..... Passes Test
Identification (by IR) ..... Passes Test

CAS: 458-37-7 MERCK INDEX: 14,2673

CYCLE-TAINER Accessories
See Solvent and Reagent Delivery Systems Section, p. 99-105

CYCLE-TAINER Solvent Delivery System
See Solvent and Reagent Delivery Systems Section, p. 99-105

CYCLE-TAP Dispenser
See Solvent and Reagent Delivery Systems Section, p. 99-105

CYCLE-TAP Sampler
See Solvent and Reagent Delivery Systems Section, p. 99-105

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cyclohexane
BAKER ANALYZED ACS Reagent

9206-01	Glass	500 mL	cso	75.25	
		12 x 500 mL	cso	50.15	601.80
9206-22	Al SAFETAINER	1 L	cso	114.00	
		6 x 1 L	cso	76.00	456.00
9206-05	Al SAFETAINER	4 L	cso	277.60	
		4 x 4 L	cso	185.05	740.20
9206-33	Poly Coated	4 L	cso	238.65	
		4 x 4 L	cso	159.10	636.40
9206-07	Steel Pail	20 L	sbk	553.35	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

C_6H_{12} FW: 84.16

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (C_6H_{12}) (by GC, corrected for water) ..... min. 99.0%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.001%
Substances Darkened by H_2SO_4 ..... Passes Test
Water (by KF, coulometric) ..... max. 0.02%
Product Information (not specifications):
Boiling Point (typical) ..... 80.7 °C.
Density (g/mL) at 25°C (typical) 0.774

CAS: 110-82-7 MERCK INDEX: 14,2723 IMO: 3:1145
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Cyclohexane
HPLC
For Use in Liquid Chromatography and Spectrophotometry

9292-03	Glass	4 L	chp	218.55	
		4 x 4 L	chp	145.70	582.80

C_6H_{12} FW: 84.16

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-254 nm ..... max. 0.01
240 nm ..... max. 0.08
230 nm ..... max. 0.20
220 nm ..... max. 0.30
UV Cut-off, nm ..... max. 205
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission ..... max. 0.5
at Emission Maximum for Impurities ..... max. 1.0
Assay (C_6H_{12}) (by GC, corrected for water) ..... min. 99.5%
Residue after Evaporation ..... max. 2 ppm
Substances Darkened by H_2SO_4 ..... Passes Test
Water (by KF, coulometric) ..... max. 0.01%

CAS: 110-82-7 DENSITY: 1 L = 0.78 kg MERCK INDEX: 14,2723
IMO: 3:1145 FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cyclohexane
ULTRA RESI-ANALYZED
For Organic Residue Analysis

9258-02	Glass	1 L	chp	91.20	
		6 x 1 L	chp	60.80	364.80
9258-03	Glass	4 L	chp	226.60	
		4 x 4 L	chp	151.05	604.20

C_6H_{12} FW: 84.16

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 10
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Assay (C_6H_{12}) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 2 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 100 ppm

CAS: 110-82-7 DENSITY: 1 L = 0.78 kg MERCK INDEX: 14,2723
IMO: 3:1145 FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

1,2-Cyclohexanediaminetetraacetic Acid
See trans-(1,2-Cyclohexylenedinitrilo)tetraacetic Acid, Monohydrate

1,3,5-Cyclohexanetrione
See Phloroglucinol

Cyclohexanol
BAKER ANALYZED Reagent

9208-01	Glass	500 mL	cso	83.20	
		12 x 500 mL	cso	55.45	665.40
9208-03	Glass	4 L	cso	281.05	
		4 x 4 L	cso	187.35	749.40

$C_6H_{12}O$ FW: 100.16

Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_6H_{12}O$) (by GC) .....min. 98%
Identification (by IR) .....Passes Test
Product Information (not specifications):
Boiling Point (typical) .....161.1 °C.
Density (g/mL) at 25°C (typical) 0.945

CAS: 108-93-0 MERCK INDEX: 14,2725 FLASH POINT: 63°C

Solvent Spill Cleanup Products available. See pp. 378.

Cyclohexanone
BAKER ANALYZED Reagent

9210-01	Glass	500 mL	cso	134.70	
		12 x 500 mL	cso	89.80	1077.60
9210-03	Glass	4 L	cso	255.70	
		4 x 4 L	cso	170.45	681.80

$C_6H_{10}O$ FW: 98.14

Assay ($C_6H_{10}O$) (by GC) .....min. 99.0%
Color (APHA) .....max. 10
Density (g/mL) at 25°C 0.940-0.943
Residue after Evaporation .....max. 0.05%
Acidity (meq/g) .....max. 0.003
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Identification (by IR) .....Passes Test
NOTE: Color reported is at time of packaging; material will darken with age.

CAS: 108-94-1 MERCK INDEX: 14,2726 IMO: 3:1915
FLASH POINT: 43.9°C

Solvent Spill Cleanup Products available. See pp. 378.

Cyclohexene
BAKER

G045-01	Glass	1 L	non	115.00	

C_6H_{10} FW: 82.15

Assay (C_6H_{10}) (by GC) .....min. 99%

CAS: 110-83-8 DENSITY: 1 L = 0.81 kg MERCK INDEX: 14,2727
IMO: 3:2256

Solvent Spill Cleanup Products available. See pp. 378.

trans-(1,2-Cyclohexylenedinitrilo) tetraacetic Acid, Monohydrate
BAKER

G083-05	Glass	100 g	org	266.10	

$C_{14}H_{22}N_2O_8 \cdot H_2O$ FW: 364.35

Assay ($C_{14}H_{22}N_2O_8 \cdot H_2O$) .....min. 98%
Appearance .....Passes Test

CAS: 13291-61-7

L-(+)-Cysteine
BAKER

G122-03	Glass	25 g	bio	60.20	

$HSCH_2CH(NH_2)COOH$ FW: 121.16

Specific Rotation $[\alpha]_D^{25}$(c = 8 in 1N HCl) .....+8.0 - +10.0 °

CAS: 52-90-4 MERCK INDEX: 14,2781

Cysteine Hydrochloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

L-(+)-Cysteine Hydrochloride, Monohydrate
BAKER ANALYZED Biochemical Reagent

G121-03	Glass	25 g	bio	46.20	
G121-05	Glass	100 g	bio	128.25	
G121-08	Glass	1 kg	bio	354.60	

$HSCH_2CH(NH_2)COOH{\cdot}HCl{\cdot}H_2O$ FW: 175.64

Assay ($C_3H_7NO_2S{\cdot}HCl{\cdot}H_2O$) (by redox titrn) 98.5-100.5%
Specific Rotation, $[\alpha]_D^{25}$
(c = 2 in 5M HCl, calc. as Cysteine) ..... +5.0 - +8.0 °
Homogeneity by TLC ..... No Extraneous Spots
Water-Insoluble Matter ..... Passes Test
Ash (sulfated) ..... max. 0.1%
Arsenic (As) ..... max. 0.0001%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.03%

CAS: 7048-04-6 MERCK INDEX: 14,2781

L-Cysteine Hydrochloride, Monohydrate, USP
Multi-Compendial cGMP

2071-05	Poly	100 g	bio	107.00	
2071-06	Poly	1 kg	bio	602.10	

$C_3H_7NO_2S{\cdot}HCl{\cdot}H_2O$ FW: 175.64

Meets USP Requirements
Assay ($C_3H_7NO_2S{\cdot}HCl$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +5.7 - +6.8 °
Loss on Drying 8.0-12.0%
Residue on Ignition ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0015%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%

Meets FCC Requirements
Assay ($C_3H_7NO_2S{\cdot}HCl$) (dried basis) 98.0-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying 8.0-12.0%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... +5.0 - +8.0 °

Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_3H_7NO_2S{\cdot}HCl$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification E ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +5.5 - +7.0 °
Ninhydrin-Positive Substances ..... Passes Test
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 20 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying 8.0-12.0%
Ash (sulfated) ..... max. 0.1%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

CAS: 7048-04-6 MERCK INDEX: 14,2781

L-Cystine, FCC
Multi-Compendial cGMP

2073-06	Poly	1 kg	bio	482.05	

$C_6H_{12}N_2O_4S_2$ FW: 240.30

Meets FCC Requirements
Assay ($C_6H_{12}N_2O_4S_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying at 105°C ..... max. 0.2%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... -225 to -215 °

Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_6H_{12}N_2O_4S_2$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... -224 to -218 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Loss on Drying at 100°C ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

CAS: 56-89-3 MERCK INDEX: 14,2781

L-(-)-Cystine
BAKER ANALYZED Biochemical Reagent

G123-05	Poly	100 g	bio	87.45	

$HOCOCH(NH_2)CH_2SSCH_2CH(NH_2)COOH$ FW: 240.30

Meets Reagent Specifications for testing USP/NF monographs
Nitrogen Content (N)(dried basis) (Kjeldahl) 11.5-11.9%
Specific Rotation, $[\alpha]_D^{20}$(dried basis, c = 1 in 1N HCl) ..... -225 to -215 °
Homogeneity by TLC ..... No Extraneous Spots
Loss on Drying at 105°C ..... max. 0.2%
Arsenic (As) ..... max. 0.0003%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.005%

CAS: 56-89-3 MERCK INDEX: 14,2782

Dahlia B
See Methyl Violet 2B

DCYTA
See trans-(1,2-Cyclohexylenedinitrilo)tetraacetic Acid, Monohydrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Decalcifying Solution, Krajian
BAKER
(100 g/L sodium citrate, dihydrate, and 250 mL/L formic acid (88%) in water)
For Decalcification of Bones

G161-02	Poly	1 L	non	91.15	

Total Acidity, Normality 5.7-6.1
Sodium Citrate ($Na_3C_6H_5O_7 \cdot 2H_2O$), g/L 95-105
IMO: 8:3412 FLASH POINT: 50°C

Decane
Practical

G143-07	Glass	500 mL	non	114.60	

$CH_3(CH_2)_8CH_3$ FW: 142.29

Identification (by IR) .....Passes Test
CAS: 124-18-5 DENSITY: 1 L = 0.73 kg IMO: 3:2247
FLASH POINT: 46°C

1-Decanol
BAKER
(decyl alcohol)

G136-07	Glass	500 mL	non	53.05	

$CH_3(CH_2)_9OH$ FW: 158.29

Meets Reagent Specifications for testing USP/NF monographs
Assay ($CH_3(CH_2)_9OH$) .....min. 99%
CAS: 112-30-1 DENSITY: 1 L = 0.83 kg MERCK INDEX: 14,2855
FLASH POINT: 82°C

Decyl Alcohol
See 1-Decanol

Devarda's Alloy, Granular
BAKER ANALYZED Reagent
20 Mesh and Finer

2680-01	Poly	500 g	non	247.55	

Meets Reagent Specifications for testing USP/NF monographs
Copper (Cu) 49-51%
Aluminum (Al) 44-46%
Zinc (Zn) 4-6%
Nitrogen (N) .....max. 0.005%
Mesh:
On U.S. No. 20 Sieve .....max. 2.0%
CAS: 8049-11-4 MERCK INDEX: 14,2941

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Dextran (Low Fraction)
BAKER
(av. mol. wt. 60,000-90,000)

G200-05	Glass	100 g	non	254.60	

Appearance .....Passes Test
CAS: 9004-54-0 MERCK INDEX: 14,2948

Dextrose, Anhydrous
ULTREX Ultrapure Reagent

4893-05	Glass	100 g	spr	432.10	

$C_6H_{12}O_6$ FW: 180.16

Analysis of Actual Lot (not specifications)
Certificate Provided Reports Actual Lot Analysis
Specific Rotation, $[\alpha]_D^{25}$(c = 10 in water) .....+ 52.6 °
Titrable Acid (µeq/g) 1
Ash (sulfated) 0.02%
Loss on Drying at 105°C 0.05%
Particulate Matter .....< 0.0001%
Starch .....Passes Test
Non-Metallic Impurities (in ppm)(µg/g):
Arsenic (As) .....< 1
Boron (B) 0.4
Chloride (Cl) .....< 25
Nitrogen Compounds (as N) 2
Silicon (Si) .....< 0.05
Sulfate and Sulfite (as SO_4) .....< 5
Metallic Impurities (in ppm)(µg/g):
Aluminum (Al) 0.4
Cadmium (Cd) 0.1
Calcium (Ca) 0.1
Chromium (Cr) .....< 0.03
Cobalt (Co) .....< 0.01
Copper (Cu) .....< 0.005
Iron (Fe) .....< 0.01
Lead (Pb) .....< 0.02
Magnesium (Mg) .....< 0.005
Manganese (Mn) .....< 0.005
Molybdenum (Mo) .....< 0.01
Nickel (Ni) .....< 0.01
Silver (Ag) .....< 0.005
Sodium (Na) 4
Tin (Sn) .....< 0.05
Titanium (Ti) .....< 0.01
Vanadium (V) .....< 0.01
Zinc (Zn) .....< 0.1
CAS: 50-99-7 MERCK INDEX: 14,4459

Dextrose

Dextrose, Anhydrous
USP cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
1919-01	Poly	500 g	rss	77.20	
		4 x 500 g	rss	51.45	205.80
1919-05	Poly	2.5 kg	rss	209.05	
		4 x 2.5 kg	rss	139.35	557.40
1919-07	Poly Pail	12 kg	bks	Inquire	
1919-09		100 lb	bul	Inquire	
1919-08	Lined Fiber Dr	200 lb	bul	Inquire	
1919-25	Poly Drum	200 lb	bul	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Meets USP Requirements

Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ (calculated on dried basis) ..... +52.6 - +53.2 °
Color of Solution ..... Passes Test
Acidity ..... Passes Test
Water (H_2O) ..... max. 0.5%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.018%
Sulfate (SO_4) ..... max. 0.025%
Arsenic (As) ..... max. 1 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Dextrin ..... Passes Test
Soluble Starch, Sulfites ..... Passes Test

CAS: 50-99-7 MERCK INDEX: 14,4459

Dextrose, Anhydrous, Powder
BAKER ANALYZED ACS Reagent
(D-glucose, anhydrous)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
1916-01	Poly	500 g	csa	62.10	
		4 x 500 g	csa	41.40	165.60
1916-05	Poly	2.5 kg	csa	173.95	
		4 x 2.5 kg	csa	115.95	463.80
1916-07	Poly Pail	12 kg	bks	Inquire	
1916-09	Poly Drum	250 lb	bul	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Specific Rotation $[\alpha]_D^{25}$ ..... +52.5 - +53.0 °
Insoluble Matter ..... max. 0.005%
Loss on Drying at 105°C ..... max. 0.2%
Residue after Ignition ..... max. 0.015%
Solution in Water (50%)(APHA) ..... max. 20
Titrable Acid (meq/g) ..... max. 0.002
Chloride (Cl) ..... max. 0.01%
Sulfate and Sulfite (as SO_4) ..... max. 0.005%
Starch ..... Passes Test
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 50-99-7 MERCK INDEX: 14,4459

Dextrose, Anhydrous, USP
Multi-Compendial
(Glucose) cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
1920-05	Poly	2.5 kg	rss	251.10	
		4 x 2.5 kg	rss	167.40	669.60
1920-07	Poly Pail	12 kg	bks	Inquire	
1920-09	Poly Drum	100 lb	bul	Inquire	
1920-06	Poly Drum	200 lb	bul	Inquire	
1920-20	Poly Drum	100 kg	bul	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Meets USP Requirements

Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ (calculated on dried basis) ..... +52.6 - +53.2 °
Color of Solution ..... Passes Test
Acidity ..... Passes Test
Water (H_2O) ..... max. 0.5%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.018%
Sulfate (SO_4) ..... max. 0.025%
Arsenic (As) ..... max. 1 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Dextrin ..... Passes Test
Soluble Starch, Sulfites ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ (calculated on anhydrous basis) ..... +52.5 - +53.3 °
Foreign Sugars, Soluble Starch, and Dextrins ..... Passes Test
Sulfite (SO_2) ..... max. 15 ppm
Chloride (Cl) ..... max. 125 ppm
Sulfate (SO_4) ..... max. 200 ppm
Arsenic (As) ..... max. 1 ppm
Barium (Ba) ..... Passes Test
Calcium (Ca) ..... max. 200 ppm
Lead (Pb) ..... max. 0.5 ppm
Water (H_2O) ..... max. 1.0%
Ash (sulfated) ..... max. 0.1%

Meets JP Chemical Specifications

Assay ($C_6H_{12}O_6$) (dried basis) 99.5-101.0%
Identification ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Acidity ..... Passes Test
Chloride (Cl) ..... max. 0.018%
Sulfate (SO_4) ..... max. 0.024%
Heavy Metals (as Pb) ..... max. 4 ppm
Arsenic (As) ..... max. 1.3 ppm
Dextrin ..... Passes Test
Soluble Starch, Sulfites ..... Passes Test
Loss on Drying at 105°C ..... max. 1.0%
Residue on Ignition ..... max. 0.10%
Preserve in well-closed containers.

CAS: 50-99-7 MERCK INDEX: 14,4459

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Dextrose, Monohydrate, Powder
BAKER ANALYZED Reagent
(D-glucose, monohydrate)

1910-01	Poly	500 g	non	51.70	
1910-05	Poly	2.5 kg	non	171.10	

$C_6H_{12}O_6 \cdot H_2O$ FW: 198.17

Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.015%
Chloride (Cl) .....max. 0.005%
Sulfate and Sulfite (as SO_4) .....max. 0.005%
Starch .....Passes Test
Trace Impurities (in ppm):
Arsenic (As) .....max. 0.2
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 5996-10-1 MERCK INDEX: 14,4459

Dextrose, Monohydrate, Powder
USP

cGMP

1912-01	Poly	500 g	rnc	59.20	
1912-05	Poly	2.5 kg	rnc	200.05	

$C_6H_{12}O_6 \cdot H_2O$ FW: 198.17

Meets USP Requirements
Identification .....Passes Test
Specific Rotation $[\alpha]_D^{25}$(calculated on dried basis) .....+52.6 - +53.2 °
Color of Solution .....Passes Test
Acidity .....Passes Test
Water (H_2O) 7.5-9.5%
Residue on Ignition .....max. 0.1%
Chloride (Cl) .....max. 0.018%
Sulfate (SO_4) .....max. 0.025%
Arsenic (As) .....max. 1 ppm
Heavy Metals (as Pb) .....max. 5 ppm
Dextrin .....Passes Test
Soluble Starch, Sulfites .....Passes Test

CAS: 5996-10-1 MERCK INDEX: 14,4459

Dextrose, Monohydrate, USP
Multi-Compendial
(glucose, monohydrate)

cGMP

1913-07	Poly Pail	12 kg	bks	Inquire	

$C_6H_{12}O_6 \cdot H_2O$ FW: 198.17

Meets USP Requirements
Identification .....Passes Test
Specific Rotation $[\alpha]_D^{25}$(calculated on dried basis) .....+52.6 - +53.2 °
Color of Solution .....Passes Test
Acidity .....Passes Test
Water (H_2O) 7.5-9.5%
Residue on Ignition .....max. 0.1%
Chloride (Cl) .....max. 0.018%
Sulfate (SO_4) .....max. 0.025%
Arsenic (As) .....max. 1 ppm
Heavy Metals (as Pb) .....max. 5 ppm
Dextrin .....Passes Test
Soluble Starch, Sulfites .....Passes Test
Endotoxin Concentration (EU/g) .....max. 2.5

Meets BP/Ph.Eur. Chemical Specifications
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Appearance of Solution .....Passes Test
Acidity or Alkalinity .....Passes Test
Specific Rotation $[\alpha]_D^{20}$ .....+52.5 - +53.3 °
Foreign Sugars, Soluble Starch, and Dextrins .....Passes Test
Sulfite (SO_2) .....max. 15 ppm
Chloride (Cl) .....max. 125 ppm
Sulfate (SO_4) .....max. 200 ppm
Arsenic (As) .....max. 1 ppm
Barium (Ba) .....Passes Test
Calcium (Ca) .....max. 200 ppm
Lead (Pb) .....max. 0.5 ppm
Water (H_2O) 7.0-9.5%
Ash (sulfated) .....max. 0.1%

CAS: 5996-10-1 MERCK INDEX: 14,4459

Di-
See also Bi- and Bis-

Diacetone Alcohol
See 4-Hydroxy-4-methyl-2-pentanone

Diacetyl Dioxime
See Dimethylglyoxime

Diacetyl Monoxime
BAKER ANALYZED Reagent
(2,3-butanedione monoxime)

G218-05	Glass	100 g	non	166.30	

$CH_3C(:NOH)COCH_3$ FW: 101.11

Appearance .....Passes Test
Melting Range .....74-76 °C.
Color of Solution .....max. 100
Identification (by IR) .....Passes Test

CAS: 57-71-6 MERCK INDEX: 14,2966

1,2-Diaminoethane
See Ethylenediamine

2,7-Diamino-10-ethyl-9-phenylphenanthridinium Bromide
See Ethidium Bromide

2,6-Diaminohexanoic Acid
See L-(+)-Lysine, Monohydrate

2,5-Diaminovaleric Acid
See L-(+)-Ornithine Monohydrochloride

Diatomaceous Earth

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Diatomaceous Earth
Analytical Filter Aid

1939-01	Glass	500 g	csa	88.65	
		4 x 500 g	csa	59.10	236.40
1939-05	Poly Pail	2.5 kg	non	188.35	

CAS: 68855-54-9 MERCK INDEX: 14,4973

Diatomaceous Earth
See also Celite 503 and Celite 545

Diboron Trioxide
See Boric Anhydride

Dibutylamine
BAKER ANALYZED Reagent

G680-07	Glass S/S	500 mL	non	57.30
G680-09	Glass	4 L	non	199.35

$(CH_3CH_2CH_2CH_2)_2NH$ FW: 129.25

Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_8H_{19}N$) (by GC) ..... min. 99%
Refractive Index, η^{20}_D 1.415-1.419

CAS: 111-92-2 DENSITY: 1 L = 0.76 kg MERCK INDEX: 14,3032
IMO: 8:2248 FLASH POINT: 47°C

Solvent Spill Cleanup Products available. See pp. 378.

Di-iso-butyl Ketone
See 2,6-Dimethyl-4-heptanone

Dibutyl Phthalate
BAKER ANALYZED Reagent

G811-09	Glass	4 L	non	87.15
G811-01	Steel Pail	20 L	sbo	456.10

C_6H_4-1,2-$(COOCH_2CH_2CH_2CH_3)_2$ FW: 278.35

Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_{16}H_{22}O_4$) ..... min. 99.0%
Refractive Index, η^{20}_D 1.491-1.493
Acidity ..... max. 0.02%

CAS: 84-74-2 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,3035
IMO: 9:3082 FLASH POINT: 157°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Dichloroacetic Acid
BAKER ANALYZED Reagent

G895-04	Glass	3 L	spr	1062.90	
		4 x 3 L	spr	708.60	2834.40
G895-03	Glass	4 L	spr	1294.35	
		4 x 4 L	spr	862.90	3451.60

$Cl_2CHCOOH$ FW: 128.94

Appearance ..... Passes Test
Assay ($Cl_2CHCOOH$) (by titration) ..... min. 99%
Identification (by IR) ..... Passes Test
Refractive Index, η^{20}_D 1.46-1.47
Transmittance
440 nm ..... Actual Value Reported
Water (H_2O) ..... Actual Value Reported

CAS: 79-43-6 DENSITY: 1 L = 1.563 kg MERCK INDEX: 14,3050
IMO: 8:1764

Acid Spill Cleanup Products available. See pp. 378.

Dichloroacetic Acid
Practical

G897-07	Glass in Can	500 mL	non	175.75

$Cl_2CHCOOH$ FW: 128.94

Identification (by IR) ..... Passes Test

CAS: 79-43-6 DENSITY: 1 L = 1.563 kg MERCK INDEX: 14,3050
IMO: 8:1764

Acid Spill Cleanup Products available. See pp. 378.

o-Dichlorobenzene
BAKER ANALYZED Reagent

9217-01	Glass	500 mL	cso	131.85	
		12 x 500 mL	cso	87.90	1054.80

$C_6H_4Cl_2$ FW: 147.00

Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_6H_4Cl_2$) (by GC) ..... min. 98%
Density (g/mL) at 25°C 1.299-1.301
Residue after Evaporation ..... max. 0.005%
Acidity (as HCl) ..... max. 0.005%
Refractive Index, η^{25}_D 1.548-1.550

CAS: 95-50-1 MERCK INDEX: 14,3056 IMO: 6.1:1591
FLASH POINT: 66°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

o-Dichlorobenzene
HPLC

9233-03	Glass	4 L	chp	311.95	
		4 x 4 L	chp	207.95	831.80

$C_6H_4Cl_2$ FW: 147.00

Assay (by GC, corrected for water) .....min. 98.5%
Ultraviolet Absorbance (1.00-cm cell vs. water):
300 nm .....max. 0.30
305 nm .....max. 0.10
335 nm .....max. 0.05
375 nm .....max. 0.01
UV Cut-off, nm .....max. 296
Residue after Evaporation .....max. 8 ppm
Water (by Karl Fischer titrn) .....max. 0.02%

CAS: 95-50-1 DENSITY: 1 L = 1.30 kg MERCK INDEX: 14,3056
IMO: 6.1:1591 FLASH POINT: 66°C

Solvent Spill Cleanup Products available. See pp. 378.

Dichlorodimethylsilane
BAKER
(dimethyldichlorosilane)

H061-05	Glass in Can	100 mL	non	131.75	

$(CH_3)_2SiCl_2$ FW: 129.06

Identification (by IR) .....Passes Test

CAS: 75-78-5 DENSITY: 1 L = 1.07 kg IMO: 3:1162
FLASH POINT: -3°C

Solvent Spill Cleanup Products available. See pp. 378.

1,2-Dichloroethane
BAKER ANALYZED ACS Reagent
(ethylene dichloride)

H076-07	Glass	500 mL	cor	65.70	
		12 x 500 mL	cor	43.80	525.60
H076-09	Glass	4 L	cor	159.70	
		4 x 4 L	cor	106.45	425.80
H076-33	Poly Coated	4 L	cor	177.70	
		4 x 4 L	cor	118.45	473.80

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$ClCH_2CH_2Cl$ FW: 98.96

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($ClCH_2CH_2Cl$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.002%
Titrable Acid (meq/g) .....max. 0.0003
Water (H_2O)(by Karl Fischer titrn) .....max. 0.03%

CAS: 107-06-2 DENSITY: 1 L = 1.24 kg MERCK INDEX: 14,3797
IMO: 3:1184 FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1,2-Dichloroethane
PHOTREX Reagent
(ethylene dichloride)
For Spectrophotometry

9302-01	Glass	500 mL	cso	132.70	
		12 x 500 mL	cso	88.45	1061.40
9302-03	Glass	4 L	cso	675.40	
		4 x 4 L	cso	450.25	1801.00

$ClCH_2CH_2Cl$ FW: 98.96

Meets ACS Specifications
Assay ($ClCH_2CH_2Cl$) (by GC, corrected for water) .....min. 99.0%
Appearance .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0005%
Titrable Acid (meq/g) .....max. 0.0003
Water (H_2O)(by Karl Fischer titrn) .....max. 0.03%
Ultraviolet Absorbance (1.00-cm cell vs. water):
228 nm .....max. 1.00
230 nm .....max. 0.50
235 nm .....max. 0.20
240 nm .....max. 0.10
245 nm .....max. 0.05
250 nm .....max. 0.02
255 nm .....max. 0.01
400 nm .....max. 0.01
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:

2.5-3.3	8.3-9.6
3.4-6.7	9.8-10.4
7.2-7.4	11.6-12.7

Product Information (not specifications):
Boiling Point (typical) .....83.5 °C.
Density (g/mL) at 25°C (typical) 1.246

CAS: 107-06-2 MERCK INDEX: 14,3797 IMO: 3:1184
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

1,2-Dichloroethane
See Ethylene Dichloride

2',7'-Dichlorofluorescein
BAKER ANALYZED ACS Reagent

H098-01	Glass	5 g	non	101.00	

$C_{20}H_{10}Cl_2O_5$ FW: 401.20

Meets ACS Specifications
Appearance .....Passes Test
Clarity of Alcohol Solution .....Passes Test
Suitability as Adsorption Indicator .....Passes Test

CAS: 76-54-0 MERCK INDEX: 14,3067

Dichloroindophenol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2,6-Dichloroindophenol, Sodium Derivative
BAKER ANALYZED ACS Reagent
2,6-Dichlorophenalindephenol Sodium Salt

H116-01	Glass	5 g	non	249.35	
H116-02	Glass	10 g	non	373.30	

$O:C_6H_2(Cl_2):NC_6H_4ONa$ FW: 290.08

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Loss on Drying at 120°C .....max. 12.0%
Interfering Dyes .....Passes Test

CAS: 620-45-1 MERCK INDEX: 14,3068

Dichloromethane
See under Methylene Chloride

Diethanolamine
BAKER ANALYZED ACS Reagent
(2,2′-iminodiethanol)

9227-01	Glass	500 mL	cso	150.90	
		12 x 500 mL	cso	100.60	1207.20
9227-03	Glass	4 L	cso	622.50	
		4 x 4 L	cso	415.00	1660.00

$(HOCH_2CH_2)_2NH$ FW: 105.14

Meets ACS Specifications
Assay ($(HOCH_2CH_2)_2NH$) (by GC, corrected for water) .....min. 98.5%
Apparent Equivalent Weight 104.0-106.0
Color (APHA) .....max. 15
Monoethanolamine .....max. 1.0%
Triethanolamine .....max. 1.0%
Residue after Ignition .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.002%
Iron (Fe) .....max. 0.001%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.15%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.090

CAS: 111-42-2 MERCK INDEX: 14,3107 FLASH POINT: 130°C

Diethylamine
BAKER ANALYZED Reagent

9216-01	Glass	500 mL	cso	148.00	
		12 x 500 mL	cso	98.65	1183.80
9216-03	Glass	4 L	cso	601.60	
		4 x 4 L	cso	401.05	1604.20

$(C_2H_5)_2NH$ FW: 73.14

Assay ($(C_2H_5)_2NH$) (by GC) .....min. 99%
Insoluble Matter .....Passes Test
Residue after Evaporation .....max. 0.01%

CAS: 109-89-7 DENSITY: 1 L = 0.707 kg MERCK INDEX: 14,3111
IMO: 3:1154 FLASH POINT: -28°C

Diethyldithiocarbamic Acid, Sodium Salt
See Sodium Diethyldithiocarbamate

1,4-Diethylene Dioxide
See p-Dioxane

Diethylene Glycol
See 2,2′-Oxydiethanol

Diethylene Glycol Dimethyl Ether
See Bis(2-methoxyethyl) Ether

Diethylene Glycol Monobutyl Ether
See 2-(2-Butoxyethoxy)ethanol

Diethylene Glycol Monoethyl Ether
See 2-(2-Ethoxyethoxy)ethanol

Diethylenetriamine
BAKER ANALYZED Reagent

H768-07	Glass	500 mL	non	60.20	

$NH_2CH_2CH_2NHCH_2CH_2NH_2$ FW: 103.17

Meets Reagent Specifications for testing USP/NF monographs
Assay .....min. 98%
Refractive Index, η^{20}_D 1.4815-1.4845

CAS: 111-40-0 DENSITY: 1 L = 0.96 kg MERCK INDEX: 14,7125
IMO: 8:2079 FLASH POINT: 102°C

Diethylenetriaminepentaacetic Acid, Pentasodium Salt (40% in H_2O)
BAKER

H775-08	Glass	1 kg	org	80.10	

$[(NaOCOCH_2)_2NCH_2CH_2]_2NCH_2COONa$ FW: 503.26

Appearance .....Passes Test

DENSITY: 1 L = 1.3 kg MERCK INDEX: 14,7125 IMO: 8:3267

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Diethyl Ether
See Ether

N,N-Diethyl-p-phenylenediamine Oxalate
BAKER

H916-03	Glass	25 g	org	254.10	

$C_{22}H_{34}N_4O_4$ FW: 418.54

Assay ($C_{22}H_{34}N_4O_4$) .....min. 90%
Appearance .....Passes Test
CAS: 62637-92-7

Diglyme
See under Bis(2-methoxyethyl) Ether

3,4-Dihydroxy-2-anthraquinonesulfonic Acid
See Alizarin Red S

o-Dihydroxybenzene
See Pyrocatechol

m-Dihydroxybenzene
See Resorcinol

4,5-Dihydroxy-m-benzenedisulfonic Acid, Disodium Salt, Monohydrate
See Tiron

2,2′-Dihydroxydiethylamine
See Diethanolamine

2,2′-Dihydroxyethyl Ether
See 2,2′-Oxydiethanol

3′,6′-Dihydroxyfluoran
See Fluorescein

4,5-Dihydroxy-2,7-naphthalenedisulfonic Acid, Disodium Salt, Dihydrate
See Chromotropic Acid

2,3-Dihydroxysuccinic Acid
See d-Tartaric Acid

(4,5-Dihydroxy-3-[(p-sulfophenyl)azo]-2,7-) Naphthalenedisulfonic Acid, Trisodium Salt
See SPADNS

Diiodomethane
BAKER
(methylene iodide)

J219-05	Glass	100 mL	non	507.90	

CH_2I_2 FW: 267.84

Identification (by IR) .....Passes Test
CAS: 75-11-6 DENSITY: 1 L = 3.325 kg MERCK INDEX: 14,6066
IMO: 8:3265 FLASH POINT: > 113°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N,N′ Diisopropylcarbodiimide
BAKER ANALYZED Reagent
For Peptide Synthesis

K750-07	Glass S/S	1 kg	org	2093.35	

$C_7H_{14}N_2$ FW: 126.20

Assay (by GC) .....min. 99%
Color (APHA) .....max. 200
CAS: 693-13-0 DENSITY: 1 L = 0.806 kg IMO: 3:1993
FLASH POINT: 34°C

Solvent Spill Cleanup Products available. See pp. 378.

DILUT-IT Analytical Concentrations
See Titrimetry Section p. 50-52

DILUT-IT Dissolution Media Concentrations
See under Dissolution Media

DL-threo-1,4-Dimercapto-2,3-butanediol
See Dithiothreitol (DTT, Cleland's Reagent)

1,2-Dimethoxyethane
BAKER
(ethylene glycol dimethyl ether)

J330-09	Glass	4 L	non	536.65	

$CH_3OCH_2CH_2OCH_3$ FW: 90.12

Assay ($C_4H_{10}O_2$) (by GC, corrected for water) .....min. 99.0%
Identification (by IR) .....Passes Test
CAS: 110-71-4 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,3224
IMO: 3:2252 FLASH POINT: -2°C

1,2-Dimethoxyethane
BAKER ANALYZED Reagent
(ethylene glycol dimethyl ether)

J331-07	Glass	500 mL	cor	108.70	
		12 x 500 mL	cor	72.45	869.40

$CH_3OCH_2CH_2OCH_3$ FW: 90.12

Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_4H_{10}O_2$) (by GC, corrected for water) .....min. 99.0%
Acidity (as CH_3COOH) .....max. 0.015%
Boiling Range (1-95 mL) .....83-86 °C.
Density (g/mL) at 20°C 0.865-0.871
Identification (by IR) .....Passes Test
Peroxide (as H_2O_2) .....max. 25 ppm
Refractive Index, η^{20}_D 1.379-1.381
Residue after Evaporation .....max. 0.002%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
CAS: 110-71-4 MERCK INDEX: 14,3224 IMO: 3:2252
FLASH POINT: -2°C

Dimethylacetamide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N,N-Dimethylacetamide
BAKER ANALYZED Reagent

J372-07	Glass	500 mL	non	180.00	
J372-09	Glass	4 L	non	251.90	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$CH_3CON(CH_3)_2$ FW: 87.12

Assay ($CH_3CON(CH_3)_2$) (by GC) .....min. 99.5%
Density (g/mL) at 25°C 0.931-0.936
Residue after Ignition .....max. 0.005%
pH of 20% Solution at 25°C 4.0-7.0
Water (H_2O) .....max. 0.05%

CAS: 127-19-5 MERCK INDEX: 14,3227 FLASH POINT: 66°C

Solvent Spill Cleanup Products available. See pp. 378.

Dimethylamine (26% w/v in H_2O)
BAKER

J407-08	Glass S/S	1 kg	org	94.20	

$(CH_3)_2NH$ FW: 45.09

Assay (C_2H_7N)(w/v) 25-27%
Appearance .....Passes Test

CAS: 124-40-3 DENSITY: 1 L = 0.83 kg MERCK INDEX: 14,3228
IMO: 3:1160 FLASH POINT: -18°C

p-(Dimethylamino)benzaldehyde
BAKER ANALYZED ACS Reagent
(Ehrlich's Reagent)

J418-03	Poly	25 g	non	54.20	
J418-05	Poly	100 g	non	134.75	

$(CH_3)_2NC_6H_4CHO$ FW: 149.19

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Melting Point .....73-75 °C.
Solubility in HCl .....Passes Test
Solubility in Alcohol .....Passes Test
Color of HCl Solution .....Passes Test
Color of Alcohol Solution(APHA) .....max. 60
Residue after Ignition .....max. 0.1%

CAS: 100-10-7 MERCK INDEX: 14,3230

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

5-[p-(Dimethylamino)benzylidene]rhodanine
BAKER ANALYZED Reagent

J431-02	Glass	10 g	non	88.40	

$C_{12}H_{12}N_2OS_2$ FW: 264.37

Sensitivity for Silver .....Passes Test

CAS: 536-17-4 MERCK INDEX: 14,3231

o-[[p-(Dimethylamino)phenyl]azo] Benzoic Acid Hydrochloride
See Methyl Red Hydrochloride

Dimethyldichlorosilane
See Dichlorodimethylsilane

2′,2″-Dimethyl-5,5″-di-iso-propylphenolphthalein
See Thymolphthalein

Dimethylformamide
BAKER ANALYZED ACS Reagent

9221-01	Glass	500 mL	cso	98.65	
		12 x 500 mL	cso	65.75	789.00
9221-06	Poly	500 mL	cso	99.75	
		12 x 500 mL	cso	66.50	798.00
9221-03	Glass	4 L	cso	486.30	
		4 x 4 L	cso	324.20	1296.80
9221-33	Poly Coated	4 L	cso	549.30	
		4 x 4 L	cso	366.20	1464.80
9221-07	Steel Pail	20 L	sbk	902.45	
9221-R	Steel Drum	420 lb	bul	Inquire	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$HCON(CH_3)_2$ FW: 73.09

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($HCON(CH_3)_2$) (by GC, corrected for water) .....min. 99.8%
Appearance .....Passes Test
Color (APHA) .....max. 15
Residue after Evaporation .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.0005
Titrable Base (meq/g) .....max. 0.003
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Trace Impurities (in ppm):
Iron (Fe) .....max. 0.1
Product Information (not specifications):
Boiling Point (typical) .....153.0 °C.
Density (g/mL) at 25°C (typical) 0.944

CAS: 68-12-2 MERCK INDEX: 14,3243 IMO: 3:2265
FLASH POINT: 58°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Dimethylformamide
BakerDRY
For Use in Organic Synthesis

9213-10	Septum-Seal Cap	100 mL	lws	47.45	
		6 x 100 mL	lws	37.95	227.70
9213-12	Septum-Seal Cap	1 L	lws	99.95	
		6 x 1 L	lws	79.95	479.70

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$HCON(CH_3)_2$ FW: 73.09

Meets ACS Specifications

Assay ($HCON(CH_3)_2$) (by GC, corrected for water) .....min. 99.8%
Appearance .....Passes Test
Color (APHA) .....max. 15
Residue after Evaporation .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.0005
Titrable Base (meq/g) .....max. 0.003
Water (H_2O)(by Karl Fischer titrn) .....max. 20 ppm

Product Information (not specifications):

Boiling Point (typical) .....153.0 °C.
Density (g/mL) at 25°C (typical) 0.944

CAS: 68-12-2 MERCK INDEX: 14,3243 IMO: 3:2265
FLASH POINT: 58°C

Solvent Spill Cleanup Products available. See pp. 378.

Dimethylformamide
PHOTREX Reagent
For Spectrophotometry

9222-01	Glass	500 mL	cso	129.40	
		12 x 500 mL	cso	86.25	1035.00
9222-03	Glass	4 L	cso	592.80	
		4 x 4 L	cso	395.20	1580.80

$HCON(CH_3)_2$ FW: 73.09

Meets ACS Specifications

Assay ($HCON(CH_3)_2$) (by GC, corrected for water) .....min. 99.8%
Appearance .....Passes Test
Color (APHA) .....max. 15
Residue after Evaporation .....max. 0.0005%
Titrable Acid (meq/g) .....max. 0.0005
Titrable Base (meq/g) .....max. 0.003
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%

Trace Impurities (in ppm):

Iron (Fe) .....max. 0.1

Optical Absorbance (1-cm path vs water):

270 nm .....max. 1.00
275 nm .....max. 0.30
295 nm .....max. 0.10
310 nm .....max. 0.05
340 nm .....max. 0.01
400 nm .....max. 0.01

Product Information (not specifications):

Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:

2.5-3.0 10.3-11.4
3.8-5.1 11.7-14.7
5.2-5.5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Boiling Point (typical) .....153.0 °C.
Density (g/mL) at 25°C (typical) 0.944

CAS: 68-12-2 MERCK INDEX: 14,3243 IMO: 3:2265
FLASH POINT: 58°C

Solvent Spill Cleanup Products available. See pp. 378.

Dimethylformamide
BAKER BIO-ANALYZED Reagent
For Biotech Applications

9344-13	Glass	4 L	cbs	336.15	
		4 x 4 L	cbs	224.10	896.40

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$HCON(CH_3)_2$ FW: 73.09

Assay ($HCON(CH_3)_2$) (by GC, corrected for water) .....min. 99.8%
Appearance .....Passes Test
Color (APHA) .....max. 15
Residue after Evaporation .....max. 5 ppm
Titrable Acid (meq/g) .....max. 0.0005
Titrable Base (meq/g) .....max. 0.003
Water (H_2O)(by Karl Fischer titrn) .....max. 400 ppm

Ultraviolet Absorbance (1.00-cm cell vs. water):

400 nm .....max. 0.01
340 nm .....max. 0.01
310 nm .....max. 0.05
295 nm .....max. 0.10
275 nm .....max. 0.30
270 nm .....max. 1.00

Amines (as dimethylamine) .....max. 5 ppm

CAS: 68-12-2 DENSITY: 1 L = 0.949 kg MERCK INDEX: 14,3243
IMO: 3:2265 FLASH POINT: 58°C

Solvent Spill Cleanup Products available. See pp. 378.

Dimethylglyoxime, Powder
BAKER ANALYZED ACS Reagent

1938-04	Poly	125 g	csa	145.80	
		4 x 125 g	csa	97.20	388.80
1938-01	Poly	500 g	csa	399.55	
		4 x 500 g	csa	266.35	1065.40

$CH_3C(:NOH)C(:NOH)CH_3$ FW: 116.12

Meets ACS Specifications

Melting Point .....238-241 °C.
Insoluble in Alcohol .....max. 0.05%
Residue after Ignition .....max. 0.05%
Suitability for Nickel Determination .....Passes Test

CAS: 95-45-4 MERCK INDEX: 14,3246

Dimethylheptanone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2,6-Dimethyl-4-heptanone
Practical

J795-09	Glass	4 L	non	131.80	

CAS: 108-83-8 DENSITY: 1 L = 0.81 kg IMO: 3:1157
FLASH POINT: 49°C

Solvent Spill Cleanup Products available. See pp. 378.

Dimethyl Ketone
See under Acetone

N,N-Dimethyl-p-phenylenediamine Oxalate
BAKER

K064-05	Glass	100 g	non	550.05	

$[(CH_3)_2NC_6H_4NH_2]_2{\cdot}HOCOCOOH$ FW: 362.43

Identification (by IR) ..... Passes Test
CAS: 24631-29-6 MERCK INDEX: 14,3254 IMO: 6.1:2811

Dimethyl Sulfoxide
BAKER ANALYZED ACS Reagent
(methyl sulfoxide)

9224-01	Glass	500 mL	cso	149.80	
		12 x 500 mL	cso	99.85	1198.20
9224-06	Poly	500 mL	cso	153.70	
		12 x 500 mL	cso	102.45	1229.40
9224-03	Glass	4 L	cso	655.65	
		4 x 4 L	cso	437.10	1748.40
9224-33	Poly Coated	4 L	cso	667.65	
		4 x 4 L	cso	445.10	1780.40
9224-07	Poly Pail	19 L	sbk	1947.95	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$(CH_3)_2SO$ FW: 78.13

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Appearance ..... Passes Test
Assay ($(CH_3)_2SO$) (by GC, corrected for water) ..... min. 99.9%
Residue after Evaporation ..... max. 0.01%
Titrable Acid (meq/g) ..... max. 0.001
Water (by KF, coulometric) ..... max. 0.1%
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.092
CAS: 67-68-5 MERCK INDEX: 14,3259 FLASH POINT: 89°C

Dimethyl Sulfoxide
USP
(methyl sulfoxide)

cGMP

9033-04	Glass	100 mL	rnc	207.40	
9033-33	Poly Coated	4 L	rss	3838.80	
		4 x 4 L	rss	2559.20	10236.80

$(CH_3)_2SO$ FW: 78.13

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Gravity at 25°/25°C 1.095-1.101
Refractive Index, η^{25}_D 1.4755-1.4775
Acidity ..... Passes Test
Water (H_2O) ..... max. 0.1%
Ultraviolet Absorbance (1.00-cm cell vs. water) (curve smooth throughout stated range with no extraneous impurity peaks):
275 nm ..... max. 0.20
Absorbance Ratio:
285 nm/275 nm ..... max. 0.65
295 nm/275 nm ..... max. 0.45
Nonvolatile Residue ..... max. 0.01%
Related Substances ..... max. 0.1%
Assay ($(CH_3)_2SO$) ..... min. 99.9%
CAS: 67-68-5 DENSITY: 1 L = 1.10 kg MERCK INDEX: 14,3259
FLASH POINT: 89°C

Dimethyl Sulfoxide
PHOTREX Reagent
For Spectrophotometry

9194-03	Glass	4 L	cso	660.10	
		4 x 4 L	cso	440.05	1760.20
9194-33	Poly Coated	4 L	cso	712.35	
		4 x 4 L	cso	474.90	1899.60

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$(CH_3)_2SO$ FW: 78.13

Meets ACS Specifications
Appearance ..... Passes Test
Assay ($(CH_3)_2SO$) (by GC, corrected for water) ..... min. 99.9%
Residue after Evaporation ..... max. 0.002%
Titrable Acid (meq/g) ..... max. 0.001
Water (by KF, coulometric) ..... max. 0.1%
Ultraviolet Absorbance (1.00-cm cell vs. water) (curve smooth throughout stated range with no extraneous impurity peaks):
400-350 nm ..... max. 0.01
330 nm ..... max. 0.02
310 nm ..... max. 0.06
290 nm ..... max. 0.18
270 nm ..... max. 0.40
Product Information (not specifications):
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:

2.0-2.3	5.1-6.7
2.4-3.2	7.9-8.7
3.7-5.0	11.4-13.8

CAS: 67-68-5 DENSITY: 1 L = 1.10 kg MERCK INDEX: 14,3259
FLASH POINT: 89°C

p-Dioxane
BAKER ANALYZED ACS Reagent
(1,4-dioxane)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9231-04	Glass	150 mL	non	57.85	
9231-01	Glass	500 mL	cso	99.70	
		12 x 500 mL	cso	66.45	797.40
9231-22	AI SAFETAINER	1 L	cso	207.15	
		6 x 1 L	cso	138.10	828.60
9231-03	Glass	4 L	cso	395.40	
		4 x 4 L	cso	263.60	1054.40
9231-R		473 lb	bul	Inquire	

$C_4H_8O_2$ FW: 88.11

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_4H_8O_2$) (by GC, corrected for water) .....min. 99.0%
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.01%
Color (APHA) .....max. 20
Freezing Point .....min. 11.0 °C.
Peroxide (as H_2O_2) .....max. 0.005%
Residue after Evaporation .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.0016
Water (by KF, coulometric) .....max. 0.05%

Contains 0.075% Butylated Hydroxytoluene as a stabilizer.

CAS: 123-91-1 DENSITY: 1 L = 1.03 kg MERCK INDEX: 14,3300
IMO: 3:1165 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

p-Dioxane
PHOTREX Reagent
For Spectrophotometry and Liquid Scintillation Counting

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9196-02	Glass	1 L	cso	209.95	
		6 x 1 L	cso	139.95	839.70
9196-03	Glass	4 L	cso	435.15	
		4 x 4 L	cso	290.10	1160.40

$C_4H_8O_2$ FW: 88.11

Meets ACS Specifications

Assay ($C_4H_8O_2$) (by GC, corrected for water) .....min. 99.0%
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.01%
Color (APHA) .....max. 10
Counting Efficiency for ^3H
in Prepared "Cocktail" .....Actual Value Reported
Freezing Point .....min. 11.0 °C.
Peroxide (as H_2O_2) .....max. 0.005%
Residue after Evaporation .....max. 0.001%
Titrable Acid (meq/g) .....max. 0.0016
Water (by KF, coulometric) .....max. 0.02%

Ultraviolet Absorbance (1.00-cm cell vs. water):

420 nm .....max. 0.005
400-295 nm .....max. 0.01
280 nm .....max. 0.05
270 nm .....max. 0.10
250 nm .....max. 0.25
225 nm .....max. 0.60
215 nm .....max. 1.00

Product Information (not specifications):
Windows of Infrared Transmittance (0.1-mm path, 60-100% T), µm:

2.0-3.3 9.9-10.7
3.8-5.0 12.1-15.4
5.1-6.7

CAS: 123-91-1 DENSITY: 1 L = 1.03 kg MERCK INDEX: 14,3300
IMO: 3:1165 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Diphenylamine, Crystal
BAKER ANALYZED ACS Reagent

1944-04	Glass	125 g	non	95.40
1944-01	Glass	500 g	non	259.20

$(C_6H_5)_2NH$ FW: 169.23

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Melting Point .....52.5-54.0 °C.
Solubility in Alcohol .....Passes Test
Residue after Ignition .....max. 0.03%
Nitrate (NO_3) .....Passes Test
Sensitivity for Nitrate .....Passes Test

CAS: 122-39-4 MERCK INDEX: 14,3317 FLASH POINT: 150°C

p-Diphenylaminesulfonic Acid, Barium or Sodium Salt
See Barium or Sodium Diphenylaminesulfonate

sym-Diphenylcarbazide
See 1,5-Diphenylcarbohydrazide

sym-Diphenylcarbazone
BAKER ANALYZED ACS Reagent

K617-02	Glass	10 g	non	98.40
K617-03	Glass	25 g	non	239.35

$C_6H_5NHNHCON{:}NC_6H_5{\cdot}C_6H_5NHNHCONHNHC_6H_5$ FW: 482.55

Meets ACS Specifications

Residue after Ignition .....max. 0.1%
Solubility in Aqueous Acetone .....Passes Test
Sensitivity .....Passes Test

MERCK INDEX: 14,3322

Diphenylcarbohydrazide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1,5-Diphenylcarbohydrazide, Powder

BAKER ANALYZED ACS Reagent (sym-diphenylcarbazide)

K620-03	Glass	25 g	non	95.65	
K620-05	Glass	100 g	non	186.55	

$C_6H_5NHNHCONHNHC_6H_5$ FW: 242.28

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Melting Point .....173-176 °C.
Residue after Ignition .....max. 0.05%
Solubility in Aqueous Acetone .....Passes Test
Sensitivity for Chromate .....Passes Test

CAS: 140-22-7

Diphenyl Ketone
See Benzophenone

Dipotassium Hydrogen Phosphate
See Potassium Phosphate

Di-iso-propyl Ether
See iso-Propyl Ether

Dipyridyl
See 2,2′-Bipyridine

Diskmate II Rotary Extraction Station
See Analytical Chromatography Section, p. 22-45

Disodium Ethylenediaminetetraacetate
See under EDTA Disodium Salt Dihydrate

Disodium Hydrogen Phosphate
See under Sodium Phosphate, Dibasic

Disodium Succinate
See Succinic Acid, Disodium Salt

DILUT-IT Dissolution Media Concentrates

Avantor introduces a new line of J.T.Baker DILUT-IT dissolution media concentrates which are pre-measured and only need to be diluted with purified water to create "ready to use" dissolution media. The new DILUT-IT dissolution media concentrates represent a major improvement for laboratory analysts/chemists performing dissolution testing because they eliminate many of the time-consuming steps typically associated with solution preparation.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetate Buffer pH 4.5 DILUT-IT Dissolution Media Concentrate

D017-00	Poly	12 x 230.8 mL	spr	20.50	246.00
D017-02	Poly	6 x 961.5 mL	spr	37.15	222.90
D017-04	Poly	6 x 1.9 L	spr	57.90	347.40

Appearance .....Passes Test
pH at 25°C at 26x Dilution 4.45-4.55
Assay (M) at 26x Dilution (as Sodium Acetate) 0.045-0.054
Density (g/mL) at 25°C .....Actual Value Reported
Store at room temperature.

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid 0.01N DILUT-IT Dissolution Media Concentrate

D010-00	Poly	12 x 230.8 mL	spr	20.50	246.00
D010-02	Poly	6 x 961.5 mL	spr	37.15	222.90
D010-04	Poly	6 x 1.9 L	spr	56.80	340.80

Appearance .....Passes Test
Density (g/mL) at 25°C .....Actual Value Reported
Normality at 26x dilution 0.0098-0.0102
Store at room temperature.

CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid 0.1N DILUT-IT Dissolution Media Concentrate

D011-00	Poly	12 x 230.8 mL	spr	20.50	246.00
D011-02	Poly	6 x 961.5 mL	spr	37.15	222.90
D011-04	Poly	6 x 1.9 L	spr	56.80	340.80

Appearance .....Passes Test
Density (g/mL) at 25°C .....Actual Value Reported
Normality at 26x dilution 0.098-0.102
Store at room temperature.

CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Potassium Phosphate pH 5.8 DILUT-IT Dissolution Media Concentrate

D012-00	Poly	12 x 230.8 mL	spr	20.50	246.00
D012-02	Poly	6 x 961.5 mL	spr	37.15	222.90
D012-04	Poly	6 x 1.9 L	spr	57.90	347.40

Appearance .....Passes Test
Density (g/mL) at 25°C .....Actual Value Reported
pH at 25°C at 26x Dilution 5.75-5.85
Assay (M) at 26x Dilution
(as Potassium Phosphate Monobasic) 0.045-0.054
Store at room temperature.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Phosphate pH 6.0 DILUT-IT Dissolution Media Concentrate

D013-00	Poly	12 x 230.8 mL	spr	20.50	246.00
D013-02	Poly	6 x 961.5 mL	spr	38.25	229.50
D013-04	Poly	6 x 1.9 L	spr	57.90	347.40

Appearance ..... Passes Test
pH at 25°C at 26x Dilution 5.95-6.05
Assay (M) at 26x Dilution
(as Potassium Phosphate Monobasic) 0.045-0.054
Density (g/mL) at 25°C ..... Actual Value Reported
Store at room temperature.

Potassium Phosphate pH 6.8 DILUT-IT Dissolution Media Concentrate

D014-00	Poly	12 x 230.8 mL	spr	21.00	252.00
D014-02	Poly	6 x 961.5 mL	spr	39.30	235.80
D014-04	Poly	6 x 1.9 L	spr	60.10	360.60

Appearance ..... Passes Test
pH at 25°C at 26x Dilution 6.75-6.85
Assay (M) at 26x Dilution
(as Potassium Phosphate Monobasic) 0.045-0.054
Density (g/mL) at 25°C ..... Actual Value Reported
Store at room temperature.

Potassium Phosphate pH 7.2 DILUT-IT Dissolution Media Concentrate

D015-00	Poly	12 x 230.8 mL	spr	21.30	255.60
D015-02	Poly	6 x 961.5 mL	spr	39.30	235.80
D015-04	Poly	6 x 1.9 L	spr	60.10	360.60

Appearance ..... Passes Test
pH at 25°C at 26x Dilution 7.15-7.25
Assay (M) at 26x Dilution
(as Potassium Phosphate Monobasic) 0.045-0.054
Density (g/mL) at 25°C ..... Actual Value Reported
Store at room temperature.

Potassium Phosphate pH 7.4 DILUT-IT Dissolution Media Concentrate

D019-00	Poly	12 x 230.8 mL	spr	21.60	259.20
D019-02	Poly	6 x 961.5 mL	spr	39.30	235.80
D019-04	Poly	6 x 1.9 L	spr	63.35	380.10

Appearance ..... Passes Test
pH at 25°C at 26x Dilution 7.35-7.45
Assay (M) at 26x Dilution
(as Potassium Phosphate Monobasic) 0.045-0.054
Density (g/mL) at 25°C ..... Actual Value Reported
Store at room temperature.

Potassium Phosphate pH 7.5 DILUT-IT Dissolution Media Concentrate

D016-00	Poly	12 x 230.8 mL	spr	21.60	259.20
D016-02	Poly	6 x 961.5 mL	spr	39.30	235.80
D016-04	Poly	6 x 1.9 L	spr	63.35	380.10

Appearance ..... Passes Test
pH at 25°C at 26x Dilution 7.45-7.55
Assay (M) at 26x Dilution
(as Potassium Phosphate Monobasic) 0.045-0.054
Density (g/mL) at 25°C ..... Actual Value Reported
Store at room temperature.

Simulated Gastric Fluid (without enzyme)

D020-00	Poly	12 x 230.8 mL	spr	19.85	238.20
D020-02	Poly	6 x 961.5 mL	spr	36.60	219.60
D020-04	Poly	6 x 1.9 L	spr	57.50	345.00

Assay, Sodium Chloride (NaCl) (at 26x dilution) ..... 1.9-2.1 g/L
pH at 25°C at 26x Dilution 1.15-1.25
Does not contain enzyme
IMO: 8:1789

Sodium Lauryl Sulfate 0.50% DILUT-IT Dissolution Media Concentrate

D018-01	Poly	12 x 400 mL	spr	27.35	328.20

Appearance ..... Passes Test
Assay (at 15x Dilution) 0.49-0.51%
Density (g/mL) at 25°C ..... Actual Value Reported
Store at room temperature.

Sodium Phosphate pH 6.8 DILUT-IT Dissolution Media Concentrate

D021-00	Poly	12 x 230.8 mL	spr	21.00	252.00
D021-02	Poly	6 x 961.5 mL	spr	39.30	235.80
D021-04	Poly	6 x 1.9 L	spr	60.10	360.60

Appearance ..... Passes Test
Identification ..... Passes Test
pH at 25°C at 26x Dilution 6.75-6.85
Assay (M) at 26X Dilution
(as Sodium Phosphate Monobasic) 0.045-0.055
Does not contain enzyme
Store at room temperature.
IMO: 8:3266

Dithiothreitol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1,4-Dithiothreitol (DTT, Cleland's Reagent)
ULTRAPURE BIOREAGENT

F780-01	Poly	5 g	upr	196.55	
F780-02	Poly	25 g	upr	413.25	
F780-03	Poly	100 g	upr	1333.50	
F780-05	Poly	1 kg	upr	8406.75	

$HSCH_2(CHOH)_2CH_2SH$ FW: 154.25

Assay ($HSCH_2(CHOH)_2CH_2SH$) .....min. 99.5%
Absorbance of a 0.1M Solution (1-cm path vs water) at:
280 nm .....max. 0.06
260 nm .....max. 0.40
Appearance .....Passes Test
Melting Point .....40-43 °C.
Keep material refrigerated between 2-8°C (36-46°F).

CAS: 3483-12-3 MERCK INDEX: 14,3376 FLASH POINT: > 109°C

1,4-Dithiothreitol (DTT, Cleland's Reagent)
cGMP
Biotech Reagent

F781-05	Poly	1 kg	upr	10650.05	

$HSCH_2(CHOH)_2CH_2SH$ FW: 154.25

Assay ($HSCH_2(CHOH)_2CH_2SH$) .....min. 99.5%
Appearance .....Passes Test
Absorbance of a 0.1M Solution (1-cm path vs water) at:
280 nm .....max. 0.06
260 nm .....max. 0.40
Infrared Spectrum .....Passes Test
Keep material refrigerated between 2-8°C (36-46°F).

CAS: 3483-12-3 MERCK INDEX: 14,3376 FLASH POINT: > 109°C

75% DMSO / 25% DI Water Blend
BAKER ANALYZED Reagent

9207-07	Poly Pail	19 L	sbk	1498.15	
9207-09	Poly Drum	200 L	sbk	Inquire	

Component Specifications:
Dimethyl Sulfoxide
Assay ($(CH_3)_2SO$) (by GC, corrected for water) .....min. 99.9%
Water (H_2O) .....max. 0.1%
Filtered through 0.2 micron filter

DENSITY: 1 L = 1.10 kg MERCK INDEX: 14,3259 FLASH POINT: 89°C

90% DMSO / 10% Alcohol Blend
BAKER ANALYZED Reagent

9236-07	Poly Pail	19 L	sbk	1804.60	

Component Specifications:
Dimethyl Sulfoxide
Assay ($(CH_3)_2SO$) (by GC, corrected for water) .....min. 99.9%
Water (H_2O) .....max. 0.1%
Alcohol
SDA Formula 3A (200 proof)(v/v) 94.0-96.0%
Isopropyl Alcohol (2-propanol)(v/v) 4.0-6.0%
Water (H_2O) .....max. 0.5%
Filtered through 0.2 micron filter

MERCK INDEX: 14,3259 FLASH POINT: 58.3°C

Dodecanoic Acid
See Lauric Acid

Dodecyl Sodium Sulfate
See Sodium Dodecyl Sulfate

Dodecyltrimethylammonium Chloride
BAKER

L049-03	Glass	25 g	org	299.85	

$CH_3(CH_2)_{11}N(CH_3)_3Cl$ FW: 263.90

Assay ($C_{15}H_{34}ClN$) .....min. 97%
Appearance .....Passes Test

CAS: 112-00-5 IMO: 8:3261

Dowex Ion Exchange Resins
See under Ion Exchange Resins

DRIERITE, Indicating (4 Mesh)

L057-07		454 g	non	69.10	
L057-02		2.3 kg	non	279.75	

Product Information (not specifications):
DRIERITE, Indicating is Calcium Sulfate, Anhydrous. It is impregnated with cobalt chloride making the material blue when dry and changing to rose-red upon absorption of moisture. The material is an all-purpose drying agent. As a desiccant, it is capable of absorbing about 6.6% by weight of moisture and 10-14% by weight of moisture in gases.

CAS: 7778-18-9 MERCK INDEX: 14,1706

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

DRIERITE, Indicating (8 Mesh)

L058-07		454 g	non	62.90	
L058-02		2.3 kg	non	246.40	

Product Information (not specifications):
DRIERITE, Indicating is Calcium Sulfate, Anhydrous. It is impregnated with cobalt chloride making the material blue when dry and changing to rose-red upon absorption of moisture. The material is an all-purpose drying agent. As a desiccant, it is capable of absorbing about 6.6% by weight of moisture and 10 -14% by weight of moisture in gases.

CAS: 7778-18-9 MERCK INDEX: 14,1706

DRIERITE, Indicating (10-20 Mesh)

L059-07	Glass	454 g	non	68.10	

Product Information (not specifications):
DRIERITE, Indicating is Calcium Sulfate, Anhydrous. It is impregnated with cobalt chloride making the material blue when dry and changing to rose-red upon absorption of moisture. The material is an all-purpose drying agent. As a desiccant, it is capable of absorbing about 6.6% by weight of moisture and 10-14% by weight of moisture in gases.

CAS: 7778-18-9 MERCK INDEX: 14,1706

DRIERITE, Regular (8 Mesh)
(Non-Indicating)

L056-07		454 g	non	32.95	
L056-02		2.3 kg	non	122.30	

Product Information (not specifications):
DRIERITE is Calcium Sulfate, Anhydrous. The material is an all-purpose drying agent. As a desiccant, it is capable of absorbing about 6.6% by weight of moisture and 10-14% by weight of moisture in gases.

CAS: 7778-18-9 MERCK INDEX: 14,1706

Drugs of Abuse Testing
See Analytical Chromatography Section, p. 22-45

DTT
See 1,4-Dithiothreitol (DTT, Cleland's Reagent)

DUAL-TINT pH Papers
See Wet Chemicals Analysis Section, p. 49-55 or pH Products, p. 297-298

Edetate Disodium
USP
(edta, disodium salt dihydrate crystal)

8994-01	Glass	500 g	rss	251.85	
		4 x 500 g	rss	167.90	671.60
8994-07	Poly Pail	12 kg	bks	Inquire	

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ FW: 372.24

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
pH (1 in 20) 4.0-6.0
Loss on Drying 8.7-11.4%
Calcium (Ca) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.005%
Nitrilotriacetic Acid ..... max. 0.1%
Assay ($C_{10}H_{14}N_2Na_2O_8$) (dried basis) 99.0-101.0%

CAS: 6381-92-6

Edetate Disodium, USP
Multi-Compendial
(edta, disodium salt dihydrate crystal)

8995-01	Glass	500 g	rss	307.65	
		4 x 500 g	rss	205.10	820.40
8995-07	Poly Pail	12 kg	bks	Inquire	
8995-20	Poly Drum	100 lb	bul	Inquire	

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ FW: 372.24

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
pH (1 in 20) 4.0-6.0
Loss on Drying 8.7-11.4%
Calcium (Ca) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.005%
Nitrilotriacetic Acid ..... max. 0.1%
Assay ($C_{10}H_{14}N_2Na_2O_8$) (dried basis) 99.0-101.0%
Endotoxin Concentration (EU/g) ..... Actual Value Reported

Meets BP/Ph.Eur. Chemical Specifications
Assay 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Impurity A ..... max. 0.1%
Appearance of Solution ..... Passes Test
pH (1 in 20) 4.0-5.5
Heavy Metals (as Pb) ..... max. 20 ppm
Iron (Fe) ..... max. 80 ppm

Meets JP Chemical Specifications
Assay 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
pH of 1% Solution at 25°C 4.3-4.7
Clarity and Color of Solution ..... Passes Test
Cyanide (CN) ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Arsenic (As) ..... max. 2 ppm
Residue after Ignition 37.0-39.0%

CAS: 6381-92-6

EDTA

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

EDTA, Powder
BAKER ANALYZED ACS Reagent
((ethylenedinitrilo)tetraacetic acid)

8991-01	Poly	500 g	csa	198.55	
		4 x 500 g	csa	132.35	529.40

$C_{10}H_{16}N_2O_8$ FW: 292.25

Meets ACS Specifications

Assay ($C_{10}H_{16}N_2O_8$) 99.4-100.6%
Insoluble in Dilute NH_4OH .....max. 0.005%
Residue after Ignition .....max. 0.2%
Nitrilotriacetic Acid .....max. 0.1%
Calcium (Ca) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.005%
Trace Impurities (in ppm):
Magnesium (Mg) .....max. 5

CAS: 60-00-4 MERCK INDEX: 14,3517

EDTA Standard Solution (1 mL = 1 mg $CaCO_3$)
BAKER ANALYZED Reagent

5648-02	Poly	1 L	sol	41.15	
		6 x 1 L	sol	34.30	205.80
5648-03	Cubitainer	4 L	sol	82.40	
		4 x 4 L	sol	68.65	274.60
5648-07	Cubitainer	20 L	sol	228.60	

$C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$ FW: 372.24

Each lot of this product is standardized at 25°C against NIST Standard Reference Material Calcium Carbonate (Hydroxy Naphthol Blue endpoint).
SRM No .....Reported on Label
The titer found falls within the range 0.980-1.020 mg $CaCO_3$/mL.
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 6381-92-6 MERCK INDEX: 14,3517

EDTA, Disodium Salt, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent
((ethylenedinitrilo)tetraacetic acid, disodium salt, dihydrate)

8993-01	Poly	500 g	csa	208.15	
		4 x 500 g	csa	138.75	555.00
8993-05	Poly	2.5 kg	csa	707.25	
		4 x 2.5 kg	csa	471.50	1886.00
8993-07	Poly Pail	12 kg	bks	Inquire	
8993-R		100 lb	bul	Inquire	

$C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$ FW: 372.24

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$) 99.0-101.0%
Insoluble Matter .....max. 0.005%
pH of 5% Solution at 25°C 4.0-6.0
Nitrilotriacetic Acid (by polarography) .....max. 0.1%
Heavy Metals (as Pb) .....max. 0.005%
Iron (Fe) .....max. 0.01%

CAS: 6381-92-6

EDTA, Disodium Salt, Dihydrate, Crystal
ULTRAPURE BIOREAGENT
((ethylenedinitrilo)tetraacetic acid, disodium salt, dihydrate)

4040-00	Poly	100 g	upr	43.45	
4040-01	Poly	500 g	upr	106.05	
4040-04	Poly	1 kg	upr	145.65	
4040-06	Poly Pail	5 kg	upr	493.65	

$C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$ FW: 372.24

Assay ($C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$) 99.0-101.0%
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
pH of 5% Solution at 25°C 4.0-6.0
Calcium (Ca) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.001%
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.005%
Nitrilotriacetic Acid (by polarography) .....max. 0.1%

CAS: 6381-92-6

EDTA, Disodium Salt, Dihydrate
See also under Edetate Disodium

EDTA, Disodium Salt, Dihydrate, 0.1M Volumetric Solution
BAKER ANALYZED Reagent

5632-02	Poly	1 L	sol	68.90	
		6 x 1 L	sol	57.40	344.40

$C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$ FW: 372.24

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Molarity (Mol/L) 0.098-0.102

CAS: 6381-92-6

For more information on products for drug discovery, see pages 58-63.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

EDTA, Disodium Salt, DILUT-IT Analytical Concentrate, 0.1M

(1/10 mole = 33.62 g $C_{10}H_{14}N_2Na_2O_8$)

4653-01	Ampoule	1 pk	spr	78.20	
		6 x 1 pk	spr	65.15	390.90

(Makes 0.1M solution after dilution to 1000 mL)

Molarity (by titrimetry) ..... Passes Test

EDTA, Iron(III) Derivative, Sodium Salt (13% Iron)

Practical

L699-07	Poly	500 g	non	48.50	

$C_{10}H_{12}FeN_2NaO_8$ FW: 367.05

Appearance ..... Passes Test
Iron (Fe) 12.5-13.5%
Total EDTA ..... min. 67.5%

CAS: 15708-41-5

EDTA, Magnesium Derivative, Disodium Salt

BAKER

L704-05	Poly	100 g	non	368.70	

$C_{10}H_{12}MgN_2Na_2O_8 \cdot 4H_2O$ FW: 432.56

Test for EDTA/Mg Ratio ..... Passes Test

CAS: 14402-88-1

EDTA, Magnesium Derivative, Magnesium Salt

Technical

L701-05	Poly	100 g	non	250.10	
L701-06	Poly Pail	5 kg	non	4628.45	

$C_{10}H_{12}Mg_2N_2O_8$ FW: 336.82

Identification (by IR) ..... Passes Test

EDTA, Tetrasodium Salt, Dihydrate

BAKER ANALYZED Reagent
((ethylenedinitrilo)tetraacetic acid, tetrasodium salt, dihydrate)

L693-07	Poly	500 g	non	147.70	
L693-09	Poly	2.5 kg	csa	517.35	
		4 x 2.5 kg	csa	344.90	1379.60
L693-01	Poly Pail	12 kg	bks	Inquire	

$C_{10}H_{12}N_2Na_4O_8 \cdot 2H_2O$ FW: 416.21

Assay ($C_{10}H_{12}N_2Na_4O_8 \cdot 2H_2O$) 99-104%
Insoluble Matter ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.01%

CAS: 10378-23-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ehrlich's Reagent

See p-(Dimethylamino)benzaldehyde

Elemental Analysis Products

See Analytical Standards Section, p. 94-98

Eosin B

BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology (C.I. 45400)

L083-03	Glass	25 g	non	121.35	

$C_{20}H_6Br_2N_2Na_2O_9$ FW: 624.05

Certified by the Biological Stain Commission

Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 0.01% Na_2CO_3,1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 548-24-3

Eosin Y

BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology and Compounding of Blood Stain (C.I. 45380)

L088-03	Glass	25 g	non	68.35	

$C_{20}H_6Br_4Na_2O_5$ FW: 691.88

Certified by the Biological Stain Commission

Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 0.01% Na_2CO_3,1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 17372-87-1 MERCK INDEX: 14,3603

EPA Contract Laboratory Program (CLP) Standards

See Analytical Standards Section, p. 94-98

Epsom Salts

See Magnesium Sulfate, 7-Hydrate, Crystal, USP

Eriochrome Black T

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Eriochrome Black T, Powder

BAKER ANALYZED ACS Reagent
(C.I. 14645)

L126-03	Glass	25 g	bio	37.30	
L126-05	Glass	100 g	bio	137.70	

$HOC_{10}H_6N:NC_{10}H_4(OH)(NO_2)SO_3Na$ FW: 461.40

Meets ACS Specifications

Clarity of Solution .....Passes Test
Suitability as Complexometric Indicator .....Passes Test

CAS: 1787-61-7 MERCK INDEX: 14,3667

Eriochrome Black, T.S.

BAKER ANALYZED Reagent

5920-04	Glass	100 mL	sol	19.90	

Sensitivity .....Passes Test
Product Information (not specifications):
Appearance (Clear, dark red violet solution)

IMO: 3:1992 FLASH POINT: 11°C

Solvent Spill Cleanup Products available. See pp. 378.

Eriochrome Blue Black R

See Calcon

Erythrosin B

BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology
(C.I. 45430)

L146-03	Glass	25 g	non	115.85	

$C_{20}H_6I_4Na_2O_5$ FW: 879.87

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 0.01% Na_2CO_3,1-cm path) .....Actual Value Reported
Biological Test .....Passes Test

CAS: 16423-68-0 MERCK INDEX: 14,3693

Ethanedial

See Glyoxal

1,2-Ethanediamine

See Ethylenediamine

Ethanedioic Acid

See Oxalic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1,2-Ethanediol

See Ethylene Glycol

Ethanol, Denatured, 70% Solution, Sterile

See under Protocol C[3]

Ethanolamine

See Monoethanolamine

Ethanolic Acid

See under Acetic Acid

Ether, Anhydrous

BAKER ANALYZED ACS Reagent
Suitable for Fat Extraction
Contains BHT as a Preservative

9244-01	Al SAFETAINER	250 mL	cso	96.10	
		12 x 250 mL	cso	64.05	768.60
9244-06	Al SAFETAINER	500 mL	cso	97.65	
		6 x 500 mL	cso	65.10	390.60
9244-22	Al SAFETAINER	1 L	cso	179.80	
		6 x 1 L	cso	119.85	719.10
9244-25	Al SAFETAINER	2.5 L	cso	363.40	
		4 x 2.5 L	cso	242.25	969.00
9244-05	Glass	4 x 4 L	cso	294.95	1179.80
9244-03	Al SAFETAINER	4 L	cso	423.90	
		4 x 4 L	cso	282.60	1130.40
9244-07	Steel Pail	20 L	sbk	605.60	
9244-R	Steel Drum	320 lb	bul	Inquire	

$(C_2H_5)_2O$ FW: 74.12

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(C_2H_5)_2O$) (by GC, corrected for water) .....min. 99.0%
Alcohol (C_2H_5OH) .....Passes Test
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.001%
Color (APHA) .....max. 10
Peroxide (as H_2O_2) .....max. 1 ppm
Preservative (BHT) .....min. 7 ppm
Residue after Evaporation .....max. 0.001%
Titrable Acid (µeq/g) .....max. 0.2
Water (by KF, coulometric) .....max. 0.01%
Density (g/mL) at 25°C (typical) 0.7079

CAS: 60-29-7 MERCK INDEX: 14,3806 IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether, Anhydrous

HPLC
For Use in Liquid Chromatography and Spectrophotometry
Contains Alcohol as a Preservative

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9237-03	Glass	4 L	chp	219.90	
		4 x 4 L	chp	146.60	586.40
9237-33	Poly Coated	4 L	chp	167.30	

$(C_2H_5)_2O$ FW: 74.12

Ultraviolet Absorbance (1.00-cm cell vs. water):
- 400-350 nm .....max. 0.01
- 280 nm .....max. 0.02
- 254 nm .....max. 0.07
- 231 nm .....max. 0.4

UV Cut-off, nm .....max. 220
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
- at 450 nm Emission .....max. 0.5
- at Emission Maximum for Impurities .....max. 1.0

Assay (by GC, corrected for water, exclusive of preservative) .min. 99.5%
Peroxide (as H_2O_2) .....max. 5 ppm
Preservative (C_2H_5OH) 1.5-2.5%
Residue after Evaporation .....max. 5 ppm
Titrable Acid (µeq/g) .....max. 0.2
Water (by KF, coulometric) .....max. 0.01%

CAS: 60-29-7 DENSITY: 1 L = 0.71 kg MERCK INDEX: 14,3806
IMO: 3:1155 FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether, For Anesthesia

cGMP

USP
(ethyl ether)
Preserved with about 2% Alcohol, 0.2% max Water and 7 ppm min BHT

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9249-02	Al SAFETAINER	12 x 250 mL	rss	58.85	706.20
9249-22	Al SAFETAINER	6 x 1 L	rss	104.60	627.60

$(C_2H_5)_2O$ FW: 74.12

Meets USP Requirements

Specific Gravity at 25°/25°C 0.713-0.716
Acidity .....Passes Test
Nonvolatile Residue .....max. 0.003%
Aldehydes .....Passes Test
Peroxide (as H_2O_2) .....max. 0.3 ppm
Low Boiling Hydrocarbons .....max. 0.2%
Preservative (C_2H_5OH), (w/w) 1.5-3.5%
Preservative (H_2O), (w/w) .....max. 0.2%
Preservative (BHT) .....min. 7 ppm

CAS: 60-29-7 DENSITY: 1 L = 0.71 kg MERCK INDEX: 14,3806
IMO: 3:1155 FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether, Ultra Low Water

BakerDRY
Contains No Preservative

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9250-10	Septum-Seal Cap	100 mL	lws	54.75	
		6 x 100 mL	lws	43.80	262.80
9250-12	Septum-Seal Cap	1 L	lws	79.00	
		6 x 1 L	lws	63.20	379.20

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$(C_2H_5)_2O$ FW: 74.12

Meets ACS Specifications

Assay ($(C_2H_5)_2O$) (by GC) .....min. 99.0%
Alcohol (C_2H_5OH) .....max. 0.05%
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.001%
Color (APHA) .....max. 10
Peroxide (as H_2O_2) .....max. 1 ppm
Residue after Evaporation .....max. 5 ppm
Titrable Acid (µeq/g) .....max. 0.2
Water (by KF, coulometric) .....max. 10 ppm
Density (g/mL) at 25°C (typical) 0.7079

CAS: 60-29-7 MERCK INDEX: 14,3806 IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether

ULTRA RESI-ANALYZED
For Organic Residue Analysis

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9259-02	Glass	1 L	chp	87.75	
		6 x 1 L	chp	58.50	351.00
9259-03	Glass	4 L	chp	235.35	
		4 x 4 L	chp	156.90	627.60

$(C_2H_5)_2O$ FW: 74.12

Assay ($(C_2H_5)_2O$) (by GC, exclusive of preservative, corrected for water) .....min. 99.0%
Diethyl Ether Interferences:
Suitability for U.S. EPA Method 8151A .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Peroxide (as H_2O_2) .....max. 5 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Titrable Acid (µeq/g) .....max. 0.2
Water (by KF, coulometric) .....max. 0.08%

CAS: 60-29-7 DENSITY: 1 L = 0.71 kg MERCK INDEX: 14,3806
IMO: 3:1155 FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ether
BAKER ANALYZED ACS Reagent
Contains Alcohol, Water, and BHT as Preservatives

9240-22	Al SAFETAINER	1 L	cso	144.15	
		6 x 1 L	cso	96.10	576.60
9240-05	Glass	4 x 4 L	cso	278.90	1115.60
9240-03	Al SAFETAINER	4 L	cso	430.30	
		4 x 4 L	cso	286.85	1147.40
9240-07	Steel Pail	20 L	sbk	614.35	
9240-R	Steel Drum	320 lb	bul	Inquire	

$(C_2H_5)_2O$ FW: 74.12

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($(C_2H_5)_2O$) (by GC, exclusive of preservative) .....min. 98.0%
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.001%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Titrable Acid (µeq/g) .....max. 0.2
Peroxide (as H_2O_2) .....max. 1 ppm
Preservative (C_2H_5OH) 1.5-3.5%
Preservative (H_2O), (w/w) .....max. 0.5%
Preservative (BHT) .....min. 0.0007%
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 0.713

CAS: 60-29-7 MERCK INDEX: 14,3806 IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether
cGMP
USP
Preserved with 2% Alcohol, 0.5% max Water and 7 ppm min BHT

9239-22	Al SAFETAINER	1 L	rss	161.20	
		6 x 1 L	rss	107.45	644.70
9239-05	Al SAFETAINER	4 L	rss	517.90	
		4 x 4 L	rss	345.25	1381.00
9239-07	Steel Pail	20 L	bks	Inquire	
9239-R	Steel Drum	320 lb	bul	Inquire	

$(C_2H_5)_2O$ FW: 74.12

Meets USP Requirements
Specific Gravity at 25°/25°C 0.713-0.716
Acidity .....Passes Test
Nonvolatile Residue .....max. 0.003%
Aldehydes .....Passes Test
Peroxide (as H_2O_2) .....max. 0.3 ppm
Low Boiling Hydrocarbons .....max. 0.2%
Preservative (C_2H_5OH), (w/w) 1.5-3.5%
Preservative (H_2O), (w/w) .....max. 0.5%
Preservative (BHT) .....min. 7 ppm

CAS: 60-29-7 DENSITY: 1 L = 0.71 kg MERCK INDEX: 14,3806
IMO: 3:1155 FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ethidium Bromide
ULTRAPURE BIOREAGENT
(2,7-diamino-10-ethyl-9-phenylphenanthridinium bromide; homidium bromide)
For Nucleic Acid Detection

4007-00	Poly	1 g	upr	29.55	
4007-01		5 g	upr	105.55	

$C_{21}H_{20}BrN_3$ FW: 394.31

Assay ($C_{21}H_{20}BrN_3$) (dried basis) .....min. 98%
UV Absorbance, nm 283-287
UV Absorbance at Maximum .....min. 1.25
Visible Absorbance, nm 475-481
Visible Absorbance at Maximum .....min. 0.65
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected

CAS: 1239-45-8 MERCK INDEX: 14,4731 IMO: 6.1:2811

2-Ethoxyethanol
BAKER ANALYZED Reagent
(ethylene glycol monoethyl ether)

L210-07	Glass	500 mL	non	68.60	
L210-09	Glass	4 L	non	155.10	

$C_2H_5OCH_2CH_2OH$ FW: 90.12

Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_4H_{10}O_2$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.005%
Acidity (as CH_3COOH) .....max. 0.01%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Boiling Range (1-95 mL) .....133-135 °C.

CAS: 110-80-5 DENSITY: 1 L = 0.93 kg MERCK INDEX: 14,3750
IMO: 3:1171 FLASH POINT: 43°C

Solvent Spill Cleanup Products available. See pp. 378.

2-(2-Ethoxyethoxy)ethanol
BAKER

L216-07	Glass S/S	500 mL	non	58.85	

$C_2H_5OCH_2CH_2OCH_2CH_2OH$ FW: 134.18

Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Identification (by IR) .....Passes Test

CAS: 111-90-0 DENSITY: 1 L = 0.9855 kg MERCK INDEX: 14,1800
FLASH POINT: 83°C

Ethyl Acetate
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9280-01	Glass	500 mL	cso	52.60	
		12 x 500 mL	cso	35.05	420.60
9280-22	Al SAFETAINER	1 L	cso	118.95	
		6 x 1 L	cso	79.30	475.80
9280-03	Glass	4 L	cso	244.75	
		4 x 4 L	cso	163.15	652.60
9280-33	Poly Coated	4 L	cso	256.20	
		4 x 4 L	cso	170.80	683.20
9280-05	Al SAFETAINER	4 L	cso	282.60	
		4 x 4 L	cso	188.40	753.60
9280-07	Steel Pail	20 L	bks	Inquire	
9280-R	Steel Drum	400 lb	bul	Inquire	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$CH_3COOC_2H_5$ FW: 88.11

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CH_3COOC_2H_5$) (by GC, corrected for water) .....min. 99.9%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
Titrable Acid (µeq/g) .....max. 0.9
Water (by KF, volumetric) .....max. 0.06%

Product Information (not specifications):

Boiling Point (typical) .....77.2 °C.
Density (g/mL) at 25°C (typical) 0.894

CAS: 141-78-6 MERCK INDEX: 14,3757 IMO: 3:1173
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetate
NF cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9278-01	Glass	500 mL	rss	60.25	
		12 x 500 mL	rss	40.15	481.80
9278-03	Glass	4 L	rss	297.45	
		4 x 4 L	rss	198.30	793.20
9278-07	Steel Pail	20 L	bks	Inquire	

$CH_3COOC_2H_5$ FW: 88.11

Meets NF Requirements

Assay ($CH_3COOC_2H_5$) 99.0-100.5%
Identification .....Passes Test
Specific Gravity at 25°/25°C 0.894-0.898
Acidity .....Passes Test
Readily Carbonizable Substances .....Passes Test
Nonvolatile Residue .....max. 0.02%
Methyl Compounds .....Passes Test
Chromatographic Purity: .....min. 99.5%

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg MERCK INDEX: 14,3757
IMO: 3:1173 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetate
HPLC
For Use in Liquid Chromatography and Spectrophotometry

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9282-02	Glass	1 L	chp	81.90	
		6 x 1 L	chp	54.60	327.60
9282-03	Glass	4 L	chp	158.65	
		4 x 4 L	chp	105.75	423.00
9282-33	Poly Coated	4 L	chp	176.55	
		4 x 4 L	chp	117.70	470.80
9282-G4	Glass	4 L	chp	182.40	
		4 x 4 L	chp	121.60	486.40

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$CH_3COOC_2H_5$ FW: 88.11

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-330 nm .....max. 0.01
280 nm .....max. 0.02
265 nm .....max. 0.05
UV Cut-off, nm .....max. 255

Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....Actual Value Reported
at Emission Maximum for Impurities .....Actual Value Reported

Assay (by GC, corrected for water) .....min. 99.6%
Residue after Evaporation .....max. 2 ppm
Titrable Acid (µeq/g) .....max. 0.8
Water (by KF, volumetric) .....max. 0.04%

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg MERCK INDEX: 14,3757
IMO: 3:1173 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetate
ULTRA RESI-ANALYZED
For Organic Residue Analysis

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9260-02	Glass	1 L	chp	74.35	
		6 x 1 L	chp	49.55	297.30
9260-03	Glass	4 L	chp	153.25	
		4 x 4 L	chp	102.15	408.60

$CH_3COOC_2H_5$ FW: 88.11

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Assay ($CH_3COOC_2H_5$) (by GC, corrected for water) .....min. 99.6%
Titrable Acid (µeq/g) .....max. 0.8
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, volumetric) .....max. 0.05%

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg MERCK INDEX: 14,3757
IMO: 3:1173 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ethyl Acetate
BAKER ANALYZED LC/MS Reagent

9828-03	Glass	4 L	cbs	151.30	
		4 x 4 L	cbs	100.85	403.40

$CH_3COOC_2H_5$ FW: 88.11

Ultraviolet Absorbance (1.00-cm cell vs. water):
330 -400 nm .....max. 0.01
280 nm .....max. 0.02
275 nm .....max. 0.05
265 nm .....max. 0.050
255 nm .....max. 1.00
Assay ($CH_3COOC_2H_5$) .....min. 99.6%
Residue after Evaporation .....max. 1 ppm
Water (H_2O) .....max. 0.05%
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....Actual Value Reported
* Calcium (Ca) .....Actual Value Reported
Iron (Fe) .....Actual Value Reported
Magnesium (Mg) .....Actual Value Reported
Potassium (K) .....Actual Value Reported
*Sodium (Na) .....Actual Value Reported
* May change over time due to extraction from glass container.
Filtered through a 0.2 micron filter.

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg MERCK INDEX: 14,3757
IMO: 3:1173 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Alcohol
See Alcohol, Anhydrous and Proprietary Solvent

Ethyl Alcohol, Denatured 70% Solution, Sterile
See under Protocol C[3]

[Ethylenebis(oxyethylenenitrilo)]tetraacetic Acid
BAKER (EGTA)

L657-05	Glass	100 g	bio	224.85	
L657-06	Poly Pail	10 kg	bio	20650.30	

$C_{14}H_{24}N_2O_{10}$ FW: 380.35

Assay ($C_{14}H_{24}N_2O_{10}$) .....min. 98%
CAS: 67-42-5

Ethylene Chloride
See 1,2-Dichloroethane and Ethylene Dichloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ethylenediamine
BAKER ANALYZED Reagent

9299-01		500 mL	non	84.60	
9299-03		4 L	non	201.85	

$NH_2CH_2CH_2NH_2$ FW: 60.10

Assay ($NH_2CH_2CH_2NH_2$) .....min. 98.0%
Density (g/mL) at 25°C 0.890-0.903
Heavy Metals (as Pb) .....max. 0.001%

CAS: 107-15-3 MERCK INDEX: 14,3795 IMO: 8:1604
FLASH POINT: 40°C

Ethylenediaminetetraacetic Acid (and its salts and derivatives)
See under EDTA and Edetate Disodium

Ethylene Dichloride
FCC

FOOD GRADE cGMP

9301-04	Glass	150 mL	non	37.50	
9301-01	Glass	500 mL	cso	66.15	
		12 x 500 mL	cso	44.10	529.20
9301-03	Glass	4 L	cso	252.70	
		4 x 4 L	cso	168.45	673.80

$ClCH_2CH_2Cl$ FW: 98.96

Meets FCC Requirements
Distilling Range: .....82-85 °C.
Specific Gravity at 25°/25°C 1.245-1.255
Acidity .....max. 10 ppm
Free Halogens .....Passes Test
Lead (Pb) .....max 1 mg/kg
Nonvolatile Residue .....max. 0.002%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.03%

CAS: 107-06-2 DENSITY: 1 L = 1.24 kg MERCK INDEX: 14,3797
IMO: 3:1184 FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethylene Dichloride
See also 1,2-Dichloroethane

(Ethylenedinitrilo)tetraacetic Acid, Disodium Salt
See EDTA Disodium Salt, Dihydrate and Edetate Disodium

2,2′-(Ethylenedioxy)diethanol
See Triethylene Glycol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ethylene Glycol
BAKER ANALYZED Reagent
(1,2-ethanediol)

9300-01	Glass	500 mL	cso	75.30	
		12 x 500 mL	cso	50.20	602.40
9300-03	Glass	4 L	cso	266.50	
		4 x 4 L	cso	177.65	710.60
9300-33	Poly Coated	4 L	cso	288.75	
		4 x 4 L	cso	192.50	770.00
9300-07	Poly Pail	19 L	bks	Inquire	
9300-R	Poly Drum	500 lb	bul	Inquire	

$HOCH_2CH_2OH$ FW: 62.07

Appearance .....Passes Test
Assay ($HOCH_2CH_2OH$) (by GC) .....min. 99%
Assay ($HOCH_2CH_2OH$)(wet analysis) .....min. 99%
Color (APHA) .....max. 10
Specific Gravity at 20°/20°C 1.114-1.116
Residue after Ignition .....max. 0.005%
Acidity (as CH_3COOH) .....max. 0.01%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Iron (Fe) .....max. 0.2
Product Information (not specifications):
Boiling Point (typical) .....197 °C.

CAS: 107-21-1 DENSITY: 1 L = 1.1 kg MERCK INDEX: 14,3798
FLASH POINT: 111°C

Ethylene Glycol Dimethyl Ether
See 1,2-Dimethoxyethane

Ethylene Glycol Monobutyl Ether
See 2-Butoxyethanol

Ethylene Glycol Monoethyl Ether
See 2-Ethoxyethanol

Ethylene Glycol Monomethyl Ether
BAKER
(methyl CELLOSOLVE)

L718-07	Glass	500 mL	non	80.35	

$CH_3OCH_2CH_2OH$ FW: 76.10

Peroxide (as H_2O_2) .....max. 0.001%

CAS: 109-86-4 DENSITY: 1 L = 0.96 kg MERCK INDEX: 14,6038
IMO: 3:1188 FLASH POINT: 39°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethylene Glycol Monomethyl Ether
See also 2-Methoxyethanol

Ethylene Glycol Monophenyl Ether
See 2-Phenoxyethanol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ethyl Ether
See under Ether

2-Ethyl-1-hexanol
Practical

L820-09	Glass	4 L	non	86.25	

$CH_3(CH_2)_3CH(C_2H_5)CH_2OH$ FW: 130.23

Identification (by IR) .....Passes Test

CAS: 104-76-7 DENSITY: 1 L = 0.833 kg MERCK INDEX: 14,3808
FLASH POINT: 81°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Silicate
See Tetraethyl Orthosilicate

ExplorER Gel Solution
See under Electrophoresis Products, pp. 62-63

Fast Green FCF
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology and Cytology (C.I. 42053)

M377-03	Glass	25 g	bio	93.05	

$C_{37}H_{34}N_2Na_2O_{10}S_3$ FW: 808.86

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum (0.6 mg/200 mL in 50% C_2H_5OH, 1-cm path) .....Actual Value Reported
Biological Test .....Passes Test

CAS: 2353-45-9 MERCK INDEX: 14,3941

Fehling's Solution (A), T.S.
BAKER ANALYZED Reagent

5918-01	Glass	500 mL	sol	24.05	

Assay ($CuSO_4 \cdot 5H_2O$ (g/mL)) 0.069-0.073
Product Information (not specifications):
Appearance (Clear, blue solution)

DENSITY: 1 L = 1.04 kg

Fehling's Solution (B), T.S.
BAKER ANALYZED Reagent

5919-02	Poly	1 L	sol	75.90	

Suitability .....Passes Test
Product Information (not specifications):
Appearance (clear, colorless solution)

IMO: 8:3266

Ferric Ammonium Citrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ferric Ammonium Citrate, Brown, Powder

FOOD GRADE cGMP

FCC
16.5-18.5% Fe

1980-01	Glass	500 g	non	110.10	

Meets FCC Requirements
Meets Reagent Specifications for testing USP/NF monographs

Assay (as Fe) 16.5-18.5%
Identification ..... Passes Test
Ferric Citrate ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg) ..... max 1 mg/kg
Oxalate (C_2O_4) ..... Passes Test
Sulfate (SO_4) ..... max. 0.3%
Tartrate ..... Passes Test

CAS: 1185-57-5 MERCK INDEX: 14,4017

Ferric Ammonium Citrate, Green, Powder

FOOD GRADE cGMP

FCC
14.5-16.0% Fe

1977-01	Glass	500 g	non	86.20	

Meets FCC Requirements

Assay (as Fe) 14.5-16.0%
Identification ..... Passes Test
Ferric Citrate ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg) ..... max 1 mg/kg
Oxalate (C_2O_4) ..... Passes Test
Sulfate (SO_4) ..... max. 0.3%

CAS: 1185-57-5 MERCK INDEX: 14,4017

Ferric Ammonium Sulfate, 12-Hydrate, Crystal

BAKER ANALYZED ACS Reagent
(ammonium iron(III) sulfate, dodecahydrate)

1988-01	Poly	500 g	csa	132.90	
		4 x 500 g	csa	88.60	354.40
1988-07	Poly Pail	12 kg	bks	Inquire	
1988-R	Lined Fiber Dr	300 lb	bul	Inquire	

$FeNH_4(SO_4)_2 \cdot 12H_2O$ FW: 482.20

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($FeNH_4(SO_4)_2 \cdot 12H_2O$) (by iodometry) 98.5-102.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Nitrate (NO_3) ..... max. 0.01%
Calcium (Ca) ..... max. 0.01%
Copper (Cu) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Zinc (Zn)(by AAS) ..... max. 0.003%
Ferrous Iron ..... Passes Test

CAS: 7783-83-7 MERCK INDEX: 14,518

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ferric Ammonium Sulfate, T.S.

BAKER ANALYZED Reagent

5930-04	Glass	100 mL	sol	17.25	

Assay ($FeNH_4(SO_4)_2 \cdot 12H_2O$), w/v 7.6-8.4%
Product Information (not specifications):
Appearance (Clear, amber solution)

Ferric Chloride, T.S.

BAKER ANALYZED Reagent

5921-04	Glass	100 mL	sol	18.15	
5921-01	Glass	500 mL	sol	23.75	

Assay ($FeCl_3 \cdot 6H_2O$), w/v 8.5-9.5%
Product Information (not specifications):
Appearance (clear, dark orange solution that may become cloudy over time)

IMO: 8:2582

Ferric Citrate, n-Hydrate

BAKER
(iron(III) citrate)

M376-07	Poly	500 g	non	142.00	

$FeC_6H_5O_7 \cdot nH_2O$

Assay (as Fe) ..... min. 16.0%

CAS: 2338-05-8 MERCK INDEX: 14,4021

Ferric Nitrate, 9-Hydrate, Crystal

BAKER ANALYZED ACS Reagent
(iron(III) nitrate, nonohydrate)

2018-01	Poly	500 g	csa	115.00	
		4 x 500 g	csa	76.65	306.60
2018-05	Poly	2.5 kg	csa	385.45	
		4 x 2.5 kg	csa	256.95	1027.80
2018-07	Lined Fiber Dr	12 kg	bks	Inquire	

$Fe(NO_3)_3 \cdot 9H_2O$ FW: 404.00

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Fe(NO_3)_3 \cdot 9H_2O$) (by iodometry) 98.0-101.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.01%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.05%
Manganese (Mn) ..... max. 0.01%
pH of 5% Solution at 25°C 1.5-2.5

CAS: 7782-61-8 MERCK INDEX: 14,4027 IMO: 5.1:1466

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ferric Oxide, Powder

BAKER ANALYZED Reagent
(iron(III) oxide)

2024-01	Glass	500 g	csa	86.65	
		4 x 500 g	csa	57.75	231.00
2024-05	Poly	2.5 kg	csa	227.80	
		4 x 2.5 kg	csa	151.85	607.40
2024-07	Poly Pail	12 kg	bks	Inquire	

Fe_2O_3 FW: 159.69

Assay (Fe_2O_3) (by iodometry) .....min. 98.0%
Insoluble in HCl .....max. 0.2%
Phosphate (PO_4) .....max. 0.02%
Sulfate (SO_4) .....max. 0.2%
Copper (Cu)(by AAS) .....max. 0.01%
Manganese (Mn)(by AAS) .....max. 0.05%
Zinc (Zn)(by AAS) .....max. 0.01%

CAS: 1309-37-1 MERCK INDEX: 14,4028

Ferric Sulfate, n-Hydrate

BAKER ANALYZED Reagent
(iron(III) sulfate, hydrate)

2046-01	Glass	500 g	csa	225.40	
		4 x 500 g	csa	150.25	601.00
2046-05	Poly	2.5 kg	non	621.90	

$Fe_2(SO_4)_3 \cdot nH_2O$

Assay ($Fe_2(SO_4)_3$) .....min. 73.0%
Insoluble Matter .....max. 0.02%
Chloride (Cl) .....max. 0.002%
Nitrate (NO_3) .....max. 0.01%
Copper (Cu) .....max. 0.005%
Ferrous Iron .....max. 0.02%
Substances Not Precipitated by NH_4OH (as SO_4) .....max. 0.1%
Zinc (Zn) .....max. 0.005%

CAS: 15244-10-7 MERCK INDEX: 14,4032

Ferrous Ammonium Sulfate, 6-Hydrate, Fine Crystal

BAKER ANALYZED ACS Reagent
(ammonium iron(II) sulfate, hexahydrate)

2054-01	Glass	500 g	csa	187.00	
		4 x 500 g	csa	124.65	498.60
2054-19	Poly	1 kg	csa	300.85	
		4 x 1 kg	csa	200.55	802.20
2054-05	Poly	2.5 kg	csa	740.70	
		4 x 2.5 kg	csa	493.80	1975.20
2054-07	Poly Pail	12 kg	bks	Inquire	

$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$ FW: 392.13

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$) (by $KMnO_4$ titrn) 98.5-101.5%
Insoluble Matter .....max. 0.01%
pH of 5% Solution at 25°C 3.0-5.0
Chloride (Cl) .....max. 0.001%
Phosphate (PO_4) .....max. 0.003%
Calcium (Ca) .....max. 0.005%
Copper (Cu) .....max. 0.003%
Ferric Ion (Fe^{3+}) .....max. 0.01%
Magnesium (Mg) .....max. 0.002%
Manganese (Mn) .....max. 0.01%
Potassium (K) .....max. 0.002%
Sodium (Na) .....max. 0.02%
Zinc (Zn) .....max. 0.003%
NOTE: Due to inherent oxidation, ferric ion (Fe^{3+}) content may increase on storage.

CAS: 7783-85-9 MERCK INDEX: 14,521

Ferrous Chloride, 4-Hydrate, Crystal

BAKER ANALYZED Reagent
(iron(II) chloride, tetrahydrate)

2064-01	Glass	500 g	csa	172.65	
		4 x 500 g	csa	115.10	460.40
2064-05	Glass	2.5 kg	csa	602.25	
		4 x 2.5 kg	csa	401.50	1606.00

$FeCl_2 \cdot 4H_2O$ FW: 198.81

Assay ($FeCl_2 \cdot 4H_2O$) (by $KMnO_4$ titrn) 99.0-103.0%
Insoluble Matter .....max. 0.01%
Phosphate (PO_4) .....max. 0.001%
Sulfate (SO_4) .....max. 0.01%
Copper (Cu) .....max. 0.005%
Zinc (Zn) .....max. 0.005%
Trace Impurities (in ppm):
Arsenic (As) .....max. 10
Product Information (not specifications):
Appearance (pale green transparent and eflorescent crystals. May form spotted off-white to yellow discoloration over time.)

CAS: 13478-10-9 MERCK INDEX: 14,4043 IMO: 8:3260

Ferrous Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ferrous Sulfate, 7-Hydrate, Crystal

cGMP

Multi-Compendial
(iron(II) sulfate, heptahydrate)

2063-01	Glass	500 g	rnc	96.50	
2063-05	Glass	2.5 kg	rnc	286.45	

$FeSO_4 \cdot 7H_2O$ FW: 278.02

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Arsenic (As) ..... max. 3 ppm
Lead (Pb) ..... max. 0.001%
Mercury (Hg) ..... max. 3 ppm
Assay ($FeSO_4 \cdot 7H_2O$) 99.5-104.5%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
pH 3.0-4.0
Chloride (Cl) ..... max. 200 ppm
Chromium (Cr) ..... max. 50 ppm
Copper (Cu) ..... max. 50 ppm
Ferric Ion (Fe^{3+}) ..... max. 0.3%
Manganese (Mn) ..... max. 0.1%
Nickel (Ni) ..... max. 50 ppm
Zinc (Zn) ..... max. 500 ppm
Heavy Metals (as Pb) ..... max. 50 ppm
Assay ($FeSO_4 \cdot 7H_2O$) 98.0-105.0%

Meets JP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity of Solution ..... Passes Test
Acid ..... Passes Test
Heavy Metals (as Pb) ..... max. 25 ppm
Arsenic (As) ..... max. 2 ppm
Assay ($FeSO_4 \cdot 7H_2O$) 98.0-104.0%

CAS: 7782-63-0 MERCK INDEX: 14,4057

Ferrous Sulfate, 7-Hydrate, Crystal

cGMP

USP, FCC
(iron(II) sulfate, heptahydrate)

2074-01	Glass	500 g	rnc	87.65	
2074-05	Glass	2.5 kg	rnc	260.40	

$FeSO_4 \cdot 7H_2O$ FW: 278.02

Meets USP & FCC Requirements

Identification ..... Passes Test
Arsenic (As) ..... max. 3 ppm
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg) ..... max 1 mg/kg
Assay ($FeSO_4 \cdot 7H_2O$) 99.5-104.5%

CAS: 7782-63-0 MERCK INDEX: 14,4057

Ferrous Sulfate, 7-Hydrate, Granular

BAKER ANALYZED ACS Reagent
(iron(II) sulfate, heptahydrate)

2070-01	Poly	500 g	csa	112.15	
		4 x 500 g	csa	74.75	299.00
2070-05	Glass	2.5 kg	csa	341.10	
		4 x 2.5 kg	csa	227.40	909.60
2070-07	Poly Pail	12 kg	bks	Inquire	
2070-R	Lined Fiber Dr	300 lb	bul	Inquire	

$FeSO_4 \cdot 7H_2O$ FW: 278.02

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($FeSO_4 \cdot 7H_2O$) (by $KMnO_4$ titrn) 99.0-104.5%
Appearance ..... Passes Test
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 3.0-5.0
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Calcium (Ca) ..... max. 0.005%
Copper (Cu) ..... max. 0.005%
Ferric Ion (Fe^{3+}) ..... max. 0.1%
Magnesium (Mg) ..... max. 0.002%
Manganese (Mn) ..... max. 0.05%
Potassium (K) ..... max. 0.002%
Sodium (Na) ..... max. 0.02%
Zinc (Zn) ..... max. 0.005%

CAS: 7782-63-0 MERCK INDEX: 14,4057

FerroZine Iron Reagent, Monohydrate

BAKER ANALYZED Reagent

M370-01	5 g	org	159.65	

$C_{20}H_{13}N_4NaO_6S_2 \cdot H_2O$ FW: 510.48

Assay ..... min. 95.0%
Water (H_2O) ..... Actual Value Reported
Suitable for Determination of Copper and Iron.

CAS: 69898-45-9

Filter Aid, Analytical

See Diatomaceous Earth, Celite 503 and Celite 545

Flash Chromatography Media

See Analytical Chromatography Section, p. 22-45

Flash Silica

See Analytical Chromatography Section, p. 22-45

Flexible Collodion

See Collodion, Flexible

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Florisil (100-200 Mesh)
(activated magnesium silicate)
Selective Adsorbent for Gas Chromatography

M369-07	Poly	500 g	spr	147.40	
M369-08	Poly Pail	2 kg	spr	467.15	

Physical Data (not specifications):
Average Particle Diameter, µm (APD) 73-140
Bulk Density (g/cc) 0.5
CAS: 1343-88-0 MERCK INDEX: 14,5687

Florisil (60-100 Mesh)
(activated magnesium silicate)
Selective Adsorbent for Gas Chromatography

M368-07	Poly	500 g	spr	116.35	
M368-08	Poly	2 kg	spr	383.95	

Mesh:
On U.S. No. 60 Sieve .....max. 10%
Thru U.S. No. 100 Sieve .....max. 10%
Physical Data (not specifications):
Appearance (fine, white crystalline powder). However, due to the high temperature involved in the activation process, some small charred particles may be visible within the product.
Average Particle Diameter, µm (APD) 140-250
Bulk Density (g/cc) 0.5
CAS: 1343-88-0 MERCK INDEX: 14,5687

Florisil (60-100 Mesh), Activated at 675°C
BAKER ANALYZED Reagent
Suitable for Use in Chromatographic Cleanup of Pesticide Residues

3372-07	Glass	500 g	spr	162.40	
3372-08	Poly Pail	2 kg	spr	547.40	

Mesh:
On U.S. No. 60 Sieve .....max. 10%
Thru U.S. No. 100 Sieve .....max. 10%
Physical Data (not specifications):
Average Particle Diameter, µm (APD) 140-250
Bulk Density (g/cc) 0.5
CAS: 1343-88-0 MERCK INDEX: 14,5687

Fluoboric Acid
Purified
(tetrafluoroboric acid)

9528-01	Poly	500 mL	cac	144.30	
		12 x 500 mL	cac	82.45	989.40

HBF_4 FW: 87.81

Assay (HBF_4) 48-50%
CAS: 16872-11-0 DENSITY: 1 L = 1.84 kg MERCK INDEX: 14,4149
IMO: 8:1775

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Fluorescein
BAKER ANALYZED Reagent
(C.I. 45350)

M422-05	Glass	100 g	bio	57.10	

$C_{20}H_{12}O_5$ FW: 332.32

Sensitivity .....Passes Test
Solubility in Ethanol .....Passes Test
Acriflavine .....Passes Test
CAS: 2321-07-5 MERCK INDEX: 14,4159

Fluorescein, Sodium Derivative, Sodium Salt
BAKER
(C.I. 45350)

M430-07	Glass	500 g	bio	195.60	

$C_{20}H_{10}Na_2O_5$ FW: 376.28

Identification (by IR) .....Passes Test
CAS: 518-47-8 MERCK INDEX: 14,4159

Fluoroboric Acid
See Fluoboric Acid

Formaldehyde
Purified
Purified Grade, tested to USP/Multi Compendial specs

2109-03	Poly	4 L	rss	244.15	
		4 x 4 L	rss	162.75	651.00
2109-07	Cubitainer	20 L	bks	Inquire	
2109-09	Lined Steel Dr	200 L	bul	Inquire	

HCHO FW: 30.03

Meets USP 32 Chemical Specifications
Assay (HCHO) .....min. 34.5%
Acidity .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Methanol (v/v) 9.0-15.0%

Meets Ph.Eur. 6.5 Chemical Specifications
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Identification D .....Passes Test
Appearance of Solution .....Passes Test
Acidity .....Passes Test
Methanol (v/v) 9.0-15.0%
Sulfated Ash .....max. 0.1%
Assay (HCHO) 34.5-38.0%
Trioxymethylene precipitate can be formed at ppt levels upon standing below15°C (59°F). Nonhazardous polymerization may occur at low temperatures, forming paraformaldehyde, a white solid.
CAS: 50-00-0 DENSITY: 1 L = 1.08 kg MERCK INDEX: 14,4235
IMO: 3:1198 FLASH POINT: 60°C

Formaldehyde

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Formaldehyde, 37% Solution
BAKER ANALYZED ACS Reagent

2106-04	Glass	150 mL	non	37.80	
2106-01	Glass	500 mL	cso	50.50	
		12 x 500 mL	cso	33.65	403.80
2106-03	Glass	4 L	cso	143.80	
		4 x 4 L	cso	95.85	383.40
2106-07	Poly Pail	19 L	sbk	304.30	
2106-08	Lined Steel Dr	475 lb	bul	Inquire	

HCHO FW: 30.03

Meets ACS Specifications

Assay (HCHO) (by acidimetry) 36.5-38.0%
Color (APHA) .....max. 10
Residue after Ignition .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.006
Sulfate (SO_4) .....max. 0.002%
Preservative (methanol) 10-15%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2

Trioxymethylene precipitate can be formed at ppt levels upon standing below15°C (59°F). Nonhazardous polymerization may occur at low temperatures, forming paraformaldehyde, a white solid.

CAS: 50-00-0 DENSITY: 1 L = 1.08 kg MERCK INDEX: 14,4235
IMO: 3:1198 FLASH POINT: 60°C

Formalin, 10% w/v Solution
BAKER
Phosphate Buffered Histological Fixative

M518-03	Cubitainer	4 L	sol	79.90	

Assay (HCHO) 3.80-4.35%
pH at 25°C 6.8-7.2

CAS: 50-00-0 DENSITY: 1 L = 1.09 kg FLASH POINT: 85°C

Formalin
See also Formaldehyde, 37% Solution

Formamide
BAKER ANALYZED ACS Reagent

M522-06	Glass	230 mL	cor	233.65	
		12 x 230 mL	cor	155.75	1869.00

$HCONH_2$ FW: 45.04

Meets ACS Specifications

Assay ($HCONH_2$) (by GC) .....min. 99.5%
Freezing Point .....2.0-3.0 °C.
Color (APHA) .....max. 10
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.130

CAS: 75-12-7 MERCK INDEX: 14,4237 FLASH POINT: 154°C

Solvent Spill Cleanup Products available. See pp. 378.

Formamide
ULTRAPURE BIOREAGENT
For denaturing nucleic acids prior to analysis

4028-00	Glass	100 mL	upr	43.40	
4028-01		500 mL	upr	96.90	

$HCONH_2$ FW: 45.04

Assay ($HCONH_2$) (by GC) .....min. 99.5%
Absorbance of a 1M Solution:
280 nm .....max. 0.1
Color (APHA) .....max. 10
Conductivity, mS/cm (1:10) .....Actual Value Reported
Freezing Point .....2.0-3.0 °C.
Trace Impurities (in ppm):
Copper (Cu) .....max. 0.1
Iron (Fe) .....max. 0.5
Lead (Pb) .....max. 0.5
Zinc (Zn) .....max. 0.5
Packaged under Nitrogen
Deionization of material is not required.

CAS: 75-12-7 DENSITY: 1 L = 1.13 kg MERCK INDEX: 14,4237
FLASH POINT: 154°C

Solvent Spill Cleanup Products available. See pp. 378.

Formamide
BAKER

M520-07	Glass S/S	500 mL	non	68.35	

$HCONH_2$ FW: 45.04

Freezing Point .....max. 3.5 °C.

CAS: 75-12-7 DENSITY: 1 L = 1.13 kg MERCK INDEX: 14,4237
FLASH POINT: 154°C

Solvent Spill Cleanup Products available. See pp. 378.

Formic Acid, 90%
BAKER PCS Reagent
(PCS-7)
Polymer Characterization Solvent

0129-01	Glass	500 mL	cac	140.60	
		12 x 500 mL	cac	80.35	964.20
0129-05	Glass	2.5 L	cac	637.95	
		6 x 2.5 L	cac	364.55	2187.30
0129-09	Poly Drum	127 lb	bul	Inquire	

HCOOH FW: 46.03

Assay (HCOOH) 89.8-91.5%
Clarity .....Passes Test
Color (APHA) .....max. 10

CAS: 64-18-6 DENSITY: 1 L = 1.2 kg MERCK INDEX: 14,4241
IMO: 8:1779 FLASH POINT: 50°C

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Formic Acid, 88%
BAKER ANALYZED ACS Reagent

0128-01	Glass	500 mL	cac	112.90	
		12 x 500 mL	cac	64.50	774.00
0128-05	Glass	2.5 L	cac	267.65	
		6 x 2.5 L	cac	152.95	917.70
0128-18	Poly	6 x 2.5 L	spr	125.50	753.00
0128-09	Poly Drum	127 lb	bul	Inquire	

HCOOH FW: 46.03

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (HCOOH) .....min. 88.0%
Color (APHA) .....max. 15
Dilution Test .....Passes Test
Residue after Evaporation .....max. 0.002%
Acetic Acid (CH_3COOH) .....max. 0.4%
Ammonium (NH_4) .....max. 0.005%
Sulfate (SO_4) .....max. 0.002%
Sulfite (SO_3) .....Passes Test
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 64-18-6 DENSITY: 1 L = 1.2 kg MERCK INDEX: 14,4241
IMO: 8:1779 FLASH POINT: 50°C

Acid Spill Cleanup Products available. See pp. 378.

Formic Acid, Ammonium Salt
BAKER

M530-08	Poly	1 kg	non	143.40	

$HCOONH_4$ FW: 63.06

Assay ($HCOONH_4$) .....min. 96%
Identification (by IR) .....Passes Test

CAS: 540-69-2 MERCK INDEX: 14,523

Formic Acid, Sodium Salt
See Sodium Formate

D-(-)-Fructose
BAKER ANALYZED Biochemical Reagent
(D-fructopyranose)

M556-05	Poly	100 g	bio	33.00	
M556-07	Poly	500 g	bio	45.65	
M556-06	Poly Pail	5 kg	bio	247.85	

$C_6H_{12}O_6$ FW: 180.16

Specific Rotation, $[\alpha]_D^{20}$(dried basis, c = 10 in H_2O) .....-93 to -91 °
Homogeneity by TLC .....No Extraneous Spots
Ash (sulfated) .....max. 0.1%
Loss on Drying at 60°C (in vacuo) .....max. 0.1%
Arsenic (As) .....max. 0.0003%
Heavy Metals (as Cu) .....max. 0.005%
Iron (Fe) .....max. 0.003%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

CAS: 57-48-7 MERCK INDEX: 14,4273

Fuller's Earth
See Kaolin, Powder

2-Furaldehyde
See Furfural

2,5-Furandione
See Maleic Anhydride

Furfural
BAKER ANALYZED ACS Reagent
(2-furaldehyde)

2118-01	Glass	500 mL	cso	79.95	
		12 x 500 mL	cso	53.30	639.60

$C_5H_4O_2$ FW: 96.09

Meets ACS Specifications

Assay ($C_5H_4O_2$) (by GC, corrected for water) .....min. 98.0%
Titrable Acid (meq/g) .....max. 0.02
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Residue after Evaporation .....max. 0.5%

CAS: 98-01-1 DENSITY: 1 L = 1.16 kg MERCK INDEX: 14,4304
IMO: 6.1:1199 FLASH POINT: 60°C

Solvent Spill Cleanup Products available. See pp. 378.

D-Galactopyranose
See D-(+)-Galactose

D-(+)-Galactose
BAKER ANALYZED Biochemical Reagent
(D-galactopyranose)

M672-05	Poly	100 g	bio	83.70	
M672-07	Poly	500 g	bio	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Assay (by HPLC) .....min. 98%
Specific Rotation $[\alpha]_D^{20}$(c = 5 in H_2O) .....+79.5 - +80.5 °
Homogeneity by TLC .....No Extraneous Spots
Homogeneity by GLC (trimethylsilylation) .....Actual Value Reported
Ash (sulfated) .....max. 0.1%
Loss on Drying at 60°C (in vacuo) .....max. 0.1%
Arsenic (As) .....max. 0.00005%
Heavy Metals (as Cu) .....max. 0.001%
Iron (Fe) .....max. 0.0005%
Glucose .....max. 2.0%

CAS: 59-23-4 MERCK INDEX: 14,4335

Galactose

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

D-+-Galactose

cGMP

Biotech Reagent
(d-galactopyranose)

2102-05	Poly	2.5 kg	upr	1574.55	
2102-06	Poly Pail	8 kg	bks	Inquire	
2102-07	Poly Drum	12 kg	bks	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Arsenic (As) ..... max. 0.5 ppm
Assay (by HPLC) ..... min. 98%
Glucose ..... max. 2.0%
Heavy Metals (as Cu) ..... max. 10 ppm
Iron (Fe) ..... max. 5 ppm
Endotoxin Concentration (EU/g) ..... max. 10
Residual Methanol ..... max. 3000 ppm
Residual Ethanol ..... max. 5000 ppm

Meets EP Chemical Specifications

Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Identification A ..... Passes Test
Specific Optical Rotation $[\alpha]_D^{20}$ ..... +78.0 - +81.5 °
Barium (Ba) ..... Passes Test
Lead (Pb) ..... max. 0.5 ppm
Water (H_2O) ..... max. 1.0%
Ash (sulfated) ..... max. 0.1%
Total Viable Count (per g) ..... max. 100

CAS: 59-23-4 MERCK INDEX: 14,4335

D-(+)-Galactose

cGMP

Biotech Reagent
High Purity (Low Endotoxin)

2103-04	Poly	100 g	upr	92.00	
2103-05	Poly	1 kg	bks	Inquire	
2103-06	Poly Pail	5 kg	bks	Inquire	
2103-07	Poly Drum	12 kg	bks	Inquire	
2103-09	Poly Drum	50 kg	bul	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Non-Animal Derived

Acidity ..... Passes Test
Appearance ..... Passes Test
Arsenic (As) ..... max. 0.5 ppm
Barium (Ba) ..... Passes Test
Color ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 10
Glucose ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 10 ppm
Identification (Cupric Tartrate) ..... Passes Test
Identification (IR) ..... Passes Test
Identification (HPLC) ..... Passes Test
Iron (Fe) ..... max. 5 ppm
Lead (Pb) ..... max. 0.5 ppm
Purity (HPLC) ..... min. 99.0%
Residual Ethanol ..... max. 5000 ppm
Residual Methanol ..... max. 3000 ppm
Residue on Ignition ..... max. 0.05%
Solution Clarity ..... Passes Test
Solution Color ..... Passes Test
Specific Optical Rotation $[\alpha]_D^{20}$ ..... +78.0 - +81.5 °
Water (KF) ..... max. 1.0%

Microbial Testing

Salmonella (USP) ..... Passes Test
E. coli (USP) ..... Passes Test
Staphylococcus aureus (USP) ..... Passes Test
Pseudomonas aeruginosa (USP) ..... Passes Test
Total Yeast and Mold (USP) (cfu/g) ..... max 100
Total Aerobic Microbial (USP) (cfu/g) ..... max 1000
Total Viable Aerobic (EP) (cfu/g) ..... max 100

CAS: 59-23-4 MERCK INDEX: 14,4335

D-(+)-Galactose

cGMP

Biotech Reagent

2100-04	Poly	100 g	upr	110.40	
2100-05	Poly	1 kg	upr	1810.75	
2100-06	Poly Pail	5 kg	bks	Inquire	
2100-07	Poly Drum	12 kg	bks	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Appearance ..... Passes Test
Acidity ..... Passes Test
Arsenic (As) ..... max. 0.05 ppm
Barium (Ba) ..... Passes Test
Color ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 10
Glucose ..... max. 2.0%
Heavy Metals (as Pb) ..... max. 10 ppm
Identification (Cupric Tartrate) ..... Passes Test
Identification (by IR) ..... Passes Test
Iron (Fe) ..... max. 5 ppm
Lead (Pb) ..... max. 0.5 ppm
Melting Point ..... 165-170 °C.
Microbial Limits (cfu/g) ..... max. 100
Purity (by HPLC) ..... min. 98%
Residual Ethanol ..... max. 600 ppm
Residual Methanol ..... max. 600 ppm
Residue on Ignition ..... max. 0.05%
Specific Optical Rotation $[\alpha]_D^{20}$ ..... +79.5 - +80.5 °
Water (by KF) (H_2O) ..... max. 1.0%
Water-Insoluble Matter ..... Passes Test

CAS: 59-23-4 MERCK INDEX: 14,4335

Gallium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Gallium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ga metal in 5% HNO_3 and a trace of HCl)
Plasma Standard

5758-04		100 mL	spr	112.60	

Ga AW: 69.72

MERCK INDEX: 14,4346 IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Gallium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ga metal in 5% HNO_3 and a trace of HCl)
Plasma Standard

5714-04		100 mL	spr	69.65	

Ga AW: 69.72

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Gallotannic Acid

See Tannic Acid

Gelatin, Powder

cGMP

NF
(Type B)

2124-01	Glass	500 g	rnc	90.15	
2124-05	Poly	2.5 kg	rnc	319.40	

Meets NF Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Microbial Limits:
Bacterial Count (per g) ..... max. 1000
Salmonella and E. Coli ..... Passes Test
Residue on Ignition ..... max. 2.0%
Odor and Water-Insoluble Substances ..... Passes Test
Sulfur Dioxide (SO_2) ..... max. 0.004%
Arsenic (As) ..... max. 0.8 ppm
Heavy Metals (as Pb) ..... max. 0.005%

CAS: 9000-70-8 MERCK INDEX: 14,4382

Gentian Violet

See under Crystal Violet

Germanium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Germanium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ge metal in 5% HNO_3 and a trace of HF)
Plasma Standard

5759-04		100 mL	spr	112.60	

Ge AW: 72.61

MERCK INDEX: 14,4407 IMO: 8:2922

Acid Spill Cleanup Products available. See pp. 378.

Germanium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ge metal in 5% HNO_3 and a trace of HF)
Plasma Standard

5762-04		100 mL	spr	72.00	

Ge AW: 72.61

IMO: 8:2922

Acid Spill Cleanup Products available. See pp. 378.

Giemsa Blood Staining Solution, Stock

BAKER
(8.0 g/L Giemsa Stain, 500 mL/L glycerol and 500 mL/L methanol, absolute)
Prepared with Certified Stain

M708-01	Poly	500 mL	non	129.45	

Suitability for Blood Cell Staining ..... Passes Test

DENSITY: 1 L = 0.79 kg IMO: 3:1230 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Giemsa Stain

BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Blood Staining

M702-03	Glass	25 g	non	137.50	

Certified by the Biological Stain Commission
Biological Test ..... Passes Test

CAS: 51811-82-6

Glacial Acetic Acid, USP

See Acetic Acid, Glacial

Glucitol

See under Sorbitol

Glucose

See Dextrose

D-Glucose, Anhydrous

See Dextrose, Anhydrous

D-Glucose, Monohydrate

See Dextrose, Monohydrate

L-(+)-Glutamic Acid

BAKER ANALYZED Biochemical Reagent

M756-07	Poly	500 g	bio	94.15	
M756-08	Poly	1 kg	bio	169.55	

$HOCOCH_2CH_2CH(NH_2)COOH$ FW: 147.13

Assay ($C_5H_9NO_4$) (dried basis, by acid-base titrn) ..... min. 99.0%
Specific Rotation, $[\alpha]_D^{20}$ (dried basis, c = 2 in 5N HCl) ..... +29.9 - +32.1 °
Homogeneity by TLC ..... No Extraneous Spots
Ash (sulfated) ..... max. 0.1%
Loss on Drying at 85°C ..... max. 0.1%

Glutamic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chloride (Cl) ..... max. 0.2%
Arsenic (As) ..... max. 0.0003%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.003%

CAS: 56-86-0 MERCK INDEX: 14,4469

L-Glutamic Acid, FCC

Multi-Compendial

cGMP

2077-06	Poly	1 kg	bio	86.60	

$C_5H_9NO_4$ FW: 147.13

Meets FCC Requirements

Identification ..... Passes Test
Assay ($C_5H_9NO_4$) (dried basis) 98.5-101.5%
Lead (Pb) ..... max 5 mg/kg
Loss on Drying ..... max. 0.1%
Residue on Ignition ..... max. 0.3%
Specific Rotation $[\alpha]_D^{20}$ ..... +31.5 - +32.5 °

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Assay ($C_5H_9NO_4$) (dried basis) 98.5-100.5%
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +30.5 - +32.5 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

CAS: 56-86-0 MERCK INDEX: 14,4469

L-(+)-Glutamic Acid, Monosodium Salt, Monohydrate

BAKER

M746-07	Poly	500 g	bio	65.00	
M746-08	Poly Drum	25 kg	bul	Inquire	
M746-09	Poly Drum	50 kg	bul	Inquire	

$HOCOCH_2CH_2CH(NH_2)COONa \cdot H_2O$ FW: 187.13

Identification (by IR) ..... Passes Test

CAS: 6106-04-3 MERCK INDEX: 14,6254

L-Glutamine

USP, FCC

cGMP

2078-06	Poly	1 kg	bio	369.45	
2078-07	Poly Pail	12 kg	bks	Inquire	
2078-09	Poly Drum	50 kg	bul	Inquire	

$C_5H_{10}N_2O_3$ FW: 146.15

Meets USP Requirements

Assay ($C_5H_{10}N_2O_3$) (dried basis) 98.5-101.5%
Chromatographic Purity ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Endotoxin Concentration, IU/mg ..... Actual Value Reported
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +6.3 - +7.3 °
Loss on Drying at 105°C ..... max. 0.3%
Residue on Ignition ..... max. 0.3%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0015%
Solubility of 3% Solution at 30°C ..... Passes Test
Solubility of 3.5% Solution at 30°C ..... Passes Test
Identification (by IR) ..... Passes Test
Endotoxin Concentration (EU/mg) ..... max. 0.06

Meets FCC Requirements

Assay (as $C_5H_{10}N_2O_3$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Loss on Drying ..... max. 0.3%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... +6.3 - +7.3 °
Lead (Pb) ..... max 5 mg/kg

CAS: 56-85-9 MERCK INDEX: 14,4471

Glutaraldehyde (50% in H_2O)

BAKER

M753-09	Poly Coated	3 kg	org	128.90	

$OHC(CH_2)_3CHO$ FW: 100.12

Assay ($C_5H_8O_2$) 47-53%
Appearance ..... Passes Test
pH ..... Passes Test

CAS: 111-30-8 DENSITY: 1 L = 1.129 kg MERCK INDEX: 14,4472
IMO: 8:3265

Glutaraldehyde, 25% Aqueous Solution

BAKER ANALYZED Reagent
For Biological Applications

2127-01	Glass	500 mL	cso	169.15	
		12 x 500 mL	cso	112.75	1353.00
2127-03	Glass	4 L	cso	461.10	
		4 x 4 L	cso	307.40	1229.60

$OHC(CH_2)_3CHO$ FW: 100.12

Appearance ..... Passes Test
Assay ($C_5H_8O_2$) (UV Analysis) 23-31%
pH at 25°C 3.1-4.5
Clarity of 1% Solution ..... Passes Test

CAS: 111-30-8 DENSITY: 1 L = 1.06 kg MERCK INDEX: 14,4472

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Glutaraldehyde (25% in H_2O)

Practical

M752-07	Glass	500 mL	bio	51.90	
M752-09	Glass	4 L	bio	120.75	

$OHC(CH_2)_3CHO$ FW: 100.12

Identification ..... Passes Test

CAS: 111-30-8 DENSITY: 1 L = 1.06 kg MERCK INDEX: 14,4472

Glutathione Reduced

BAKER

M770-01	Glass	5 g	bio	270.05	

$C_{10}H_{17}N_3O_6S$ FW: 307.43

Identification (by IR) ..... Passes Test

Keep material refrigerated between 2-8°C (36-46°F).

CAS: 70-18-8 MERCK INDEX: 14,4475

Glycerin

USP (glycerol) 100% Vegetable Based cGMP

2142-01	Glass	500 mL	rss	144.15	
		12 x 500 mL	rss	96.10	1153.20
2142-03	Glass	4 L	rss	692.65	
		4 x 4 L	rss	461.75	1847.00
2142-07	Poly Pail	19 L	bks	Inquire	
2142-09	Poly Drum	550 lb	bul	Inquire	

$HOCH_2CHOHCH_2OH$ FW: 92.10

Meets USP Requirements

Assay (as $HOCH_2CHOHCH_2OH$) (calculated on anhydrous basis) 99.0-101.0%
Identification A ..... Passes Test
Identification B
Diethylene Glycol ..... max. 0.10%
Ethylene Glycol ..... max. 0.10%
Identification C ..... Passes Test
Specific Gravity at 25°/25°C ..... min. 1.249
Color ..... Passes Test
Residue on Ignition ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 5 ppm
Chlorinated Compounds (as Cl) ..... max. 0.003%
Fatty Acids and Esters (as butyric acid) ..... Passes Test
Water (H_2O) ..... max. 5.0%
Related Compounds:
Individual Impurity ..... max. 0.1%
Total Impurities ..... max. 1.0%

CAS: 56-81-5 DENSITY: 1 L = 1.26 kg MERCK INDEX: 14,4484
FLASH POINT: 199°C

Glycerin, USP

Multi-Compendial (glycerol) cGMP

2140-01	Glass	500 mL	rss	154.30	
		12 x 500 mL	rss	102.85	1234.20
2140-03	Glass	4 L	rss	745.35	
		4 x 4 L	rss	496.90	1987.60
2140-07	Poly Pail	19 L	bks	Inquire	
2140-R	Poly Drum	550 lb	bul	Inquire	

$HOCH_2CHOHCH_2OH$ FW: 92.10

Meets USP & FCC Requirements

Assay (as $HOCH_2CHOHCH_2OH$) (calculated on anhydrous basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B
Diethylene Glycol ..... max. 0.10%
Ethylene Glycol ..... max. 0.10%
Identification C ..... Passes Test
Specific Gravity at 25°/25°C ..... min. 1.249
Color ..... Passes Test
Residue on Ignition ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 5 ppm
Chlorinated Compounds (as Cl) ..... max. 0.003%
Fatty Acids and Esters (as butyric acid) ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Water (by KF) (H_2O) ..... max. 5.0%
Related Compounds:
Individual Impurity ..... max. 0.1%
Total Impurities ..... max. 1.0%
Lead (Pb) ..... max 1 mg/kg

Meets BP/Ph.Eur. Chemical Specifications

Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Refractive Index, η^{20}_D 1.470-1.475
Aldehydes ..... max. 10 ppm
Ester ..... Passes Test
Halogenated Compounds ..... max. 35 ppm
Sugars ..... Passes Test
Chloride (Cl) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Water (H_2O) ..... max. 2.0%
Ash (sulfated) ..... max. 0.01%
Impurity A and Related Substances:
Impurity A ..... max. 0.1%
Other Impurities with R_T<Glycerol ..... max. 0.1%
Total impurities R_T>Glycerol ..... max. 0.5%
Assay (anhydrous basis) 98.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test

CAS: 56-81-5 DENSITY: 1 L = 1.26 kg MERCK INDEX: 14,4484
FLASH POINT: 199°C

Glycerin

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Glycerin, USP					
Multi-Compendial (glycerol) 100% Vegetable Based					
2143-01	Glass	500 mL	rss	177.30	
		12 x 500 mL	rss	118.20	1418.40
2143-03	Glass	4 L	rss	850.80	
		4 x 4 L	rss	567.20	2268.80
2143-07	Poly Pail	19 L	bks	Inquire	
2143-09		200 L	bul	Inquire	
2143-30	Poly Tote	2200 lb	bul	Inquire	

$HOCH_2CHOHCH_2OH$ FW: 92.10

Meets USP Requirements

Identification A ..... Passes Test
Identification B
Diethylene Glycol ..... max. 0.10%
Ethylene Glycol ..... max. 0.10%
Identification C ..... Passes Test
Specific Gravity at 25°/25°C ..... min. 1.249
Color ..... Passes Test
Residue on Ignition ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 5 ppm
Chlorinated Compounds (as Cl) ..... max. 0.003%
Fatty Acids and Esters (as butyric acid) ..... Passes Test
Assay (as $HOCH_2CHOHCH_2OH$)
(calculated on anhydrous basis) 99.0-101.0%
Water (H_2O) ..... max. 5.0%
Related Compounds:
Individual Impurity ..... max. 0.1%
Total Impurities ..... max. 1.0%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Refractive Index, η^{20}_D 1.470-1.475
Aldehydes ..... max. 10 ppm
Ester ..... Passes Test
Halogenated Compounds ..... max. 35 ppm
Sugars ..... Passes Test
Chloride (Cl) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Water (H_2O) ..... max. 2.0%
Ash (sulfated) ..... max. 0.01%
Impurity A and Related Substances:
Impurity A ..... max. 0.1%
Other Impurities with R_T<Glycerol ..... max. 0.1%
Total impurities R_T>Glycerol ..... max. 0.5%
Assay (anhydrous basis) 98.0-101.0%

Meets JP Chemical Specifications

Assay (anhydrous basis) 98.0-101.0%
Identification ..... Passes Test
Specific Gravity at 20°/20°C ..... min. 1.258
Refractive Index, η^{20}_D ..... min. 1.470
Color ..... Passes Test
Residue on Ignition ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 5 ppm
Fatty Acids and Esters (as butyric acid) ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Acrolein, Glucose, and Related Compounds ..... Passes Test
Ammonium (NH_4) ..... Passes Test
Calcium (Ca) ..... Passes Test
Arsenic (As) ..... max. 2 ppm
Water (H_2O) ..... max. 2.0%
Endotoxin Concentration (EU/g) ..... max. 5

CAS: 56-81-5 DENSITY: 1 L = 1.26 kg MERCK INDEX: 14,4484
FLASH POINT: 199°C

Glycerin

See also Glycerol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Glycerol					
BAKER					
M778-07	Glass S/S	500 mL	non	50.35	
M778-09	Glass	4 L	non	269.55	
M778-01	Poly Pail	19 L	sbo	960.10	

$HOCH_2CHOHCH_2OH$ FW: 92.10

Assay ($C_3H_8O_3$) ..... min. 99%
Identification (by IR) ..... Passes Test

CAS: 56-81-5 DENSITY: 1 L = 1.26 kg MERCK INDEX: 14,4484
FLASH POINT: 199°C

Glycerol

See also Glycerin

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Glycerol, Anhydrous					
BAKER ANALYZED ACS Reagent (glycerin)					
2136-01	Glass	500 mL	cso	106.00	
		12 x 500 mL	cso	70.65	847.80
2136-03	Glass	4 L	cso	509.35	
		4 x 4 L	cso	339.55	1358.20
2136-35	Poly	4 L	cso	416.10	
		4 x 4 L	cso	277.40	1109.60
2136-08	Poly Pail	19 L	bks	Inquire	

$HOCH_2CHOHCH_2OH$ FW: 92.10

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Assay ($HOCH_2CHOHCH_2OH$) (by GC, corrected for water) ..... min. 99.5%
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 0.005%
Neutrality ..... Passes Test
Chlorinated Compounds (as Cl) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.001%
Acrolein and Glucose ..... Passes Test
Fatty Acid Esters (as Butyric Acid) ..... max. 0.05%
Substances Darkened by H_2SO_4 ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.5%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.257
CAS: 56-81-5 MERCK INDEX: 14,4484 FLASH POINT: 199°C

Glycerol, Anhydrous
ULTRAPURE BIOREAGENT
For enzyme stabilization, freezing and electrophoresis buffers

4043-00	Poly	500 mL	upr	53.80	
4043-01	Poly	4 L	upr	294.80	
4043-07	Poly Pail	19 L	bks	Inquire	

$HOCH_2CHOHCH_2OH$ FW: 92.10

Assay ($HOCH_2CHOHCH_2OH$) .....min. 99.5%
Absorbance of a 1M Solution:
280 nm .....max. 0.05
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Color (APHA) .....max. 10
Residue after Ignition .....max. 0.005%
Fatty Acid Esters (as Butyric Acid) .....max. 0.05%
Trace Impurities (in ppm):
Iron (Fe) .....max. 5
Lead (Pb) .....max. 2
Mercury (Hg) .....max. 10
Zinc (Zn) .....max. 2
CAS: 56-81-5 DENSITY: 1 L = 1.26 kg MERCK INDEX: 14,4484
FLASH POINT: 199°C

β-Glycerophosphoric Acid, Disodium Salt, 5-Hydrate
BAKER ANALYZED Reagent
(sodium β-glycerophosphate)

M781-05	Glass	100 g	non	227.55	

$(HOCH_2)_2CHOPO_3Na_2 \cdot 5H_2O$ FW: 306.12

Alpha Content .....max. 2%
CAS: 819-83-0 MERCK INDEX: 14,4486

Glyceryl Triacetate
See Triacetin

For more information on products for drug discovery, see pages 58-63.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Glycine
ULTRAPURE BIOREAGENT
For Electrophoresis, Liquid Chromatography and Molecular Biology Buffers

4059-00	Poly	250 g	upr	27.25	
4059-02	Poly	1 kg	upr	70.75	
4059-06	Poly Pail	5 kg	upr	255.40	
4059-07	Poly Pail	12 kg	bks	Inquire	
4059-09	Poly Drum	50 kg	bul	Inquire	

NH_2CH_2COOH FW: 75.07

Assay ($C_2H_5NO_2$) (dried basis, by non-aqueous acid-base titration) .....min. 99.5%
Homogeneity by TLC .....No Extraneous Spots
Residue after Ignition .....max. 0.1%
Loss on Drying at 105°C .....max. 0.2%
Readily Carbonizable Substances .....Passes Test
Absorbance of a 1M Solution:
280 nm .....max. 0.1
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected
Arsenic (As) .....max. 3 ppm
Heavy Metals (as Pb) .....max. 5 ppm
Iron (Fe) .....max. 0.003%
CAS: 56-40-6 MERCK INDEX: 14,4491

Glycine
USP, FCC cGMP

0581-01	Glass	500 g	rnc	83.10	
0581-05	Glass	2 kg	rnc	264.50	
0581-07	Poly Pail	12 kg	bks	Inquire	

NH_2CH_2COOH FW: 75.07

Meets USP & FCC Requirements
Assay ($C_2H_5NO_2$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Loss on Drying .....max. 0.2%
Residue on Ignition .....max. 0.1%
Chloride (Cl) .....max. 0.007%
Sulfate (SO_4) .....max. 0.0065%
Heavy Metals (as Pb) .....max. 0.002%
Lead (Pb) .....max 5 mg/kg
Hydrolyzable Substances .....Passes Test
CAS: 56-40-6 MERCK INDEX: 14,4491

Glycine

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Glycine
BAKER ANALYZED Biochemical Reagent

4057-02	Glass	1 kg	upr	55.35	
4057-06	Poly Pail	5 kg	upr	172.70	

NH_2CH_2COOH FW: 75.07

Assay ($C_2H_5NO_2$) (dried basis, by non-aqueous acid-base titration) 98.5-101.5%
Residue after Ignition ..... max. 0.1%
Lead (Pb) ..... max. 5 ppm
Description ..... Passes Test
Solubility ..... Passes Test

CAS: 56-40-6 MERCK INDEX: 14,4491

Glycine, USP
Multi-Compendial (aminoacetic acid)

cGMP

0582-01	Glass	500 g	bio	101.45	
0582-05	Glass	2 kg	bio	347.90	
0582-07	Poly Pail	12 kg	bks	Inquire	
0582-09	Poly Drum	50 kg	bul	Inquire	

NH_2CH_2COOH FW: 75.07

Meets USP Requirements
Identification ..... Passes Test
Loss on Drying at 105°C ..... max. 0.2%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.007%
Sulfate (SO_4) ..... max. 0.0065%
Heavy Metals (as Pb) ..... max. 0.002%
Hydrolyzable Substances ..... Passes Test
Assay ($C_2H_5NO_2$) (dried basis) 98.5-101.5%
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_2H_5NO_2$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Appearance of Solution ..... Passes Test
pH 5.9-6.4
Chloride (Cl) ..... max. 75 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%
Ninhydrin-Positive Substances ..... Passes Test

Meets JP Chemical Specifications
Assay ($C_2H_5NO_2$) (dried basis) 98.5-101.0%
Identification ..... Passes Test
pH (1 in 20) 5.6-6.6
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.021%
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 0.30%
Residue on Ignition ..... max. 0.10%

CAS: 56-40-6 MERCK INDEX: 14,4491

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Glycinol
See Monoethanolamine

Glycocoll
See under Glycine

Glycogen (from Oysters)
BAKER

M816-01	Glass	5 g	non	92.45	

$(C_6H_{10}O_5)n$ FW: 162.14

Identification (by IR) ..... Passes Test

CAS: 9005-79-2 MERCK INDEX: 14,4496

Glycolic Acid
BAKER

M821-05	Glass	100 g	org	97.90	

$HOCH_2COOH$ FW: 76.05

Assay ($C_2H_4O_3$) (by acid-base titration) ..... min. 98%
Appearance ..... Passes Test

CAS: 79-14-1 MERCK INDEX: 14,4498 IMO: 8:3261

Glycylglycine
BAKER ANALYZED Biochemical Reagent

2079-06	Poly	1 kg	bio	603.25	

$C_4H_8N_2O_3$ FW: 132.12

Assay ($C_4H_8N_2O_3$) (dried basis) 98.5-101.0%
State of Solution (Transmittance) ..... min. 98.0%
Ammonium (NH_4) ..... max. 0.020%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Iron (Fe) ..... max. 20 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Arsenic (As) ..... max. 1 ppm
Loss on Drying ..... max. 0.20%
Residue after Ignition ..... max. 0.05%
Foreign Amino Acids ..... max. 0.5%
Endotoxin Concentration (EU/mg) ..... Actual Value Reported

CAS: 556-50-3 MERCK INDEX: 14,4503

Glyoxal (40% in H_2O)
Technical

M834-09	Glass	4 L	non	139.30	

OHCCHO FW: 58.04

Assay (OHCCHO) 35-45%

CAS: 107-22-2 DENSITY: 1 L = 1.27 kg MERCK INDEX: 14,4509

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Glyoxaline
See Imidazole

Gold, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Gold, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Au metal in 20% HCl)
Plasma Standard

5730-04		100 mL	spr	451.70	

Au AW: 196.97

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Gold, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Au metal in 20% HCl)
Plasma Standard

5763-04		100 mL	spr	145.45	

Au AW: 196.97

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Gold, 1000 µg/mL (0.1% w/v)
BAKER INSTRA-ANALYZED Reagent
(Au metal in 20% HCl)

6452-04	Poly	150 mL	spr	106.00	

Au AW: 196.97

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Gold Chloride, Trihydrate, Crystal
BAKER ANALYZED ACS Reagent
(chloroauric(III) acid, trihydrate)

2146-03	Ampoule	1 g	spr	120.20	
2146-00	Glass	30 g	spr	2104.00	

$HAuCl_4 \cdot 3H_2O$ FW: 393.83

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (as Au) .....min. 49.0%
Insoluble in Ether .....max. 0.1%
Alkalies and Other Metals (as SO_4) .....max. 0.2%

CAS: 16961-25-4 MERCK INDEX: 14,4522 IMO: 8:1759

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

GRANUSIC
See Phosphorus Pentoxide

Grape Sugar
See Dextrose

Green Vitriol
See Ferrous Sulfate

Guaiacol
BAKER ANALYZED Reagent
(o-methoxyphenol)

M840-06	Glass	240 mL	bio	127.70	

$CH_3OC_6H_4OH$ FW: 124.14

Meets Reagent Specifications for testing USP/NF monographs
Assay ($CH_3OC_6H_4OH$) (by GC) .....min. 98%
Refractive Index, η^{20}_D 1.5430-1.5450

CAS: 90-05-1 DENSITY: 1 L = 1.112 kg MERCK INDEX: 14,4553
FLASH POINT: 82°C

Solvent Spill Cleanup Products available. See pp. 378.

Guanidine Hydrochloride
Technical

4077-01	Poly	500 g	bio	56.45	
4077-07	Flowmor	12 kg	bks	Inquire	
4077-09	Flowmor	50 kg	bul	Inquire	

$NH_2C(:NH)NH_2 \cdot HCl$ FW: 95.53

Assay ($NH_2C(:NH)NH_2 \cdot HCl$) .....min. 98.0%
Melting Range .....175-188 °C.
Loss on Drying at 105°C .....max. 0.3%
UV Absorbance of 6M Solution:
275 nm .....Actual Value Reported
260 nm .....Actual Value Reported

CAS: 50-01-1 MERCK INDEX: 14,4562

Guanidine Thiocyanate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Guanidine Thiocyanate
Biotech Reagent

4083-06	Poly	125 g	upr	78.55	
4083-01	Poly	500 g	upr	275.80	
4083-04	Poly Pail	5 kg	upr	1882.65	
4083-07	Poly Pail	12 kg	bks	Inquire	

$NH_2C(:NH)NH_2 \cdot HSCN$ FW: 118.16

Assay ($NH_2C(:NH)NH_2 \cdot HSCN$) (dried basis) ..... min. 99.0%
Identification ..... Passes Test
Loss on Drying at 105°C ..... max. 0.5%
pH of 5% Solution at 25°C 4.0-7.0
Absorbance of a 1.7M Solution:
340 nm ..... max. 0.03
300 nm ..... max. 0.05
280 nm ..... max. 0.30
DNase Activity ..... None Detected
Protease Activity ..... None Detected
RNase Activity ..... None Detected
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1
Copper (Cu) ..... max. 1
Iron (Fe) ..... max. 1
Lead (Pb) ..... max. 2
CAS: 593-84-0

Hematoxylin
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology and Cytology (C.I. 75290)

M906-03	Glass	25 g	non	160.70	

$C_{16}H_{14}O_6 \cdot nH_2O$

Meets Reagent Specifications for testing USP/NF monographs
Certified by the Biological Stain Commission
Biological Test ..... Passes Test
CAS: 517-28-2 MERCK INDEX: 14,4637

Heparin Sodium
BAKER
(mixture of polysaccharide sodium salts)

M916-00	Glass	1 g	org	87.50	

Loss on Drying at 60°C ..... max. 5%
pH of 1% Solution at 25°C 5.0-7.5
Heavy Metals (as Pb) ..... max. 0.003%
Appearance ..... Passes Test
CAS: 9041-08-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

HEPES, Free Acid
ULTRAPURE BIOREAGENT
(4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid)
For Liquid Chromatography and Molecular Biology Buffers

4018-00	Poly	25 g	upr	33.35	
4018-01	Poly	100 g	upr	87.35	
4018-04	Poly	500 g	upr	339.45	
4018-06	Poly Pail	5 kg	upr	2259.30	
4018-08	Poly Pail	7.5 kg	upr	3162.00	
4018-07	Poly Pail	12 kg	bks	Inquire	
4018-09	Poly Drum	25 kg	bul	Inquire	

$C_8H_{18}N_2O_4S$ FW: 238.31

Assay ($C_8H_{18}N_2O_4S$) ..... min. 99%
Appearance (fine, white, crystalline powder) ..... Passes Test
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Absorbance of a 0.1M Solution (1-cm path vs water) at:
260 nm ..... max. 0.05
280 nm ..... max. 0.05
pH of 5% Solution at 25°C 5.0-6.5
Ash (sulfated) ..... max. 0.2%
Trace Impurities (in ppm):
Arsenic and Antimony (as As) ..... max. 0.05
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
pK_a at 20°C ..... Actual Value Reported
CAS: 7365-45-9 MERCK INDEX: 14,4654

HEPES, Free Acid
Purified
Suitable for Use in Biopharmaceutical Manufacturing Applications

4808-02	Poly	1 kg	bks	Inquire	
4808-04	Poly Pail	5 kg	bks	Inquire	
4808-06	Poly Pail	10 kg	bks	Inquire	
4808-08		25 kg	bul	Inquire	
4808-09		50 kg	bul	Inquire	

$C_8H_{18}N_2O_4S$ FW: 238.31

Assay ($C_8H_{18}N_2O_4S$) ..... min. 99%
Appearance (fine, white, crystalline powder) ..... Passes Test
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Absorbance of a 0.1M Solution (1-cm path vs water) at:
260 nm ..... max. 0.05
280 nm ..... max. 0.05
pH of 5% Solution at 25°C 5.0-6.5
Ash (sulfated) ..... max. 0.2%
Trace Impurities (in ppm):
Arsenic and Antimony (as As) ..... max. 0.05
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
pK_a at 20°C ..... Actual Value Reported
CAS: 7365-45-9 MERCK INDEX: 14,4654

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

HEPES, Sodium Salt

ULTRAPURE BIOREAGENT

(4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid, sodium salt)

4153-00	Poly	25 g	upr	32.20	
4153-01	Poly	100 g	upr	73.05	
4153-05	Poly	1 kg	upr	553.85	
4153-06	Poly Pail	10 kg	upr	4925.30	

$C_8H_{17}N_2NaO_4S$ FW: 260.28

Assay ($C_8H_{17}N_2NaO_4S$) (dried basis) .....min. 99.0%
Appearance .....Passes Test
Solubility .....Passes Test
Loss on Drying at 80°C .....max. 3.0%
Insoluble Matter .....max. 1.0%
Heavy Metals (as Pb) .....max. 1 ppm
Identification (Sodium) .....Passes Test
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
pK_a at 20°C .....Actual Value Reported

CAS: 75277-39-3

HEPES, Sodium Salt

Purified

Suitable for use in biopharmaceutical manufacturing applications

4809-02	Poly	1 kg	bks	Inquire
4809-04	Poly Pail	5 kg	bks	Inquire
4809-06	Poly Pail	10 kg	bks	Inquire
4809-08		25 kg	bul	Inquire
4809-09		50 kg	bul	Inquire

$C_8H_{17}N_2NaO_4S$ FW: 260.28

Assay ($C_8H_{17}N_2NaO_4S$) (dried basis) .....min. 99.0%
Appearance .....Passes Test
Solubility .....Passes Test
Loss on Drying at 80°C .....max. 3.0%
Insoluble Matter .....max. 1.0%
Heavy Metals (as Pb) .....max. 1 ppm
Identification (Sodium) .....Passes Test
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
pK_a at 20°C .....Actual Value Reported

CAS: 75277-39-3

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

n-Heptane

HPLC

For Use in Liquid Chromatography and Spectrophotometry

9177-03	Glass	4 L	chp	229.45	
		4 x 4 L	chp	152.95	611.80

$CH_3(CH_2)_5CH_3$ FW: 100.20

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-254 nm .....max. 0.01
220 nm .....max. 0.10
210 nm .....max. 0.40
UV Cut-off, nm .....max. 197
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.2
at Emission Maximum for Impurities .....max. 1.0
Assay (by GC, corrected for water) .....min. 99.0%
Residue after Evaporation .....max. 2 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 0.01%

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg MERCK INDEX: 14,4659
IMO: 3:1206 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

n-Heptane

BAKER ANALYZED Reagent

M956-01	Glass	500 mL	cor	76.15	
		12 x 500 mL	cor	50.75	609.00
M956-08	Glass	4 L	cor	281.05	
		4 x 4 L	cor	187.35	749.40
M956-05	Al SAFETAINER	4 L	cor	314.95	
		4 x 4 L	cor	209.95	839.80
M956-33	Poly Coated	4 L	cor	317.10	
		4 x 4 L	cor	211.40	845.60
M956-07	Steel Pail	20 L	sbo	629.60	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$CH_3(CH_2)_5CH_3$ FW: 100.20

Assay ($CH_3(CH_2)_5CH_3$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg MERCK INDEX: 14,4659
IMO: 3:1206 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Heptane

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

n-Heptane
BAKER ANALYZED Reagent

M953-08	Glass	4 L	cor	225.00	
		4 x 4 L	cor	150.00	600.00
M953-07	Steel Pail	20 L	sbo	534.75	

$CH_3(CH_2)_5CH_3$ FW: 100.20

Assay ($CH_3(CH_2)_5CH_3$) (by GC, corrected for water) .....min. 95.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg MERCK INDEX: 14,4659
IMO: 3:1206 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

n-Heptane
ULTRA RESI-ANALYZED
(n-heptane)
For Organic Residue Analysis

9338-02	Glass	1 L	chp	76.20	
		6 x 1 L	chp	50.80	304.80
9338-03	Glass	4 L	chp	212.05	
		4 x 4 L	chp	141.35	565.40

$CH_3(CH_2)_5CH_3$ FW: 100.20

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Neat Solvent Front Characterization:
ECD-Sensitive Impurities (as Ethylene Dibromide)
Single Impurity Peak (ng/mL) .....max. 5
Assay ($CH_3(CH_2)_5CH_3$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 100 ppm

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg MERCK INDEX: 14,4659
IMO: 3:1206 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Heptane, Low Water
BakerDRY

9365-10	Septum-Seal Cap	100 mL	lws	48.15	
		6 x 100 mL	lws	38.50	231.00
9365-12	Septum-Seal Cap	1 L	lws	84.65	
		6 x 1 L	lws	67.70	406.20

$CH_3(CH_2)_5CH_3$ FW: 100.20

Assay ($CH_3(CH_2)_5CH_3$) (by GC) .....min. 98.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Water (by KF, coulometric) .....max. 20 ppm

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg MERCK INDEX: 14,4659
IMO: 3:1206 FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1-Heptanesulfonic Acid, Sodium Salt
HPLC
(sodium 1-heptanesulfonate)
For Ion-Pair Chromatography of Basic Compounds

2173-05	Glass	25 g	org	124.85	
2173-01	Glass	500 g	org	1751.05	

$CH_3(CH_2)_6SO_3Na$ FW: 202.26

Assay (as $C_7H_{15}SO_3Na$) (by acidimetry) .....min. 98.0%
UV Absorbance of 0.25 M Solution:
250 nm .....max. 0.05
240 nm .....max. 0.05
230 nm .....max. 0.05
220 nm .....max. 0.06
210 nm .....max. 0.08
200 nm .....max. 0.2

CAS: 22767-50-6

Hexachloroplatinic(IV) Acid
See Chloroplatinic Acid and Platinum Chloride

Hexadecane
Practical
(cetane)

N105-07	Glass	500 mL	non	141.90	

CAS: 544-76-3 DENSITY: 1 L = 0.77 kg FLASH POINT: > 100°C

Hexadecanoic Acid
See Palmitic Acid

Hexadecyltrimethylammonium Bromide
BAKER ANALYZED Reagent
(CTAB) (cetrimonium bromide)

N121-07	Glass	500 g	cor	325.80	
		4 x 500 g	cor	217.20	868.80

$CH_3(CH_2)_{15}N(CH_3)_3Br$ FW: 364.46

Assay ($C_{19}H_{42}BrN$) .....min. 98.0%
Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.1%
Appearance .....Passes Test
pH of 5% Solution at 25°C 5.0-7.0
Identification (by IR) .....Passes Test

CAS: 57-09-0 MERCK INDEX: 14,2025 FLASH POINT: 244°C

2,4-Hexadienoic Acid
See Sorbic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hexafluoro-2-propanol
BAKER ANALYZED Reagent

N151-05	Glass S/S	100 mL	non	566.60	

$CF_3CHOHCF_3$ FW: 168.04

Assay ($C_3H_2F_60$) (by GC, corrected for water) .....min. 99%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.1%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Product Information (not specifications):
Boiling Point (typical) .....58.2 °C.

CAS: 920-66-1 DENSITY: 1 L = 1.62 kg IMO: 8:1760

Solvent Spill Cleanup Products available. See pp. 378.

Hexahydrobenzene
See Cyclohexane

Hexahydrophenol
See Cyclohexanol

Hexahydrotoluene
See Methylcyclohexane

1,1,1,3,3,3-Hexamethyldisilazane
BAKER ANALYZED Reagent

N152-05	Glass S/S	100 mL	non	128.20	

$(CH_3)_3SiNHSi(CH_3)_3$ FW: 161.39

Meets Reagent Specifications for testing USP/NF monographs
Assay ($(CH_3)_3SiNHSi(CH_3)_3$) (by GC, corrected for water) .....min. 99%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0025%
Water (by KF, Coulometric) (H_2O) .....max. 0.1%

CAS: 999-97-3 DENSITY: 1 L = 0.77 kg IMO: 3:2924
FLASH POINT: 11°C

Solvent Spill Cleanup Products available. See pp. 378.

Hexamethylenetetramine
BAKER ANALYZED ACS Reagent

N145-07	Poly	500 g	non	51.20	

$(CH_2)_6N_4$ FW: 140.19

Meets ACS Specifications
Assay ($(CH_2)_6N_4$) (dried basis) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Loss on Drying .....max. 2.0%
Residue after Ignition .....max. 0.1%
Heavy Metals (as Pb) .....max. 0.001%

CAS: 100-97-0 MERCK INDEX: 14,5966 IMO: 4.1:1328
FLASH POINT: 250°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hexanes
BAKER ANALYZED ACS Reagent

9309-01	Glass	500 mL	cso	52.90	
		12 x 500 mL	cso	35.25	423.00
9309-22	Al SAFETAINER	1 L	cso	94.35	
		6 x 1 L	cso	62.90	377.40
9309-03	Glass	4 L	cso	169.95	
		4 x 4 L	cso	113.30	453.20
9309-05	Al SAFETAINER	4 L	cso	191.55	
		4 x 4 L	cso	127.70	510.80
9309-33	Poly Coated	4 L	cso	184.65	
		4 x 4 L	cso	123.10	492.40
9309-07	Steel Pail	20 L	sbk	361.90	
9309-R	Steel Drum	303 lb	bul	Inquire	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$CH_3(CH_2)_4CH_3$ FW: 86.18

Meets ACS Specifications
Assay (Sum of 5 isomers, total hexanes plus methylcyclopentane) (by GC) .....min. 98.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Water-Soluble Titrable Acid, meq/g .....max. 0.0003
Sulfur Compounds (as S) .....max. 0.005%
Thiophene .....Passes Test
Product Information (not specifications):
Boiling Point (typical) .....68.7 °C.
Density (g/mL) at 25°C (typical) 0.663

CAS: 110-54-3 MERCK INDEX: 14,4694 IMO: 3:1208
FLASH POINT: -21°C

Solvent Spill Cleanup Products available. See pp. 378.

Hexanes
BAKER ANALYZED ACS Reagent

9367-03	Glass	4 L	cso	203.05	
		4 x 4 L	cso	135.35	541.40
9367-07	Steel Pail	20 L	sbk	438.40	
9367-09	Steel Drum	303 lb	bul	Inquire	

$CH_3(CH_2)_4CH_3$ FW: 86.18

Meets ACS Specifications
Assay (Sum of 5 isomers, total hexanes plus methylcyclopentane) (by GC) .....min. 98.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Water-Soluble Titrable Acid, meq/g .....max. 0.0003
Sulfur Compounds (as S) .....max. 0.005%
Thiophene .....Passes Test
Assay (as n-hexane) (by GC, corrected for water) .....min. 95.0%
Product Information (not specifications):
Boiling Point (typical) .....68.7 °C.
Density (g/mL) at 25°C (typical) 0.663

CAS: 110-54-3 MERCK INDEX: 14,4694 IMO: 3:1208
FLASH POINT: -21°C

Solvent Spill Cleanup Products available. See pp. 378.

Hexanes

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hexanes					
BAKER					
N169-08	Glass	4 L	cor	94.15	
		4 x 4 L	cor	62.75	251.00

$CH_3(CH_2)_4CH_3$ FW: 86.18

Identification (by IR) ..... Passes Test
Assay (Sum of 5 isomers, total hexanes plus methylcyclopentane) (by GC) ..... min. 95%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 20 ppm

CAS: 110-54-3 DENSITY: 1 L = 0.66 kg MERCK INDEX: 14,4694
IMO: 3:1208 FLASH POINT: -21°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hexanes (99% n-hexane)					
ULTRA RESI-ANALYZED					
N168-02	Glass	1 L	chp	369.85	
		6 x 1 L	chp	246.55	1479.30
N168-08	Glass	4 L	chp	1182.55	
		4 x 4 L	chp	788.35	3153.40

$CH_3(CH_2)_4CH_3$ FW: 86.18

Meets ACS Specifications
Assay (Total Saturated C_6 Isomers) (by GC, corrected for water) ..... min. 99.5%
Assay (as n-Hexane) (by GC, corrected for water) ..... min. 99.0%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 3 ppm
Water-Soluble Titrable Acid, meq/g ..... max. 0.0003
Sulfur Compounds (as S) ..... max. 0.005%
Thiophene ..... Passes Test
Water (by KF, coulometric) ..... max. 0.03%
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission ..... max. 0.3
at Emission Maximum for Impurities ..... max. 1.0
Ultraviolet Absorbance (1.00-cm cell vs. water):
400-280 nm ..... max. 0.01
250 nm ..... max. 0.02
240 nm ..... max. 0.04
230 nm ..... max. 0.10
220 nm ..... max. 0.20
210 nm ..... max. 0.30
195 nm ..... max. 1.00
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 0.663

CAS: 110-54-3 MERCK INDEX: 14,4694 IMO: 3:1208
FLASH POINT: -23°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hexanes (95% n-hexane)					
ULTRA RESI-ANALYZED					
For Organic Residue Analysis					
9262-02	Glass	1 L	chp	77.20	
		6 x 1 L	chp	51.45	308.70
9262-03	Glass	4 L	chp	187.30	
		4 x 4 L	chp	124.85	499.40
9262-G4	Glass	4 L	chp	215.40	
		4 x 4 L	chp	143.60	574.40

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$CH_3(CH_2)_4CH_3$ FW: 86.18

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) ..... max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide) Single Impurity Peak (pg/mL) ..... max. 10
Neat Solvent Front Characterization:
ECD-Sensitive Impurities (as Ethylene Dibromide) Single Impurity Peak (ng/mL) ..... max. 5
Assay (Total Saturated C_6 Isomers) (by GC, corrected for water) ..... min. 99.5%
Assay (as n-Hexane) (by GC, corrected for water) ..... min. 95%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 1 ppm
Substances Darkened by H_2SO_4 ..... Passes Test
Water (by KF, coulometric) ..... max. 0.05%

CAS: 110-54-3 DENSITY: 1 L = 0.66 kg MERCK INDEX: 14,4694
IMO: 3:1208 FLASH POINT: -23°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hexanes (95% n-hexane)					
HPLC					
For Use in Liquid Chromatography and Spectrophotometry					
9304-02	Glass	1 L	chp	100.60	
		6 x 1 L	chp	67.05	402.30
9304-03	Glass	4 L	chp	218.55	
		4 x 4 L	chp	145.70	582.80
9304-G4	Glass	4 L	chp	240.25	
		4 x 4 L	chp	160.15	640.60
9304-33	Poly Coated	4 L	chp	232.95	
		4 x 4 L	chp	155.30	621.20

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$CH_3(CH_2)_4CH_3$ FW: 86.18

Ultraviolet Absorbance (1.00-cm cell vs. water):
350 nm ..... max. 0.005
280 nm ..... max. 0.005
254 nm ..... max. 0.008
220 nm ..... max. 0.08
210 nm ..... max. 0.2
UV Cut-off, nm ..... max. 192
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
Assay (Total Saturated C_6 Isomers)
(by GC, corrected for water) .....min. 99.5%
Assay (as n-Hexane) (by GC, corrected for water) .....min. 95.0%
Residue after Evaporation .....max. 2 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 0.01%
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 0.663
Filtered through a 0.2 micron filter.
Packaged under Nitrogen.

CAS: 110-54-3 MERCK INDEX: 14,4694 IMO: 3:1208
FLASH POINT: -23°C

Solvent Spill Cleanup Products available. See pp. 378.

Hexanes, Low Water
BakerDRY

9277-10	Septum-Seal Cap	100 mL	lws	41.55	
		6 x 100 mL	lws	33.25	199.50
9277-12	Septum-Seal Cap	1 L	lws	86.25	
		6 x 1 L	lws	69.00	414.00

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$CH_3(CH_2)_4CH_3$ FW: 86.18

Meets ACS Specifications
Assay (C_6H_{14}) (by GC)(total isomers) .....min. 98.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 2 ppm
Water-Soluble Titrable Acid, meq/g .....max. 0.0003
Sulfur Compounds (as S) .....max. 0.005%
Thiophene .....Passes Test
Water (by KF, coulometric) .....max. 20 ppm
Product Information (not specifications):
Boiling Point (typical) .....68.7 °C.
Density (g/mL) at 25°C (typical) 0.663

CAS: 110-54-3 MERCK INDEX: 14,4694 IMO: 3:1208
FLASH POINT: -21°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1-Hexanesulfonic Acid, Sodium Salt
HPLC
For Ion-Pair Chromatography of Basic Compounds

2175-05	Glass	25 g	org	127.30	
2175-01	Glass	500 g	org	1781.30	

$CH_3(CH_2)_5SO_3Na$ FW: 188.22
Assay (as $C_6H_{13}SO_3Na$) (by acidimetry) .....min. 98.0%
UV Absorbance of 0.25 M Solution:
250 nm .....max. 0.05
240 nm .....max. 0.05
230 nm .....max. 0.05
220 nm .....max. 0.06
210 nm .....max. 0.08
200 nm .....max. 0.2

CAS: 2832-45-3

1-Hexanol
Purified

9307-01	Glass	500 mL	cso	87.55	
		12 x 500 mL	cso	58.35	700.20
9307-03	Glass	4 L	cso	294.60	
		4 x 4 L	cso	196.40	785.60

$CH_3(CH_2)_5OH$ FW: 102.18
Assay ($C_6H_{13}OH$) (by GC) .....min. 95%
Color (APHA) .....max. 15

CAS: 111-27-3 DENSITY: 1 L = 0.82 kg MERCK INDEX: 14,4697
IMO: 3:2282 FLASH POINT: 61°C

Solvent Spill Cleanup Products available. See pp. 378.

For more information on the CYCLE-TAINER Solvent Delivery System, see pages 99-105.

Hexanone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2-Hexanone
BAKER

N230-03	Glass	25 g	non	94.35	

$CH_3CH_2CH_2CH_2COCH_3$ FW: 100.16

Boiling Point .....126-128 °C.
Identification (by IR) .....Passes Test

CAS: 591-78-6 DENSITY: 1 L = 0.81 kg MERCK INDEX: 14,6033
IMO: 3:1224 FLASH POINT: 25°C

Solvent Spill Cleanup Products available. See pp. 378.

Hexone
See Methyl iso-Butyl Ketone

Hexyl Alcohol
See 1-Hexanol

High Purity Solvents
See Analytical Chromatography Section, p. 22-45, and individual solvent listings

L-Histidine, USP
Multi-Compendial cGMP

2080-05	Poly	100 g	bio	126.30
2080-06	Poly	1 kg	bio	899.10
2080-07	Poly Pail	12 kg	bks	Inquire

$C_6H_9N_3O_2$ FW: 155.16

Meets USP Requirements
Assay ($C_6H_9N_3O_2$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Specific Rotation $[\alpha]_D^{25}$ .....+12.6 - +14.0 °
pH 7.0-8.5
Loss on Drying at 105°C .....max. 0.2%
Residue on Ignition .....max. 0.4%
Chloride (Cl) .....max. 0.05%
Sulfate (SO_4) .....max. 0.03%
Iron (Fe) .....max. 0.003%
Heavy Metals (as Pb) .....max. 0.0015%
Chromatographic Purity:
Individual Impurities .....max. 0.5%
Total Impurities .....max. 2.0%

Meets FCC Requirements
Assay ($C_6H_9N_3O_2$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Lead (Pb) .....max 5 mg/kg
Loss on Drying .....max. 0.2%
Residue on Ignition .....max. 0.2%
Specific Rotation $[\alpha]_D^{20}$ .....+11.5 - +13.5 °

Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_6H_9N_3O_2$) (dried basis) 98.5-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Appearance of Solution .....Passes Test
Specific Rotation $[\alpha]_D^{20}$ .....+11.4 - +12.4 °
Ninhydrin-Positive Substances .....max. 0.5%
Chloride (Cl) .....max. 200 ppm
Sulfate (SO_4) .....max. 300 ppm
Ammonium (NH_4) .....max. 200 ppm
Iron (Fe) .....max. 10 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Loss on Drying .....max. 0.5%
Ash (sulfated) .....max. 0.1%

Meets JPC 1997 Requirements
Assay ($C_6H_9N_3O_2$) (dried basis) .....min. 98.5%
Identification .....Passes Test
Optical Rotation $[\alpha]_D^{25}$ .....+11.8 - +12.8 °
pH 7.0-8.5
Clarity and Color of Solution .....Passes Test
Chloride (Cl) .....max. 0.021%
Sulfate (SO_4) .....max. 0.028%
Ammonium (NH_4) .....max. 0.02%
Heavy Metals (as Pb) .....max. 20 ppm
Arsenic (As) .....max. 2 ppm
Other Amino Acids .....Passes Test
Loss on Drying .....max. 0.30%
Residue on Ignition .....max. 0.10%

CAS: 71-00-1 MERCK INDEX: 14,4720

L-(+)-Histidine
BAKER ANALYZED Biochemical Reagent

N327-05	Glass	100 g	bio	114.85
N327-06	Poly Pail	5 kg	bio	2467.50

NHCH:NCH:$CCH_2CH(NH_2)COOH$ FW: 155.16

Assay (NHCH:NCH:$CCH_2CH(NH_2)COOH$) (dried basis) .....min. 98.5%
Specific Rotation, $[\alpha]_D^{25}$(dried basis, c = 1 in 6N HCl) .....+12.6 - +14.0 °
Loss on Drying at 105°C .....max. 0.2%
Ash (sulfated) .....max. 0.1%
Arsenic (As) .....max. 0.0003%
Heavy Metals (as Pb) .....max. 0.002%
Iron (Fe) .....max. 0.003%

CAS: 71-00-1 MERCK INDEX: 14,4720

L-Histidine Monohydrochloride, FCC
Multi-Compendial FOOD GRADE cGMP

2081-06	Poly	1 kg	bio	363.35
2081-07	Poly Pail	12 kg	bks	Inquire
2081-09	Poly Drum	50 kg	bul	Inquire

$C_6H_9N_3O_2 \cdot HCl \cdot H_2O$ FW: 209.63

Meets FCC Requirements
Assay ($C_6H_9N_3O_2 \cdot HCl$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Lead (Pb) .....max 5 mg/kg
Loss on Drying at 105°C .....max. 0.3%
Residue after Ignition .....max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ .....+8.5 - +10.5 °

Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_6H_9N_3O_2 \cdot HCl$) (dried basis) 98.5-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Identification F .....Passes Test
Appearance of Solution .....Passes Test
pH 3.0-5.0
Specific Rotation $[\alpha]_D^{20}$ .....+9.2 - +10.6 °
Ninhydrin-Positive Substances .....Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Loss on Drying at 150°C 7.0-10.0%
Ash (sulfated) ..... max. 0.1%
Store in well-closed, light-resistant containers

CAS: 5934-29-2 MERCK INDEX: 14,4720

Homidium Bromide

See Ethidium Bromide

HPLC Bonded Phases

See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

HPLC Columns

See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

HPLC Solvents

See Analytical Chromatography Section, p. 22-45 and individual solvent listings

Hyamine Hydroxide, 1M in Methanol

BAKER ANALYZED Reagent
((diisobutylcresoxyethoxyethyl)(dimethyl)benzylammonium hydroxide)
For Liquid Scintillation Counting

2197-01	Glass	500 mL	lsc	694.75	

Molarity 0.95-1.05
Suitability for Solubilizing Tissues ..... Passes Test
Suitability for LSC ..... Passes Test
Counting Efficiency for ^3H ..... min. 29%

DENSITY: 1 L = 0.933 kg IMO: 3:1230 FLASH POINT: 11°C

Solvent Spill Cleanup Products available. See pp. 378.

HYDRA-POINT Products for Karl Fischer Titrations

See under Karl Fischer Reagents

Hydrazine Dihydrochloride

BAKER

N368-05	Poly	100 g	non	68.20	
N368-07	Poly	500 g	non	121.55	

$NH_2NH_2 \cdot 2HCl$ FW: 104.97

Meets Reagent Specifications for testing USP/NF monographs
Assay ($NH_2NH_2 \cdot 2HCl$) ..... min. 98%

CAS: 5341-61-7 MERCK INDEX: 14,4770 IMO: 8:3260

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrazine Sulfate, Crystal

BAKER ANALYZED ACS Reagent

2177-04	Poly	125 g	csa	77.40	
		4 x 125 g	csa	51.60	206.40
2177-01	Poly	500 g	non	123.50	
2177-R	Poly Drum	200 lb	bul	Inquire	

$(NH_2)_2 \cdot H_2SO_4$ FW: 130.12

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($(NH_2)_2 \cdot H_2SO_4$) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.020%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%

CAS: 10034-93-2 MERCK INDEX: 14,4772 IMO: 8:3260

Hydrobromic Acid, 47-49%

BAKER ANALYZED ACS Reagent

0160-01	Glass	500 mL	cac	169.50	
		12 x 500 mL	cac	96.85	1162.20
0160-03	Glass	4 L	non	446.95	

HBr FW: 80.92

Meets ACS Specifications
Assay (HBr) (by acidimetry) 47.0-49.0%
Residue after Ignition ..... max. 0.002%
Chloride (Cl) ..... max. 0.05%
Iodide (I) ..... max. 0.003%
Phosphate (PO_4) ..... max. 0.001%
Sulfate and Sulfite (as SO_4) ..... max. 0.003%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 1
Selenium (Se) ..... max. 0.01
Material darkens when exposed to air and light.

CAS: 10035-10-6 DENSITY: 1 L = 1.5 kg MERCK INDEX: 14,4778
IMO: 8:1788

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid

ULTREX II Ultrapure Reagent

6900-05	Fluoropolymer	500 mL	spr	376.20	
6900-02	Fluoropolymer	2 L	spr	1174.35	

HCl FW: 36.46

Certificate Provided Reports Actual Lot Analysis
Assay (HCl)(w/w) 33-36%
Trace Impurities in ppt (pg/g):
Aluminum (Al) ..... max. 20
Antimony (Sb) ..... max. 20
Arsenic (As) ..... max. 50
Barium (Ba) ..... max. 10
Beryllium (Be) ..... max. 10

Hydrochloric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Bismuth (Bi)					max. 10
Boron (B)					max. 100
Cadmium (Cd)					max. 10
Calcium (Ca)					max. 20
Cerium (Ce)					max. 10
Cesium (Cs)					max. 10
Chromium (Cr)					max. 20
Cobalt (Co)					max. 10
Copper (Cu)					max. 20
Dysprosium (Dy)					max. 1
Erbium (Er)					max. 1
Europium (Eu)					max. 1
Gadolinium (Gd)					max. 1
Gallium (Ga)					max. 10
Gold (Au)					max. 100
Hafnium (Hf)					max. 10
Holmium (Ho)					max. 1
Indium (In)					max. 1
Iron (Fe)					max. 20
Lanthanum (La)					max. 1
Lead (Pb)					max. 10
Lithium (Li)					max. 10
Lutetium (Lu)					max. 10
Magnesium (Mg)					max. 10
Manganese (Mn)					max. 10
Mercury (Hg)					max. 100
Molybdenum (Mo)					max. 10
Neodymium (Nd)					max. 1
Nickel (Ni)					max. 50
Niobium (Nb)					max. 1
Palladium (Pd)					Actual Value Reported
Platinum (Pt)					Actual Value Reported
Potassium (K)					max. 10
Praseodymium (Pr)					max. 1
Rhenium (Re)					max. 10
Rhodium (Rh)					max. 10
Rubidium (Rb)					max. 10
Ruthenium (Ru)					max. 10
Samarium (Sm)					max. 1
Scandium (Sc)					max. 10
Selenium (Se)					Actual Value Reported
Silver (Ag)					max. 10
Sodium (Na)					max. 10
Strontium (Sr)					max. 10
Tantalum (Ta)					Actual Value Reported
Tellurium (Te)					max. 1
Terbium (Tb)					max. 1
Thallium (Tl)					max. 10
Thorium (Th)					max. 1
Thulium (Tm)					max. 1
Tin (Sn)					max. 20
Titanium (Ti)					max. 20
Tungsten (W)					max. 10
Uranium (U)					max. 1
Vanadium (V)					max. 10
Ytterbium (Yb)					max. 1
Yttrium (Y)					max. 1
Zinc (Zn)					max. 20
Zirconium (Zr)					max. 10

CAS: 7647-01-0 DENSITY: 1 L = 1.0500 kg MERCK INDEX: 14,4780
IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hydrochloric Acid, 36.5-38.0%					
BAKER ANALYZED ACS Reagent					
9535-02	Glass S/S	500 mL	cma	50.55	
		12 x 500 mL	cma	50.55	606.60
9535-01	Glass	6 x 500 mL	cma	30.30	181.80
9535-00	Poly Coated	6 x 500 mL	cma	34.70	208.20
9535-05	Glass S/S	2.5 L	cma	68.70	
		6 x 2.5 L	cma	68.70	412.20
9535-03	Glass	6 x 2.5 L	cma	41.25	247.50
9535-20	Poly	6 x 2.5 L	spr	33.80	202.80
9535-33	Poly Coated	6 x 2.5 L	cma	49.80	298.80
9535-07	Poly Pail	47 lb	bul	Inquire	
9535-10	Glass Carboy	65 lb	bul	Inquire	
9535-08	Poly Drum	140 lb	bul	Inquire	
9535-09	Poly Drum	290 lb	bul	Inquire	
9535-15	Poly Drum	475 lb	bul	Inquire	

HCl FW: 36.46

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance ..... Passes Test
Assay (as HCl) (by acid-base titrn) 36.5-38.0%
Color (APHA) ..... max. 10
Extractable Organic Substances ..... max. 5 ppm
Free Chlorine (as Cl) ..... max. 1 ppm
Residue after Ignition ..... max. 3 ppm
Specific Gravity at 60°/60°F 1.185-1.192
Bromide (Br) ..... max. 0.005%

Trace Impurities (in ppm):

Phosphate (PO_4) ..... max. 1
Sulfate (SO_4) ..... max. 0.5
Sulfite (SO_3) ..... max. 0.8
Ammonium (NH_4) ..... max. 3

Trace Impurities (in ppb):

Aluminum (Al) ..... max. 100
Arsenic and Antimony (as As) ..... max. 5
Boron (B) ..... max. 50
Calcium (Ca) ..... max. 200
Chromium (Cr) ..... max. 100
Copper (Cu) ..... max. 100
Gold (Au) ..... max. 100
Heavy Metals (as Pb) ..... max. 100
Iron (Fe) ..... max. 100
Lead (Pb) ..... max. 50
Magnesium (Mg) ..... max. 300
Manganese (Mn) ..... max. 300
Mercury (Hg) ..... max. 5
Nickel (Ni) ..... max. 100
Potassium (K) ..... max. 300
Sodium (Na) ..... max. 300
Tin (Sn) ..... max. 300
Titanium (Ti) ..... max. 300
Zinc (Zn) ..... max. 100

CAS: 7647-01-0 DENSITY: 1 L = 1.0500 kg MERCK INDEX: 14,4780
IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 36.5-38.0%

BAKER INSTRA-ANALYZED Reagent
(For Trace Metal Analysis)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9530-00	Poly Coated	500 mL	spr	70.60	
		6 x 500 mL	spr	40.35	242.10
9530-33	Poly Coated	2.5 L	spr	107.70	
		6 x 2.5 L	spr	61.55	369.30

HCl FW: 36.46

Meets ACS Specifications

Assay (as HCl) (by acid-base titrn) 36.5-38.0%
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 3 ppm
Specific Gravity at 60°/60°F 1.185-1.192
Bromide (Br) ..... max. 0.005%
Extractable Organic Substances ..... max. 5 ppm
Free Chlorine (as Cl) ..... max. 0.5 ppm

Trace Impurities (in ppm):

Phosphate (PO_4) ..... max. 0.05
Sulfate (SO_4) ..... max. 0.5
Sulfite (SO_3) ..... max. 0.8
Ammonium (NH_4) ..... max. 3
Arsenic (As) ..... max. 0.01

Trace Impurities (in ppb):

Aluminum (Al) ..... max. 10
Arsenic and Antimony (as As) ..... max. 5
Barium (Ba) ..... max. 1
Beryllium (Be) ..... max. 1
Bismuth (Bi) ..... max. 10
Boron (B) ..... max. 20
Cadmium (Cd) ..... max. 1
Calcium (Ca) ..... max. 50
Chromium (Cr) ..... max. 1
Cobalt (Co) ..... max. 1
Copper (Cu) ..... max. 1
Gallium (Ga) ..... max. 1
Germanium (Ge) ..... max. 3
Gold (Au) ..... max. 4
Heavy Metals (as Pb) ..... max. 100
Iron (Fe) ..... max. 15
Lead (Pb) ..... max. 1
Lithium (Li) ..... max. 1
Magnesium (Mg) ..... max. 10
Manganese (Mn) ..... max. 1
Mercury (Hg) ..... max. 0.5
Molybdenum (Mo) ..... max. 10
Nickel (Ni) ..... max. 4
Niobium (Nb) ..... max. 1
Potassium (K) ..... max. 9
Selenium (Se) ..... Actual Value Reported
Silicon (Si) ..... max. 100
Silver (Ag) ..... max. 1
Sodium (Na) ..... max. 100
Strontium (Sr) ..... max. 1
Tantalum (Ta) ..... max. 1
Thallium (Tl) ..... max. 5
Tin (Sn) ..... max. 5
Titanium (Ti) ..... max. 1
Vanadium (V) ..... max. 1
Zinc (Zn) ..... max. 5
Zirconium (Zr) ..... max. 1

Product Information (not specifications):
Appearance (clear, fuming liquid)

CAS: 7647-01-0 DENSITY: 1 L = 1.0500 kg MERCK INDEX: 14,4780
IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid (30%) w/w

cGMP

Biotech Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
0365-07	Hedpak	19 L	bks	Inquire	
0365-09	Poly Drum	200 L	bul	Inquire	

HCl in H_2O FW: 36.46

Made from USP Purified Water and Hydrochloric Acid, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance (Clear, colorless liquid) ..... Passes Test
Assay (HCl in H_2O) 29.0-31.0%

Trace Impurities (in ppm):

Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1

Filtered through 0.2 micron filter

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, NF

cGMP

Multi-Compendial
(36.5-38.0%)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9544-02	Glass S/S	500 mL	rac	62.70	
		12 x 500 mL	rac	62.70	752.40
9544-05	Glass S/S	2.5 L	rac	105.65	
		6 x 2.5 L	rac	105.65	633.90
9544-03	Glass	6 x 2.5 L	rac	59.10	354.60
9544-33	Poly Coated	2.5 L	rac	118.90	
		6 x 2.5 L	rac	67.95	407.70
9544-07	Poly Pail	47 lb	bul	Inquire	
9544-08	Poly Drum	140 lb	bul	Inquire	
9544-15	Poly Drum	475 lb	bul	Inquire	

HCl FW: 36.46

Meets NF Requirements

Identification ..... Passes Test
Residue on Ignition ..... max. 0.008%
Bromide or Iodide ..... Passes Test
Free Bromine or Chlorine ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Sulfite (SO_3) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Assay (HCl) 36.5-38.0%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Free Chlorine (as Cl) ..... max. 4 ppm
Sulfate (SO_4) ..... max. 20 ppm
Heavy Metals (as Pb) ..... max. 2 ppm
Residue on Evaporation ..... max. 0.01%
Assay (HCl) 35.0-39.0%

Meets JP Chemical Specifications

Assay (HCl) 35.0-38.0%
Identification ..... Passes Test
Residue on Ignition ..... max. 0.008%
Bromide or Iodide ..... Passes Test

Hydrochloric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Bromine or Chlorine ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Sulfite (SO_3) ..... Passes Test
Arsenic (As) ..... max. 1 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Mercury (Hg) ..... max. 0.04 ppm

CAS: 7647-01-0 DENSITY: 1 L = 1.0500 kg MERCK INDEX: 14,4780
IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 25%
Biotech Reagent cGMP

0323-07	Hedpak	19 L	bks	Inquire	

HCl FW: 36.46

Made from USP Purified Water and Hydrochloric Acid, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance (Clear, colorless) ..... Passes Test
Assay (HCl) 24.0-26.0%
Residue after Evaporation ..... max. 0.01%
Arsenic (As) ..... max. 1.5 ppm
Sulfate (SO_4) ..... max. 1 ppm
Ammonium (NH_4) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 0.5 ppm
Iron (Fe) ..... max. 0.1 ppm
Filtered through 0.2 micron filter

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg MERCK INDEX: 14,4794
IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 6.0N Solution
Biotech Reagent cGMP

0327-02	Poly	6 x 1 L	bks	Inquire	
0327-07	Hedpak	19 L	bks	Inquire	
0327-22	Poly Drum	200 L	bul	Inquire	

HCl FW: 36.46

Made from USP Purified Water and Hydrochloric Acid, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance (Clear, colorless liquid) ..... Passes Test
Normality 5.98-6.02
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Sulfate (SO_4) ..... max. 1
Filtered through a 0.2 micron filter.

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrochloric Acid, 6N Volumetric Solution
BAKER ANALYZED Reagent

5619-02	Poly	1 L	sol	41.15	
		6 x 1 L	sol	34.30	205.80
5619-03	Poly	4 L	sol	73.10	
		4 x 4 L	sol	60.90	243.60

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality (eq/L) 5.98-6.02
Trace Impurities (in ppm):
Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Appearance ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 5N Volumetric Solution
BAKER ANALYZED Reagent

5618-02	Poly	1 L	sol	43.10	
		6 x 1 L	sol	35.90	215.40
5618-03	Poly	4 L	sol	72.20	
		4 x 4 L	sol	60.15	240.60
5618-07	Poly Pail	19 L	sol	184.55	

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 4.975-5.025
Trace Impurities (in ppm):
Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Appearance ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 2.0N Solution
Biotech Reagent cGMP

0336-03	Poly	4 x 4 L	bks	Inquire	

HCl FW: 36.46

Made from USP Purified Water and Hydrochloric Acid, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance (Clear, colorless liquid) ..... Passes Test
Normality 1.98-2.02
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iron (Fe) ..... max. 0.1
Sulfate (SO_4) ..... max. 1
Filtered through a 0.2 micron filter.
DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 2N Volumetric Solution
BAKER ANALYZED Reagent

5616-02	Poly	1 L	sol	41.15	
		6 x 1 L	sol	34.30	205.80

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Appearance (clear, colorless solution) ..... Passes Test
Color (APHA) ..... max. 10
Normality 1.995-2.005
Trace Impurities (in ppm):
Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 1.0N Solution
Biotech Reagent cGMP

0325-07	Hedpak	19 L	bks	Inquire	
0325-09	Poly Drum	200 L	bul	Inquire	

HCl FW: 36.46

Made from USP Purified Water and Hydrochloric Acid, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance (Clear, colorless liquid) ..... Passes Test
Normality 0.99-1.01
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Sulfate (SO_4) ..... max. 1
Filtered through a 0.2 micron filter.
CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrochloric Acid, 1N Volumetric Solution
BAKER ANALYZED Reagent

5620-02	Poly	1 L	sol	36.80	
		6 x 1 L	sol	30.65	183.90
5620-03	Cubitainer	4 L	sol	68.90	
		4 x 4 L	sol	57.40	229.60
5620-07	Cubitainer	20 L	sol	185.35	

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Appearance (Clear, colorless liquid) ..... Passes Test
Normality 0.995-1.005
Trace Impurities (in ppm):
Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 0.5N Solution
Biotech Reagent cGMP

0335-07	Hedpak	19 L	bks	Inquire

HCl FW: 36.46

Made from USP Purified Water and Hydrochloric Acid, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance of Solution ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Normality 0.485-0.515
Residue on Ignition ..... max. 0.008%
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Sulfate (SO_4) ..... max. 1
Arsenic (As) ..... max. 2
Filtered through a 0.2 micron filter.
CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

J.T.Baker volumetric solutions provide on-target titration without re-standardization. Over 50 solutions are available in 1 L, 4 L, or 20 L sizes. See pages 50-53.

Hydrochloric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrochloric Acid, 0.5N Volumetric Solution
BAKER ANALYZED Reagent

5622-02	Poly	1 L	sol	36.80	
		6 x 1 L	sol	30.65	183.90
5622-03	Cubitainer	4 L	sol	71.35	
		4 x 4 L	sol	59.45	237.80
5622-07	Cubitainer	20 L	sol	188.75	

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.495-0.505
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 3
Sulfate (SO_4) ..... max. 1
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Appearance ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 0.2N Volumetric Solution
BAKER ANALYZED Reagent

5612-02	Poly	1 L	sol	34.90	
		6 x 1 L	sol	29.10	174.60
5612-03	Cubitainer	4 L	sol	65.20	
		4 x 4 L	sol	54.35	217.40
5612-07	Cubitainer	20 L	sol	188.75	

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.1995-0.2005
Trace Impurities (in ppm):
Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Appearance ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 0.1N Solution
Biotech Reagent cGMP

0326-07	Hedpak	19 L	bks	Inquire	

HCl FW: 36.46

Made from USP Purified Water and Hydrochloric Acid, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance (Clear, colorless liquid) ..... Passes Test
Normality 0.0995-0.1005
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Sulfate (SO_4) ..... max. 1
Filtered through a 0.2 micron filter.

CAS: 7647-01-0 DENSITY: 1 L = 1.0 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5621-02	Poly	1 L	sol	34.90	
		6 x 1 L	sol	29.10	174.60
5621-03	Cubitainer	4 L	sol	63.05	
		4 x 4 L	sol	52.55	210.20
5621-07	Cubitainer	20 L	sol	188.75	

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.0995-0.1005
Trace Impurities (in ppm):
Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1

CAS: 7647-01-0 DENSITY: 1 L = 1.0 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 0.02N Volumetric Solution
BAKER ANALYZED Reagent

5614-02	Poly	1 L	sol	44.90	
		6 x 1 L	sol	37.40	224.40
5614-03	Cubitainer	4 L	sol	65.20	
		4 x 4 L	sol	54.35	217.40

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.0195-0.0205
Trace Impurities (in ppm):
Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Appearance ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1.0 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrochloric Acid, 0.01N Volumetric Solution
BAKER ANALYZED Reagent

5611-02	Poly	1 L	sol	34.90	
		6 x 1 L	sol	29.10	174.60
5611-03	Cubitainer	4 L	sol	63.05	
		4 x 4 L	sol	52.55	210.20

HCl FW: 36.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.0095-0.0105
Trace Impurities (in ppm):
Sulfate (SO_4) ..... max. 1
Ammonium (NH_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Appearance ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1.0 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, DILUT-IT Analytical Concentrate, 1N
(1 equiv. = 36.46 g HCl)

4657-01	Ampoule	1 pk	spr	39.00	
		6 x 1 pk	spr	32.50	195.00

(Makes 1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, DILUT-IT Analytical Concentrate, 0.5N
(1/2 equiv. = 18.23 g HCl)

4654-01	Ampoule	1 pk	spr	48.85	
		6 x 1 pk	spr	40.70	244.20

(Makes 0.5N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, DILUT-IT Analytical Concentrate, 0.1N
(1/10 equiv. = 3.646 g HCl)

4655-01	Ampoule	1 pk	spr	37.90	
		6 x 1 pk	spr	31.60	189.60

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrofluoboric Acid
See Fluoboric Acid

Hydrofluoric Acid
ULTREX II Ultrapure Reagent

6904-05	Fluoropolymer	500 mL	spr	951.50	
6904-01	Fluoropolymer	1 L	spr	1864.20	

HF FW: 20.01

Certificate Provided Reports Actual Lot Analysis
Assay (HF)(w/w) 47-51%
Trace Impurities in ppt (pg/g):
Aluminum (Al) ..... max. 20
Antimony (Sb) ..... max. 20
Arsenic (As) ..... max. 50
Barium (Ba) ..... max. 10
Beryllium (Be) ..... max. 10
Bismuth (Bi) ..... max. 10
Boron (B) ..... max. 100
Cadmium (Cd) ..... max. 10
Calcium (Ca) ..... max. 20
Cerium (Ce) ..... max. 10
Cesium (Cs) ..... max. 10
Chromium (Cr) ..... max. 20
Cobalt (Co) ..... max. 10
Copper (Cu) ..... max. 20
Dysprosium (Dy) ..... max. 1
Erbium (Er) ..... max. 1
Europium (Eu) ..... max. 1
Gadolinium (Gd) ..... max. 1
Gallium (Ga) ..... max. 10
Germanium (Ge) ..... max. 10
Gold (Au) ..... max. 20
Hafnium (Hf) ..... max. 10
Holmium (Ho) ..... max. 1
Indium (In) ..... max. 1
Iron (Fe) ..... max. 20
Lanthanum (La) ..... max. 10
Lead (Pb) ..... max. 10
Lithium (Li) ..... max. 10
Lutetium (Lu) ..... max. 1
Magnesium (Mg) ..... max. 10
Manganese (Mn) ..... max. 10
Mercury (Hg) ..... max. 100
Molybdenum (Mo) ..... max. 10
Neodymium (Nd) ..... max. 1
Nickel (Ni) ..... max. 50
Niobium (Nb) ..... max. 10
Palladium (Pd) ..... max. 20
Platinum (Pt) ..... max. 20
Potassium (K) ..... max. 10
Praseodymium (Pr) ..... max. 1
Rhenium (Re) ..... max. 10
Rhodium (Rh) ..... max. 20
Rubidium (Rb) ..... max. 20
Ruthenium (Ru) ..... max. 20
Samarium (Sm) ..... max. 1
Scandium (Sc) ..... max. 10
Selenium (Se) ..... Actual Value Reported
Silver (Ag) ..... max. 10
Sodium (Na) ..... max. 10
Strontium (Sr) ..... max. 10

Hydrofluoric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Tantalum (Ta)				Actual Value Reported	
Tellurium (Te)				max. 1	
Terbium (Tb)				max. 1	
Thallium (Tl)				max. 10	
Thorium (Th)				max. 1	
Thulium (Tm)				max. 1	
Tin (Sn)				max. 20	
Titanium (Ti)				max. 50	
Tungsten (W)				max. 20	
Uranium (U)				max. 1	
Vanadium (V)				max. 10	
Ytterbium (Yb)				max. 1	
Yttrium (Y)				max. 1	
Zinc (Zn)				max. 20	
Zirconium (Zr)				max. 10	

CAS: 7664-39-3 DENSITY: 1 L = .9909 kg MERCK INDEX: 14,4790
IMO: 8:1790

Hydrofluoric Acid
BAKER INSTRA-ANALYZED Reagent (For Trace Metal Analysis)

9563-01	Poly	500 mL	spr	150.85	
		12 x 500 mL	spr	86.20	1034.40

HF FW: 20.01

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (HF) (by acidimetry)	48.0-51.0%
Color (APHA)	max. 10
Residue after Ignition	max. 5 ppm
Fluosilicic Acid (H_2SiF_6)	max. 0.010%
Trace Impurities (in ppm):	
Chloride (Cl)	max. 5
Nitrate (NO_3)	max. 3
Phosphate (PO_4)	max. 1
Sulfate and Sulfite (as SO_4)	max. 5
Trace Impurities (in ppb):	
Aluminum (Al)	max. 50
Arsenic and Antimony (as As)	max. 30
Barium (Ba)	max. 50
Beryllium (Be)	max. 20
Bismuth (Bi)	max. 100
Boron (B)	max. 50
Cadmium (Cd)	max. 10
Calcium (Ca)	max. 50
Chromium (Cr)	max. 10
Cobalt (Co)	max. 5
Copper (Cu)	max. 5
Gallium (Ga)	max. 20
Germanium (Ge)	max. 50
Gold (Au)	max. 10
Heavy Metals (as Pb)	max. 100
Iron (Fe)	max. 100
Lead (Pb)	max. 20
Lithium (Li)	max. 20
Magnesium (Mg)	max. 50
Manganese (Mn)	max. 50
Mercury (Hg)	max. 10
Molybdenum (Mo)	max. 50
Nickel (Ni)	max. 10
Potassium (K)	max. 100
Silver (Ag)	max. 20
Sodium (Na)	max. 200
Strontium (Sr)	max. 20
Tantalum (Ta)	max. 100
Tin (Sn)	max. 50
Titanium (Ti)	max. 50
Vanadium (V)	max. 50
Zinc (Zn)	max. 20
Zirconium (Zr)	max. 20

CAS: 7664-39-3 DENSITY: 1 L = .9909 kg MERCK INDEX: 14,4790
IMO: 8:1790

Hydrofluoric Acid, 48.0-51.0%
BAKER ANALYZED ACS Reagent

9560-01	Poly	500 mL	cac	96.15	
		12 x 500 mL	cac	54.95	659.40
9560-18		6 x 2.5 L	spr	33.80	202.80
9560-06	Poly	4 L	cac	376.35	
		4 x 4 L	cac	215.05	860.20
9560-08	Poly Pail	48 lb	bul	Inquire	
9560-09	Poly Drum	500 lb	bul	Inquire	

HF FW: 20.01

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (HF) (by acidimetry)	48.0-51.0%
Fluosilicic Acid (H_2SiF_6)	max. 0.01%
Residue after Ignition	max. 5 ppm
Trace Impurities (in ppm):	
Chloride (Cl)	max. 5
Nitrate (NO_3)	max. 5
Phosphate (PO_4)	max. 1
Sulfate and Sulfite (as SO_4)	max. 5
Trace Impurities (in ppb):	
Arsenic and Antimony (as As)	max. 50
Copper (Cu)	max. 50
Heavy Metals (as Pb)	max. 500
Iron (Fe)	max. 500
Lead (Pb)	max. 100
Nickel (Ni)	max. 50

CAS: 7664-39-3 DENSITY: 1 L = .9909 kg MERCK INDEX: 14,4790
IMO: 8:1790

Hydrofluoric Acid Cleanup Products
See under Spill Cleanup Products

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hydrogen Peroxide, 30% **BAKER ANALYZED ACS Reagent (Stabilized)**					
2186-01	Poly	500 mL	cso	157.30	
		12 x 500 mL	cso	104.85	1258.20
2186-18	Poly	6 x 2.5 L	spr	377.35	2264.10
2186-03	Poly	4 L	cso	690.00	
		4 x 4 L	cso	460.00	1840.00
2186-09	Poly Drum	120 lb	bul	Inquire	
2186-R	Poly Drum	250 lb	bul	Inquire	

H_2O_2 FW: 34.01

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (H_2O_2) 30.0-32.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.002%
Titrable Acid (meq/g) .....max. 0.0006
Trace Impurities (in ppm):
Chloride (Cl) .....max. 3
Nitrate (NO_3) .....max. 2
Phosphate (PO_4) .....max. 2
Sulfate (SO_4) .....max. 5
Ammonium (NH_4) .....max. 5
Trace Impurities (in ppb):
Copper (Cu) .....max. 50
Iron (Fe) .....max. 100
Heavy Metals (as Pb) .....max. 1000
Lead (Pb) .....max. 100
Nickel (Ni) .....max. 50

CAS: 7722-84-1 DENSITY: 1 L = 1.4424 kg MERCK INDEX: 14,4798
IMO: 5.1:2014

Hydrogen Peroxide, 30%
ULTREX II Ultrapure Reagent

5155-01	Poly	450 mL	spr	178.75	

H_2O_2 FW: 34.01

Meets ACS Ultratrace Specifications
Certificate Provided Reports Actual Lot Analysis

Assay (H_2O_2) 25.0-35.0%
Appearance .....Passes Test
Free Acid (µeq/g) .....max. 0.5
Trace Impurities (in ppm):
Ammonium (NH_4) .....max. 5
Chloride (Cl) .....max. 1
Nitrate (NO_3) .....max. 2
Phosphate (PO_4) .....max. 2
Sulfate (SO_4) .....max. 5
Trace Impurities (in ppt):
Aluminum (Al) .....max. 100
Antimony (Sb) .....max. 1000
Arsenic (As) .....max. 1000
Barium (Ba) .....max. 50
Beryllium (Be) .....max. 1000
Bismuth (Bi) .....max. 1000
Boron (B) .....max. 1000
Cadmium (Cd) .....max. 50
Calcium (Ca) .....max. 100
Chromium (Cr) .....max. 50
Cobalt (Co) .....max. 50
Copper (Cu) .....max. 50
Gallium (Ga) .....max. 1000
Iron (Fe) .....max. 100
Lead (Pb) .....max. 100
Lithium (Li) .....max. 50
Magnesium (Mg) .....max. 50
Manganese (Mn) .....max. 50
Mercury (Hg) .....max. 1000
Molybdenum (Mo) .....max. 1000
Nickel (Ni) .....max. 50
Potassium (K) .....max. 100
Silicon (Si) .....max. 5000
Silver (Ag) .....max. 50
Sodium (Na) .....max. 100
Strontium (Sr) .....max. 50
Tin (Sn) .....max. 50
Titanium (Ti) .....max. 1000
Vanadium (V) .....max. 1000
Zinc (Zn) .....max. 50
Zirconium (Zr) .....max. 1000

CAS: 7722-84-1 DENSITY: 1 L = 1.4424 kg MERCK INDEX: 14,4798
IMO: 5.1:2014

Hydrogen Peroxide, 30%
BAKER
Formerly C.P.
(Stabilized)

2189-01	Poly	500 mL	cso	141.55	
		12 x 500 mL	cso	94.35	1132.20

H_2O_2 FW: 34.01

Assay (H_2O_2) 29.0-32.0%
Residue after Evaporation .....max. 0.03%
Nitrogen Compounds (as N) .....max. 0.001%
Phosphate (PO_4) .....max. 0.02%
Sulfate (SO_4) .....max. 0.001%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5

CAS: 7722-84-1 DENSITY: 1 L = 1.4424 kg MERCK INDEX: 14,4798
IMO: 5.1:2014

Hydrogen Peroxide, 3% Solution, Sterile
See under Protocol C[3]

Hydrogen Peroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrogen Peroxide, 3%
BAKER ANALYZED Reagent

2180-01	Poly	500 mL	cso	62.55	
		12 x 500 mL	cso	41.70	500.40
2180-18	Poly	6 x 2.5 L	spr	136.35	818.10
2180-03	Poly	4 L	cso	253.50	
		4 x 4 L	cso	169.00	676.00
2180-R	Poly Drum	435 lb	bul	Inquire	

H_2O_2 FW: 34.01

Assay (H_2O_2) 3.0-3.5%
Residue after Evaporation ..... max. 0.05%
Free Acid (as H_2SO_4) ..... max. 0.01%
Nitrogen Compounds (as N) ..... max. 0.005%
Phosphate (PO_4) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.005%
Preservative (acetophenetidin) ..... max. 0.05%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Arsenic (As) ..... max. 0.1
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 5

CAS: 7722-84-1 DENSITY: 1 L = 1.0 kg MERCK INDEX: 14,4798

Hydrogen Peroxide, Topical, Solution, 2.5-3.5%
cGMP
USP
(Contains 0.05% max. Acetophenetidin as a Preservative)

2182-01	Glass	500 mL	rss	60.30	
		12 x 500 mL	rss	40.20	482.40
2182-03	Glass	4 L	rss	284.85	
		4 x 4 L	rss	189.90	759.60
2182-R	Poly Drum	435 lb	bul	Inquire	

H_2O_2 FW: 34.01

Meets USP Requirements
Identification ..... Passes Test
Acidity ..... Passes Test
Nonvolatile Residue (USP),mg. ..... max. 30
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Limit of Preservative ..... max. 0.05%
Assay (g/100ml) 2.5-3.5
Particulate Matter ..... Passes Test

CAS: 7722-84-1 DENSITY: 1 L = 1.0 kg MERCK INDEX: 14,4798

Hydroxyacetic Acid
See Glycolic Acid

4-Hydroxy-m-anisaldehyde
See Vanillin

o-Hydroxybenzaldehyde
See Salicylaldehyde

2-Hydroxybenzoic Acid
See Salicylic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydroxydimethylarsine Oxide, Sodium Salt
See Cacodylic Acid, Sodium Salt, Trihydrate

(2-Hydroxyethyl)mercaptan
See 2-Mercaptoethanol

(2-Hydroxyethyl)trimethylammonium Chloride
See Choline Chloride

3-Hydroxy-4-[(6-hydroxy-m-tolyl)azo]-1-naphthalenesulfonic Acid
See Calmagite

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED ACS Reagent
(hydroxylammonium chloride)

2195-04	Poly	125 g	csa	96.40	
		4 x 125 g	csa	64.25	257.00
2195-01	Poly	500 g	csa	265.00	
		4 x 500 g	csa	176.65	706.60

$NH_2OH{\cdot}HCl$ FW: 69.49

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($NH_2OH{\cdot}HCl$) (by $KMnO_4$ titrn) ..... min. 96.0%
Clarity of Alcohol Solution ..... Passes Test
Residue after Ignition ..... max. 0.05%
Titrable Free Acid (meq/g) ..... max. 0.25
Ammonium (NH_4) ..... max. 0.1%
Sulfur Compounds (as SO_4) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 5470-11-1 MERCK INDEX: 14,4828 IMO: 8:2923

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED ACS Reagent
(hydroxylammonium chloride)
Suitable for Mercury Determination

2196-01	Poly	500 g	csa	291.25	
		4 x 500 g	csa	194.15	776.60

$NH_2OH{\cdot}HCl$ FW: 69.49

Exceeds ACS Specifications
Assay ($NH_2OH{\cdot}HCl$) (by $KMnO_4$ titrn) ..... min. 96.0%
Clarity of Alcohol Solution ..... Passes Test
Residue after Ignition ..... max. 0.05%
Titrable Free Acid (meq/g) ..... max. 0.25
Ammonium (NH_4) ..... Passes Test
Sulfur Compounds (as SO_4) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
Mercury (Hg) ..... max. 0.05

CAS: 5470-11-1 MERCK INDEX: 14,4828 IMO: 8:2923

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydroxylamine Sulfate
BAKER

N646-06	Poly	250 g	non	90.75	
N646-07	Poly	500 g	non	126.70	

$(NH_2OH)_2{\cdot}H_2SO_4$ FW: 164.14

Assay ($(NH_2OH)_2{\cdot}H_2SO_4$) ..... min. 99.0%

CAS: 10039-54-0 IMO: 8:2865

Hydroxylammonium Chloride
See Hydroxylamine Hydrochloride

Hydroxylammonium Sulfate
See Hydroxylamine Sulfate

4-Hydroxy-3-methoxybenzaldehyde
See Vanillin

4-Hydroxy-4-methyl-2-pentanone
Technical
(diacetone alcohol)

N679-09	Glass	4 L	non	161.80	

$(CH_3)_2C(OH)CH_2COCH_3$ FW: 116.16

Identification (by IR) ..... Passes Test

CAS: 123-42-2 DENSITY: 1 L = 0.931 kg MERCK INDEX: 14,2964
IMO: 3:1148 FLASH POINT: 56°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Hydroxy-1,2,3-propanetricarboxylic Acid
See Citric Acid

2-Hydroxypropionic Acid
See Lactic Acid, 85%

Hydroxyquinoline
See 8-Quinolinol

2-Hydroxy-5-sulfobenzoic Acid Dihydrate
See Sulfosalicylic Acid, Dihydrate

α-Hydroxytoluene
See Benzyl Alcohol

Hypophosphorus Acid, 50%
Purified

0178-01	Glass	500 mL	cac	173.60	
		12 x 500 mL	cac	99.20	1190.40

H_3PO_2 FW: 66.00

Assay (H_3PO_2) 49-52%
Phosphate (PO_4) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.002%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Identification ..... Passes Test

CAS: 6303-21-5 DENSITY: 1 L = 1.13 kg MERCK INDEX: 14,4868
IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

ICP (Inductively Coupled Plasma) Standards
See Analytical Standards Section, p. 94-98

Imidazole
BAKER ANALYZED ACS Reagent

N811-05	Glass	100 g	bio	55.45	
N811-06	Poly	1 kg	bio	303.60	

$C_3H_4N_2$ FW: 68.08

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_3H_4N_2$) ..... min. 99.0%
Iron (Fe) ..... max. 0.001%
pH of 5% Solution at 25°C 9.5-11.0
Residue after Ignition ..... max. 0.1%
Water (H_2O) ..... max. 0.2%
DNase Activity ..... Actual Value Reported
RNase Activity ..... Actual Value Reported
Protease Activity ..... Actual Value Reported

CAS: 288-32-4 MERCK INDEX: 14,4912 IMO: 8:3263
FLASH POINT: 146°C

2,2′-Iminobisethylamine
See Diethylenetriamine

2,2′-Iminodiethanol
See Diethanolamine

1,2,3-Indantrione
See Ninhydrin, Monohydrate

Indigo Carmine
See 5,5′-Indigodisulfonic Acid

5,5′-Indigodisulfonic Acid, Disodium Salt
BAKER
(indigo carmine)
(C.I. 73015)

N877-05	Glass	100 g	non	257.70	

$C_{16}H_8N_2Na_2O_8S_2$ FW: 466.36

Visual Transition Interval:
pH ..... (Blue) 11.4
pH ..... (Yellow) 13.0

CAS: 860-22-0 MERCK INDEX: 14,4944

Indigotine

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Indigotine
See 5,5'-Indigodisulfonic Acid

Indium(III) Chloride
See Indium Trichloride

Indium Trichloride, Anhydrous
BAKER
(indium(III) chloride)
For Electron Microscopy

N886-03	Glass	25 g	non	280.70	

$InCl_3$ FW: 221.18

Assay .....min. 99.99%

CAS: 10025-82-8 MERCK INDEX: 14,4958

Industrial Spill Cleanup Kit
See under Spill Cleanup Products

Infusorial Earth
See Diatomaceous Earth

Iodine
USP

cGMP

2211-00	Glass	30 g	rnc	76.40	
2211-04	Glass	125 g	rnc	155.30	
2211-01	Glass	500 g	rnc	373.20	

I_2 FW: 253.81

Meets USP Requirements

Assay (I_2) 99.8-100.5%
Identification A .....Passes Test
Identification B .....Passes Test
Nonvolatile Residue .....max. 0.05%
Chloride and Bromide (as Cl) .....max. 0.028%

CAS: 7553-56-2 MERCK INDEX: 14,5014

Iodine, Sublimed
BAKER ANALYZED ACS Reagent

2208-04	Glass	125 g	non	179.45	
2208-01	Glass	500 g	non	355.25	
2208-05	Glass	2.5 kg	csa	1258.90	
		4 x 2.5 kg	csa	839.25	3357.00
2208-07	Lined Fiber Dr	12 kg	bks	Inquire	
2208-R	Lined Fiber Dr	100 lb	bul	Inquire	

I_2 FW: 253.81

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (I_2) .....min. 99.8%
Nonvolatile Matter .....max. 0.01%
Chlorine and Bromine (as Cl) .....max. 0.005%

CAS: 7553-56-2 MERCK INDEX: 14,5014

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iodine and Potassium Iodide, T.S.
BAKER ANALYZED Reagent

5923-02	Glass	1 L	sol	77.35	

Normality 0.15-0.17
Product Information (not specifications):
Appearance (Transparent, reddish-brown solution)

Iodine (Iodine-Iodide), 1N Volumetric Solution
BAKER ANALYZED Reagent

5688-02	Glass	1 L	sol	151.30	
		6 x 1 L	sol	126.10	756.60

I AW: 126.90

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.95-1.05

DENSITY: 1 L = 1.37 kg

Iodine (Iodine-Iodide), 0.1N Volumetric Solution

5623-02	Glass	1 L	sol	48.25	
		6 x 1 L	sol	40.20	241.20

I AW: 126.90

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0995-0.1005

Iodine (Iodine-Iodide), 0.01N Volumetric Solution

5689-02	Glass	1 L	sol	46.45	
		6 x 1 L	sol	38.70	232.20

I AW: 126.90

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0095-0.0105

Iodine (Iodine-Iodide), DILUT-IT Analytical Concentrate, 0.1N
(1/10 equiv. = 12.69 g I_2)

4662-01	Ampoule	1 pk	spr	48.90	
		6 x 1 pk	spr	40.75	244.50

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) .....Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iodine (Iodine-Iodide), DILUT-IT Analytical Concentrate, 0.01N

(1/100 equiv. = 1.269 g I_2)

4660-01	Ampoule	1 pk	spr	46.90	
		6 x 1 pk	spr	39.10	234.60

(Makes 0.01N solution after dilution to 1000 mL)

Normality (by titrimetry) ..... Passes Test

Iodine Monochloride, T.S.

BAKER ANALYZED Reagent

5922-04	Glass	100 mL	sol	26.65	
5922-01	Glass	500 mL	sol	38.00	

Suitability ..... Passes Test

Product Information (not specifications):

Appearance (Clear, orange solution)

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Iodochloride, T.S.

BAKER ANALYZED Reagent

5924-02	Glass	1 L	sol	67.60	

Normality 0.215-0.225

Product Information (not specifications):

Appearance (Deep, orange-brown solution)

DENSITY: 1 L = 1.05 kg IMO: 8:2920 FLASH POINT: 40°C

Iodomethane

See Methyl Iodide

For more information about products for use in Academic institutions, see pages 91-93.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ion Determination Testrips

Additional information on these products is available in the Wet Chemical Analysis section, pages 49–55.

BAKER TESTRIPS For Ammonium (NH_4^+)

Range: 10 -400 mg/L (ppm)
Semi-Quantitative Determination

4408-01	1 pk	spr	67.30	

IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

BAKER TESTRIPS For Nitrate/Nitrite

Range:10-500mg/L (ppm) NO_3^- and 1-80mg/ (ppm) NO_2^-
Semi-Quantitative Determination

4421-01	1 pk	spr	76.15	

BAKER TESTRIPS For Nitrite (NO_2^-)

Range: 1-80 mg/L (ppm)
Semi-Quantitative Determination

4415-01	1 pk	spr	71.90	

BAKER TESTRIPS For Peroxide (H_2O_2)

Range: 1-100 mg/L (ppm)
Semi-Quantitative Determination

4416-01	1 pk	spr	78.35	

BAKER TESTRIPS for Potassium (K^+)

Range 200-1500 mg/L (ppm)
Semi-Quantitative Determination

4417-01	1 pk	spr	110.45	

IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

BAKER TESTRIPS For Sulfite (SO_3^{2-})

Range: 10-1000 mg/L (ppm)
Semi-Quantitative Determination

4418-01	1 pk	spr	78.35	

Ion Exchange Columns and Packings, Silica Based

See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ion Exchange Resins

Anion Exchange Resin, IONAC A-554, Cl^- Form, Type II, Beads (16-50 Mesh)

BAKER ANALYZED Reagent
(strong base; styrene-DVB copolymer)

4605-01	Glass	500 g	spr	99.10	
		4 x 500 g	spr	66.05	264.20

Total Exchange Capacity, meq/mL (wet volume) ..... min. 1.3
Moisture 39-44%
Mesh (Wet Screen Analysis):
On U.S. No. 16 Sieve ..... max. 5%
Thru U.S. No. 50 Sieve ..... max. 5%
CAS: 69011-15-0

Anion Exchange Resin, IONAC NA-38, OH^- Form, Type I, Beads (16-50 Mesh)

BAKER ANALYZED Reagent
(strong base; alkyl quaternary ammonium polystyrene copolymer)

4601-01	Glass	500 g	spr	180.70	
		4 x 500 g	spr	120.45	481.80

Total Exchange Capacity, meq/mL (wet volume) ..... min. 0.9
Moisture 55-65%
Mesh (Wet Screen Analysis):
On U.S. No. 16 Sieve ..... max. 5%
Thru U.S. No. 50 Sieve ..... max. 5%
CAS: 69011-18-3

Cation Exchange Resin, Dowex C-211, H^+ Form, Spherical Beads (16-50 Mesh)

BAKER ANALYZED Reagent

1927-01	Poly	500 g	spr	103.35	
		4 x 500 g	spr	68.90	275.60
1927-05	Poly	2.5 kg	spr	364.45	
		4 x 2.5 kg	spr	242.95	971.80

Total Exchange Capacity, meq/mL (wet volume) ..... min. 1.8
Mesh (Wet Screen Analysis):
On U.S. No. 16 Sieve ..... max. 5%
Thru U.S. No. 50 Sieve ..... max. 1%
Identification ..... Passes Test
CAS: 69011-20-7

Cation Exchange Resin, Dowex C-211, Na^+ Form, Spherical Beads (16-50 Mesh)

BAKER ANALYZED Reagent
(strong acid; styrene-DVB copolymer; nuclear sulfonic acid active group)

1928-01	Glass	500 g	spr	66.25	

Total Exchange Capacity, meq/mL (wet volume) ..... min. 2.0
Mesh (Wet Screen Analysis):
On U.S. No. 16 Sieve ..... max. 5%
Thru U.S. No. 50 Sieve ..... max. 1%
Identification ..... Passes Test
CAS: 69011-22-9

DOWEX MARATHON A Anion Exchanger

BAKER ANALYZED Reagent
Resin 525-625u (Cl) Strong Base

1901-01	Glass	500 g	spr	164.25	
		4 x 500 g	spr	109.50	438.00

Total Exchange Capacity, meq/mL (wet volume) ..... min. 1.3
Uniformity Coefficient ..... max. 1.1
Water (H_2O) 50-60%
CAS: 60177-39-1

Mixed Bed Exchange Resin, IONAC NM-60 H^+/OH^- Form, Type I, Beads (16-50 Mesh)

BAKER ANALYZED Reagent
(strong acid/strong base; sulfonated/alkyl quaternary ammonium polystyrenes)

4631-01	Glass	500 g	spr	115.90	
		4 x 500 g	spr	77.25	309.00

Moisture 50-60%
Mesh (Wet Screen Analysis):
On U.S. No. 16 Sieve ..... max. 5%
Thru U.S. No. 50 Sieve ..... max. 5%
Column Capacity, meq/ml[1] ..... min. 0.55
Column Capacity, kgr/cf[1] ..... min. 12.0
Effluent Greater than 15 Megohms ..... min. 50%
[1] Measured to a 20,000 ohm-cm resistivity end point. The unit kgr/cf = kilograins per cubic foot.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ionic Standard Concentrates

See DILUT-IT entry under specific chemical name

IPA

See under Isopropyl Alcohol and 2-Propanol

Iron, Powder

BAKER ANALYZED Reagent

2226-01	Glass	500 g	csa	111.75	
		4 x 500 g	csa	74.50	298.00

Fe AW: 55.85

Assay (Fe) .....min. 96.0%
Insoluble in H_2SO_4 .....max. 0.2%
Water-Soluble Substances .....max. 0.03%
Sulfide (S) .....max. 0.03%
Lead (Pb) .....max. 0.005%
Trace Impurities (in ppm):
Arsenic (As) .....max. 5

CAS: 7439-89-6 MERCK INDEX: 14,5093

Iron, Reduced, Powder

FOOD GRADE cGMP

FCC

2228-01	Glass	500 g	csa	110.55	
		4 x 500 g	csa	73.70	294.80
2228-05	Glass	2.5 kg	non	338.15	

Fe AW: 55.85

Meets FCC Requirements

Identification .....Passes Test
Assay (Fe) .....min. 97.0%
Acid-Insoluble Substances .....max. 0.50%
Arsenic (As) .....max 3 mg/kg
Lead (Pb) .....max 4 mg/kg
Mercury (Hg) .....max 2 mg/kg
Mesh:
Thru U.S. No. 100 Sieve .....min. 100%
Thru U.S. No. 325 Sieve .....min. 95%
Particulate Matter .....Passes Test

CAS: 7439-89-6 MERCK INDEX: 14,5093

Iron, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Iron, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Fe metal in 5% HNO_3)
Plasma Standard

5731-04		100 mL	spr	112.60	

Fe AW: 55.85

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Iron, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Fe metal in 5% HNO_3)
Plasma Standard

5764-04		100 mL	spr	72.00	

Fe AW: 55.85

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Iron, 1000 µg/mL

BAKER INSTRA-ANALYZED Reagent
(Fe metal in 5% HNO_3)

6453-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Fe AW: 55.85

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Iron Alum

See Ferric Ammonium Sulfate

Iron(II) and Iron(III) Compounds

See Ferrous and Ferric listings

Iron Sesquioxide

See Ferric Oxide

1,3-Isobenzofurandione

See Phthalic Anhydride

Isobutyl Alcohol

BAKER ANALYZED ACS Reagent
(2-methyl-1-propanol)
(2-butanol)

9044-01	Glass	500 mL	cso	50.10	
		12 x 500 mL	cso	33.40	400.80
9044-03	Glass	4 L	cso	188.10	
		4 x 4 L	cso	125.40	501.60

$(CH_3)_2CHCH_2OH$ FW: 74.12

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3)_2CHCH_2OH$) (by GC, corrected for water) .....min. 99.0%
Carbonyl Compounds:
2-Butanone .....max. 0.02%
Butyraldehyde .....max. 0.01%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Solubility in H_2O .....Passes Test

Isobutyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Titrable Acid (meq/g) ..... max. 0.0005
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.1%

CAS: 78-83-1 DENSITY: 1 L = 0.803 kg MERCK INDEX: 14,5131
IMO: 3:1212 FLASH POINT: 28°C

Solvent Spill Cleanup Products available. See pp. 378.

Isobutyl Alcohol
HPLC
For Use in Liquid Chromatography

9048-03	Glass	4 L	chp	223.35	
		4 x 4 L	chp	148.90	595.60

$(CH_3)_2CHCH_2OH$ FW: 74.12

Assay (by GC, corrected for water) ..... min. 99.5%
Ultraviolet Absorbance (1.00-cm cell vs. water):
350 nm ..... max. 0.01
280 nm ..... max. 0.02
254 nm ..... max. 0.05
UV Cut-off, nm ..... max. 220
Residue after Evaporation ..... max. 5 ppm
Water (by KF, coulometric) ..... max. 0.05%

CAS: 78-83-1 DENSITY: 1 L = 0.803 kg MERCK INDEX: 14,5131
IMO: 3:1212 FLASH POINT: 28°C

Solvent Spill Cleanup Products available. See pp. 378.

L-Isoleucine, USP
cGMP
Multi-Compendial

2082-05	Poly	100 g	bio	223.00	
2082-06	Poly	1 kg	bio	1301.55	
2082-07	Poly Pail	12 kg	bks	Inquire	

$C_6H_{13}NO_2$ FW: 131.17

Meets USP Requirements
Assay ($C_6H_{13}NO_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +38.9 - +41.8 °
pH 5.5-7.0
Loss on Drying at 105°C ..... max. 0.3%
Residue on Ignition ..... max. 0.3%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0015%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%
Meets FCC Requirements
Assay ($C_6H_{13}NO_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying ..... max. 0.3%
Residue on Ignition ..... max. 0.2%
Specific Rotation $[\alpha]_D^{20}$ ..... +38.6 - +41.5 °
Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_6H_{13}NO_2$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Specific Rotation $[\alpha]_D^{20}$ ..... +40.0 - +43.0 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%
Meets JP Chemical Specifications
Assay ($C_6H_{13}NO_2$) (dried basis) 98.5-101.0%
Identification ..... Passes Test
Optical Rotation ..... +39.5 - +41.5 °
pH 5.5-6.5
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.021%
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 0.30%
Residue on Ignition ..... max. 0.10%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

CAS: 73-32-5 MERCK INDEX: 14,5179

iso-Octane
See 2,2,4-Trimethylpentane

iso-Pentane
See 2-Methylbutane

Isopropyl-
See also iso-Propyl

Isopropyl Alcohol
cGMP
USP
(2-propanol)

9080-01	Glass	500 mL	rss	35.55	
		12 x 500 mL	rss	23.70	284.40
9080-03	Glass	4 L	rss	182.05	
		4 x 4 L	rss	121.35	485.40
9080-07	Steel Pail	20 L	bks	Inquire	
9080-R	Steel Drum	355 lb	bul	Inquire	

$CH_3CHOHCH_3$ FW: 60.10

Meets USP Requirements
Identification ..... Passes Test
Specific Gravity at 25°/25°C 0.783-0.787
Refractive Index, $\eta^{20}{}_D$ 1.376-1.378
Acidity ..... Passes Test
Nonvolatile Residue ..... max. 0.005%
Assay ..... min. 99.0%

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,5208
IMO: 3:1219 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Isopropyl Alcohol
BAKER
For Histological Use

U298-09	Poly	4 L	cor	133.50	
		4 x 4 L	cor	89.00	356.00
U298-01	Steel Pail	20 L	sbo	251.85	

$CH_3CHOHCH_3$ FW: 60.10

Assay ($CH_3CHOHCH_3$) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Water (by KF, coulometric) .....max. 0.2%
Acetone .....max. 0.002%
Propionaldehyde .....max. 0.002%
Solubility in H_2O .....Passes Test
Titrable Acid or Base (meq/g) .....max. 0.0001
Copper (Cu) .....max. 0.1
Heavy Metals .....max. 1
Iron (Fe) .....max. 0.1
Nickel (Ni) .....max. 0.1

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,5208
IMO: 3:1219 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Alcohol
See also 2-Propanol

Isopropyl Alcohol, USP
cGMP
Multi-Compendial
(2-propanol)

9037-01	Glass	500 mL	rss	42.10	
		12 x 500 mL	rss	28.05	336.60
9037-03	Glass	4 L	rss	219.10	
		4 x 4 L	rss	146.05	584.20
9037-07	Steel Pail	20 L	bks	Inquire	

$CH_3CHOHCH_3$ FW: 60.10

Meets USP Requirements
Identification .....Passes Test
Specific Gravity at 25°/25°C 0.783-0.787
Refractive Index, η^{20}_D 1.376-1.378
Acidity .....Passes Test
Nonvolatile Residue .....max. 0.005%
Assay .....min. 99.0%

Meets BP/Ph.Eur. Chemical Specifications
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Appearance .....Passes Test
Acidity or Alkalinity .....Passes Test
Benzene (C_6H_6) .....max. 2 ppm
2-Butanol .....max. 0.3%
Peroxide .....Passes Test
Nonvolatile Matter .....max. 20 ppm
Water (H_2O) .....max. 0.5%
UV Absorbance:
310 nm .....max. 0.01
290 nm .....max. 0.02
270 nm .....max. 0.03
250 nm .....max. 0.10
230 nm .....max. 0.30

Meets JP Chemical Specifications
Identification A .....Passes Test
Identification B .....Passes Test
Specific Gravity at 20°/20°C 0.785-0.788
Clarity of Solution .....Passes Test
Acidity .....Passes Test
Residue on Evaporation, mg/20ml .....max. 1.0
Water (H_2O) .....max. 0.75%
Distilling Range: .....81-83 °C.

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,5208
IMO: 3:1219 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Alcohol, 70% Solution, Sterile
See under Protocol C[3]

Isopropyl Ether
See iso-Propyl Ether

Isopropyl Rubbing Alcohol
See under Protocol C[3]

Isovaleron
See 2,6-Dimethyl-4-heptanone

Kaolin, Powder
cGMP
USP, FCC

2242-01	Glass	500 g	rnc	54.75	
2242-05	Poly	1.5 kg	rnc	119.75	

Meets USP & FCC Requirements
Identification .....Passes Test
Loss on Ignition .....max. 15.0%
Acid-Soluble Substances .....max. 2.0%
Carbonate (CO_3) .....Passes Test
Iron (Fe) .....Passes Test
Lead (Pb) .....max 10 mg/kg
Arsenic (As) .....max 3 mg/kg
Sulfide (S) .....Passes Test
Particulate Matter .....Passes Test
Microbial Limits:
Escherichia coli .....Passes Test

CAS: 1332-58-7 MERCK INDEX: 14,5282

Karl Fischer Reagents

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

HYDRA-POINT Cathode Solution
BAKER ANALYZED Reagent
For Coulometric Karl Fischer Titration

8863-00		125 mL	spr	169.30	
		6 x 125 mL	spr	141.10	846.60

Suitability for Coulometric Karl Fischer determination
Catholyte for Coulometric Karl Fischer determinations with diaphragms
Analyte for Coulometric Karl Fischer determinations with diaphragms

DENSITY: 1 L = 0.9 kg IMO: 3:2924 FLASH POINT: 39°C (C.C.)

Solvent Spill Cleanup Products available. See pp. 378.

HYDRA-POINT Comp 2
BAKER ANALYZED Reagent
For Karl Fischer Titration

8891-02	Glass	1 L	spr	86.70	
		6 x 1 L	spr	72.25	433.50
8891-68	Glass	2.5 L	spr	297.85	
		4 x 2.5 L	spr	248.20	992.80

Titer, (mg H_2O/mL) (At time of release) .....min. 2.00
Pyridine free one component reagent for volumetric Karl Fischer titration
To be used with HYDRA-POINT Methanol, Dry product number 8898

DENSITY: 1 L = 1.120 kg IMO: 8:1760 FLASH POINT: 93°C (C.C.)

HYDRA-POINT Comp 5
BAKER ANALYZED Reagent
For Karl Fischer Titration

8890-02	Glass	1 L	spr	112.10	
		6 x 1 L	spr	93.40	560.40
8890-68	Glass	2.5 L	spr	247.40	
		4 x 2.5 L	spr	206.15	824.60

Titer, (mg H_2O/mL) (At time of release) .....min. 5.00
Pyridine free one component reagent for volumetric Karl Fischer titration
To be used with HYDRA-POINT Methanol, Dry product number 8898

DENSITY: 1 L = 1.180 kg IMO: 8:1760 FLASH POINT: 93°C (C.C.)

HYDRA-POINT Comp 5K
BAKER ANALYZED Reagent
For Karl Fischer Titration

8892-02	Glass	1 L	spr	115.50	
		6 x 1 L	spr	96.25	577.50
8892-68	Glass	2.5 L	spr	367.60	
		4 x 2.5 L	spr	306.35	1225.40

Titer, (mg H_2O/mL) (At time of release) .....min. 5.00
Pyridine free one component reagent for volumetric Karl Fischer titration of Ketones.
To be used with HYDRA-POINT Methanol, Dry product number 8898

DENSITY: 1 L = 1.170 kg IMO: 8:1760 FLASH POINT: 96°C (C.C.)

HYDRA-POINT Comp Buffer
BAKER ANALYZED Reagent
For Karl Fischer Titration

8899-01	Glass	500 mL	spr	96.00	
		6 x 500 mL	spr	80.00	480.00
8899-02	Glass	1 L	spr	145.30	
		6 x 1 L	spr	121.10	726.60

Buffering Capacity (5 mmol acid/mL min) .....Passes Test
Buffer for stabilizing pH during Karl Fischer Titration

IMO: 3:3286 FLASH POINT: 11°C

Solvent Spill Cleanup Products available. See pp. 378.

HYDRA-POINT Coulometric Anode
BAKER ANALYZED Reagent
For Coulometric Karl Fischer Titration

8862-01	Glass	500 mL	spr	100.80	
		6 x 500 mL	spr	84.00	504.00

Suitability for Coulometric Karl Fischer determination .....Passes Test
Analyte for coulometric Karl Fischer determinations with diaphragms

DENSITY: 1 L = 1.2 kg IMO: 3:3286 FLASH POINT: 21°C (C.C.)

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

HYDRA-POINT Coulometric Gen
BAKER ANALYZED Reagent
For Coulometric Karl Fischer Titration

8860-01	Glass	500 mL	spr	108.80	
		6 x 500 mL	spr	90.65	543.90

Hydra-Point Coulometric Gen is a halogen free reagent for general purpose coulometric water determination according to the Karl Fischer method
Hydra-Point Coulometric Gen is used for cells without diaphragms
Analyte for coulometric Karl Fischer determinations without diaphragms

DENSITY: 1 L = 0.979 kg IMO: 3:3286 FLASH POINT: 21°C (C.C.)

Solvent Spill Cleanup Products available. See pp. 378.

HYDRA-POINT Coulometric Oven
BAKER ANALYZED Reagent
For Coulometric Karl Fischer Titration

8861-01	Glass	500 mL	spr	115.60	
		6 x 500 mL	spr	96.35	578.10

Suitability for Coulometric Karl Fischer determination
Halogen free reagent for Coulometric Karl Fischer determinations without diaphragms
Analyte for coulometric Karl Fischer determinations without diaphragms

DENSITY: 1 L = 1.020 kg IMO: 3:3286 FLASH POINT: 21°C (C.C.)

Solvent Spill Cleanup Products available. See pp. 378.

HYDRA-POINT Methanol Dry
BAKER ANALYZED Reagent
For Karl Fischer Titration

8898-02	Glass	1 L	spr	23.90	
		6 x 1 L	spr	19.90	119.40
8898-68	Glass	2.5 L	spr	72.35	
		4 x 2.5 L	spr	60.30	241.20

CH_3OH FW: 32.04

Water (H_2O) .....max. 0.01%
Dry methanol is a working medium for Karl Fischer titration
To be used with HYDRA-POINT Composite 2 product number 8891 or HYDRA-POINT Composite 5 product number 8890

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C (C.C.)

Solvent Spill Cleanup Products available. See pp. 378.

HYDRA-POINT Solvent G
BAKER ANALYZED Reagent
For Karl Fischer Titration

8855-02	Glass	1 L	spr	93.10	
		6 x 1 L	spr	77.60	465.60
8855-68	Glass	2.5 L	spr	126.05	
		4 x 2.5 L	spr	105.05	420.20

Suitability for Karl Fischer titration .....Passes Test
Pyridine free solvent for volumetric Karl Fischer titration
To be used with HYDRA-POINT Titrant 2, product number 8845, or HYDRA-POINT Titrant 5, product number 8844

DENSITY: 1 L = 0.890 kg IMO: 3:1992 FLASH POINT: 11°C

Solvent Spill Cleanup Products available. See pp. 378.

HYDRA-POINT Titrant 2
BAKER ANALYZED Reagent
For Karl Fischer Titration

8845-02	Glass	1 L	spr	139.00	
		6 x 1 L	spr	115.85	695.10
8845-68	Glass	2.5 L	spr	137.10	
		4 x 2.5 L	spr	114.25	457.00

Titer, (mg H_2O/mL) (At time of release) .....min. 2.00
Titrant for volumetric Karl Fischer titration
To be used with HYDRA-POINT Solvent G product number 8855

DENSITY: 1 L = 0.821 kg IMO: 3:1992 FLASH POINT: 11°C (C.C.)

Solvent Spill Cleanup Products available. See pp. 378.

HYDRA-POINT Titrant 5
BAKER ANALYZED Reagent
For Karl Fischer Titration

8844-02	Glass	1 L	spr	60.85	
		6 x 1 L	spr	50.70	304.20
8844-68	Glass	2.5 L	spr	137.10	
		4 x 2.5 L	spr	114.25	457.00

Titer, (mg H_2O/mL) (At time of release) .....min. 5.00
Titrant for volumetric Karl Fischer titration
To be used with HYDRA-POINT Solvent G product number 8855

DENSITY: 1 L = 0.867 kg IMO: 3:1992 FLASH POINT: 10°C (C.C.)

Solvent Spill Cleanup Products available. See pp. 378.

Kernechtrot

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Kernechtrot

See Nuclear Fast Red

Kerosene (Low Odor)

BAKER

P339-00	Glass	4 L	non	150.40	

Odor (Mild) ..... Passes Test
Identification (by IR) ..... Passes Test

CAS: 8008-20-6 DENSITY: 1 L = 0.80 kg MERCK INDEX: 14,5294
IMO: 3:1223 FLASH POINT: 38°C

Solvent Spill Cleanup Products available. See pp. 378.

Laboratory Spill Cleanup Centers

See under Spill Cleanup Products

Lactic Acid, 85%

BAKER ANALYZED ACS Reagent

0194-01	Glass	500 mL	cac	135.55	
		12 x 500 mL	cac	77.45	929.40
0194-03	Glass	4 L	cac	591.60	
		4 x 4 L	cac	338.05	1352.20

$CH_3CHOHCOOH$ FW: 90.08

Meets ACS Specifications

Assay (as $CH_3CHOHCOOH$) 85.0-90.0%
Residue after Ignition ..... max. 0.02%
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Substances Darkened by H_2SO_4 ..... Passes Test
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

The reagent generally available is a mixture of lactic acid ($CH_3CHOHCOOH$) and lactic acid lactate ($C_6H_{10}O_5$).

CAS: 50-21-5 DENSITY: 1 L = 1.2 kg MERCK INDEX: 14,5336
IMO: 8:3265 FLASH POINT: > 112°C

Lactic Acid, USP

cGMP

Multi-Compendial
Racemic

0197-01	Glass	500 mL	rnc	111.40	
0197-03	Glass	4 L	rac	880.35	
		4 x 4 L	rac	503.05	2012.20

$CH_3CHOHCOOH$ FW: 90.08

Meets USP Requirements

Assay ($CH_3CHOHCOOH$) 88.0-92.0%
Chloride (Cl) ..... Passes Test
Citric, Oxalic, Phosphoric, or Tartaric Acids ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Identification ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Residue on Ignition ..... max. 0.05%
Specific Rotation ..... -0.05 to +0.05 °
Sugars ..... Passes Test
Sulfate (SO_4) ..... Passes Test

Meets Ph.Eur. Chemical Specifications

Assay ($CH_3CHOHCOOH$) 88.0-92.0%
Appearance ..... Passes Test
Calcium (Ca) ..... max. 200 ppm
Citric, Oxalic, and Phosphoric Acids ..... Passes Test
Endotoxin Concentration, <5 IU/g ..... Passes Test
Ether-Insoluble Substances ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Methanol (by GC) ..... max. 50 ppm
Sugars and Other Reducing Substances ..... Passes Test
Sulfate (SO_4) ..... max. 200 ppm
Sulfated Ash ..... max. 0.1%

Meets JP Chemical Specifications

Assay ($CH_3CHOHCOOH$) 85.0-92.0%
Chloride (Cl) ..... max. 0.036%
Citric, Oxalic, Phosphoric, or Tartaric Acids ..... Passes Test
Cyanide (CN) ..... Passes Test
Glycerin and Mannitol ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Identification ..... Passes Test
Iron (Fe) ..... max. 5 ppm
Readily Carbonizable Substances ..... Passes Test
Residue on Ignition ..... max. 0.10%
Sugars ..... Passes Test
Sulfate (SO_4) ..... max. 0.010%
Volatile Fatty Acids ..... Passes Test

CAS: 50-21-5 DENSITY: 1 L = 1.2 kg IMO: 8:3265
FLASH POINT: > 112°C

DL-Lactic Acid

cGMP

USP, FCC
Racemic

0196-04	Glass S/S	100 mL	rnc	46.20	
0196-01	Glass	500 mL	rnc	99.45	
0196-03	Glass	4 L	rac	775.00	
		4 x 4 L	rac	442.85	1771.40
0196-07	Poly Pail	19 L	bks	Inquire	
0196-09	Poly Drum	150 lb	bul	Inquire	

$CH_3CHOHCOOH$ FW: 90.08

Meets USP & FCC Requirements

Assay ($C_3H_6O_3$) 88.0-92.0%
Identification ..... Passes Test
Residue on Ignition ..... max. 0.05%
Chloride (Cl) (FCC) ..... max. 0.1%
Chloride (Cl) (USP) ..... Passes Test
Cyanide (CN) ..... max. 5 ppm
Citric, Oxalic, Phosphoric, or Tartaric Acids ..... Passes Test
Sulfate (SO_4)(FCC) ..... max. 0.25%
Sulfate (SO_4)(USP) ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Sugars ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... -0.05 to +0.05 °
Readily Carbonizable Substances ..... Passes Test
Lead (Pb) ..... max 0.5 mg/kg

CAS: 50-21-5 DENSITY: 1 L = 1.2 kg MERCK INDEX: 14,5336
IMO: 8:3265 FLASH POINT: > 112°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lactic Acid, Sodium Salt

See Sodium Lactate

β-Lactose

See D-(+)-Lactose

D-(+)-Lactose

BAKER
(β-lactose)

P347-08	Poly	2 kg	bio	133.05	

$C_{12}H_{22}O_{11}$ FW: 342.30

Specific Rotation $[\alpha]_D^{20}$(c = 6 in H_2O) ..... +53.0 - +57.0 °

CAS: 63-42-3 MERCK INDEX: 14,5343

D-(+)-Lactose, Monohydrate, Powder

BAKER ANALYZED ACS Reagent
(α-lactose)

2248-01	Poly	500 g	bio	43.95	
2248-07	Poly Pail	12 kg	bks	Inquire	

$C_{12}H_{22}O_{11}·H_2O$ FW: 360.32

Exceeds ACS Specifications

Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.03%
Dextrose ..... Passes Test
Sucrose ..... Passes Test
Water (H_2O) 4.0-6.0%

Trace Impurities (in ppm):

Dextrins, Starch ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 64044-51-5 MERCK INDEX: 14,5343

Lactose, Monohydrate, Powder

NF

cGMP

2249-01	Poly	500 g	rss	77.65	
		4 x 500 g	rss	51.75	207.00
2249-05	Poly	2.5 kg	rss	248.25	
		4 x 2.5 kg	rss	165.50	662.00
2249-07	Poly Pail	12 kg	bks	Inquire	

$C_{12}H_{22}O_{11}·H_2O$ FW: 360.32

Meets NF Requirements

Clarity and Color of Solution ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +54.4 - +55.9 °

Microbial Limits:

Total Aerobic Count (per g) ..... max. 100
Total Combined Molds and Yeasts Count (per g) ..... max. 50
Escherichia coli ..... Passes Test

Acidity or Alkalinity ..... Passes Test
Loss on Drying at 80°C ..... max. 0.5%
Water (H_2O) 4.5-5.5%
Residue on Ignition ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 5 ppm
Protein and Light-absorbing Impurities ..... Passes Test

CAS: 64044-51-5 MERCK INDEX: 14,5343

Lactose, Monohydrate, Powder, NF

Multi-Compendial

cGMP

2250-05	Poly	2.5 kg	rss	303.85	
		4 x 2.5 kg	rss	202.55	810.20
2250-07	Poly Pail	12 kg	bks	Inquire	

$C_{12}H_{22}O_{11}·H_2O$ FW: 360.32

Internationally Harmonized

Meets NF Requirements

Meets BP, Ph.Eur. & JP Chemical Specifications

Clarity and Color of Solution ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +54.4 - +55.9 °
Sulfated Ash ..... max. 0.1%

Microbial Limits:

Total Aerobic Microbial Count, cfu/g ..... max. 100
Total Combined Molds and Yeasts Count (per g) ..... max. 50
Escherichia coli (absent) ..... Passes Test
Escherichia Coli and Salmonella ..... Passes Test

Acidity or Alkalinity ..... Passes Test
Loss on Drying at 80°C ..... max. 0.5%
Water (H_2O) 4.5-5.5%
Residue on Ignition ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 5 ppm
Protein and Light-absorbing Impurities ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 10
Appearance of Solution ..... Passes Test

Store in airtight container.

CAS: 64044-51-5 MERCK INDEX: 14,5343

Lanolin

USP
(Lanum)

cGMP

2252-01	454 g	rnc	136.75	

Meets USP Requirements

Melting Range ..... 38-44 °C.
Water (H_2O) ..... max. 0.25%
Residue on Ignition ..... max. 0.1%
Water Soluble Oxidizable Substances ..... Passes Test
Petrolatum ..... Passes Test
Iodine Value 18-36
Acidity ..... Passes Test
Alkalinity ..... Passes Test
Chloride (Cl) ..... max. 0.035%
Water-Soluble Acids and Alkalies ..... Passes Test
Ammonia (as NH_3) ..... Passes Test
Appearance ..... Passes Test
Foreign Substances ..... Passes Test

CAS: 8006-54-0 DENSITY: 1 L = 0.932 kg MERCK INDEX: 14,5358
FLASH POINT: 238°C

Lanthanum

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lanthanum, 1% w/v
BAKER INSTRA-ANALYZED Reagent
Spectral Releasing Agent

6947-01	Poly	1 L	spr	86.05	
		6 x 1 L	spr	71.70	430.20

La AW: 138.90

Prepared by dissolution of lanthanum chloride of 99.999% spectral purity, as determined by arc emission spectrography. The metal content of the solution is confirmed by titrimetry.
Lanthanum Chloride solution, 0.3M in hydrochloric acid.
Lanthanum Content (La) 0.95-1.05%
Chloride (Cl) .....Passes Test
IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Lanthanum, 1% w/v
BAKER INSTRA-ANALYZED Reagent
Spectral Releasing Agent

6948-01	Poly	1 L	spr	82.40	
		6 x 1 L	spr	68.65	411.90

La AW: 138.90

Prepared by dissolution of lanthanum nitrate of 99.999% spectral purity, as determined by arc emission spectrography. The metal content of the solution is confirmed by titrimetry.
Lanthanum Nitrate solution, 0.3M nitric acid.
Lanthanum Content (La) 0.95-1.05%
Nitrate (NO_3) .....Passes Test
IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Lanthanum, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Lanthanum, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(La metal in 5% HNO_3)

6454-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

La AW: 138.90

Lanthanum (La) .....990-1010 µg/mL
DENSITY: 1 L = 1.00 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lanthanum Chloride, 7-Hydrate
BAKER ANALYZED ACS Reagent
For Flame Enhancement in Atomic Absorption Spectroscopy

2255-05	Glass	100 g	csa	165.10	
		4 x 100 g	csa	110.05	440.20
2255-07	Glass	500 g	csa	676.35	
		4 x 500 g	csa	450.90	1803.60

$LaCl_3 \cdot 7H_2O$ FW: 371.38

Meets ACS Specifications
Assay ($LaCl_3$) 64.5-70.0%
Insoluble Matter .....max. 0.01%
Calcium (Ca) .....max. 0.001%
Trace Impurities (in ppm):
Magnesium (Mg) .....max. 10
CAS: 10099-58-8 MERCK INDEX: 14,5363

Lanthanum Nitrate, 6-Hydrate
BAKER
For Flame Enhancement in Atomic Absorption Spectroscopy

P354-05	Glass	100 g	non	112.90	
P354-07	Glass	500 g	non	340.40	

$La(NO_3)_3 \cdot 6H_2O$ FW: 433.03

Calcium (Ca)(by AAS) .....max. 0.001%
CAS: 10277-43-7 MERCK INDEX: 14,5363 IMO: 5.1:1477

Lanthanum Oxide
BAKER ANALYZED Reagent
For Flame Enhancement in Atomic Absorption Spectrometry

P351-05	Glass	100 g	non	117.65	
P351-06	Glass	250 g	non	248.50	

La_2O_3 FW: 325.81

Assay (La_2O_3) .....min. 98.0%
Insoluble Matter .....max. 0.01%
Calcium (Ca)(by AAS) .....max. 0.001%
Trace Impurities (in ppm):
Magnesium (Mg)(by AAS) .....max. 2
CAS: 1312-81-8 MERCK INDEX: 14,5363

Lanthanum Oxide, Powder
ULTREX Ultrapure Reagent

4991-05	Poly	100 g	spr	390.35	

La_2O_3 FW: 325.81

Certificate Provided Reports Actual Lot Analysis
Assay (as La_2O_3) (by EDTA titrn) 99.3%
Loss on Ignition at 1150°C 0.6%
Particulate Matter .....< 0.0001%
Non-Metallic Impurities (in ppm)(µg/g):
Halide (as Cl) 5
Silicon (Si) .....< 1
Sulfur Compounds (as SO_4) 3

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Metallic Impurities (in ppm)(µg/g):
Aluminum (Al) ..... < 1
Calcium (Ca) ..... < 0.5
Copper (Cu) ..... < 1
Iron (Fe) ..... < 1
Lead (Pb) ..... < 10
Magnesium (Mg) ..... < 0.3
Potassium (K) ..... < 0.5
Rare Earths ..... < 10
Silver (Ag) ..... < 1
Sodium (Na) ..... < 0.3
Tin (Sn) ..... < 10

CAS: 1312-81-8 MERCK INDEX: 14,5363

Lauric Acid
BAKER ANALYZED Reagent
(dodecanoic acid)

P353-07	Poly	500 g	non	69.20	

$CH_3(CH_2)_{10}COOH$ FW: 200.32

Melting Point ..... 43-46 °C.
Moisture ..... max. 0.2%
Acid Value 276-284

CAS: 143-07-7 MERCK INDEX: 14,5384 FLASH POINT: > 113°C

Lauryl Sulfate
See Sodium Dodecyl Sulfate (SDS)

Lead, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Lead, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pb metal in 5% HNO_3)
Plasma Standard

5732-04		100 mL	spr	108.95	

Pb AW: 207.2

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lead, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pb metal in 5% HNO_3)
Plasma Standard

5765-04		100 mL	spr	72.00	

Pb AW: 207.20

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Lead, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pb metal in 5% HNO_3)

6455-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Pb AW: 207.2

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Lead Acetate, Trihydrate, Granular
BAKER ANALYZED ACS Reagent
(lead(II) acetate, trihydrate)

2271-01	Poly	500 g	csa	142.00	
		4 x 500 g	csa	94.65	378.60
2271-05	Poly	2.5 kg	csa	478.50	
		4 x 2.5 kg	csa	319.00	1276.00
2271-07	Poly Pail	12 kg	bks	Inquire	
2271-08	Lined Fiber Dr	110 lb	bul	Inquire	

$(CH_3COO)_2Pb{\cdot}3H_2O$ FW: 379.33

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($(CH_3COO)_2Pb{\cdot}3H_2O$) (by EDTA titrn) 99.0-103.0%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 5.5-6.5
Nitrate and Nitrite (as NO_3) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Copper (Cu) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.01%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5

CAS: 6080-56-4 MERCK INDEX: 14,5397 IMO: 6.1:1616

Lead(IV) Acetate
See Lead Tetraacetate

Lead Monoxide
See Lead Oxide (Litharge)

Lead Nitrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lead Nitrate, Crystal

BAKER ANALYZED ACS Reagent
(lead(II) nitrate)

2322-04	Glass	125 g	non	60.70	
2322-01	Poly	500 g	csa	169.50	
		4 x 500 g	csa	113.00	452.00

$Pb(NO_3)_2$ FW: 331.20

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Pb(NO_3)_2$) (by EDTA titrn) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Calcium (Ca) .....max. 0.005%
Copper (Cu) .....max. 0.002%
Iron (Fe) .....max. 0.001%
Potassium (K) .....max. 0.005%
Sodium (Na) .....max. 0.02%

CAS: 10099-74-8 MERCK INDEX: 14,5414 IMO: 5.1:1469

Lead(II) Oxide

See Lead Oxide (Litharge)

Lead Oxide (Litharge), Powder

BAKER ANALYZED ACS Reagent
(lead(II) oxide)

2338-04	Glass	125 g	non	40.05	
2338-01	Poly	500 g	non	61.35	
2338-05	Poly	2.5 kg	csa	273.30	
		4 x 2.5 kg	csa	182.20	728.80
2338-07	Poly Pail	12 kg	bks	Inquire	

PbO FW: 223.19

Meets ACS Specifications

Assay (PbO) .....min. 99.0%
Insoluble in CH_3COOH .....max. 0.02%
Chloride (Cl) .....max. 0.002%
Nitrate (NO_3) .....max. 0.01%
Calcium (Ca) .....max. 0.005%
Copper (Cu) .....max. 0.005%
Potassium (K) .....max. 0.005%
Silicon (Si) .....Actual Value Reported
Sodium (Na) .....max. 0.02%
Trace Impurities (in ppm):
Iron (Fe) .....max. 5
Silver (Ag) .....max. 5
Average Particle Diameter, µm (APD) .....Actual Value Reported
Specific Surface Area, m^2/g .....Actual Value Reported
Bulk Density (g/cc) .....Actual Value Reported
Mesh (Wet Screen Analysis):
On U.S. No. 325 Sieve .....Actual Value Reported

CAS: 1317-36-8 MERCK INDEX: 14,5425

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lead Tetraacetate

BAKER
(lead(IV) acetate)
(85% min.)

P368-05	Glass	100 g	non	229.00	

$(CH_3COO)_4Pb$ FW: 443.37

Assay ($C_8H_{12}O_8Pb$) .....min. 85%

CAS: 546-67-8 MERCK INDEX: 14,5423 IMO: 6.1:2291

L-Leucine, USP

cGMP

Multi-Compendial

2083-06	Poly	1 kg	bio	650.55	
2083-07	Poly Pail	12 kg	bks	Inquire	

$C_6H_{13}NO_2$ FW: 131.17

Meets USP Requirements

Assay ($C_6H_{13}NO_2$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Specific Rotation $[\alpha]_D^{25}$ .....+14.9 - +17.3 °
pH 5.5-7.0
Loss on Drying at 105°C .....max. 0.2%
Residue on Ignition .....max. 0.4%
Chloride (Cl) .....max. 0.05%
Sulfate (SO_4) .....max. 0.03%
Iron (Fe) .....max. 0.003%
Heavy Metals (as Pb) .....max. 0.0015%
Chromatographic Purity:
Individual Impurities .....max. 0.5%
Total Impurities .....max. 2.0%

Meets FCC Requirements

Assay ($C_6H_{13}NO_2$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Lead (Pb) .....max 5 mg/kg
Loss on Drying at 105°C .....max. 0.2%
Residue on Ignition .....max. 0.1%
Specific Rotation $[\alpha]_D^{25}$ .....+14.8 - +16.8 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_6H_{13}NO_2$) (dried basis) 98.5-101.0%
Identification A .....Passes Test
Identification C .....Passes Test
Appearance of Solution .....Passes Test
Specific Rotation $[\alpha]_D^{20}$ .....+14.5 - +16.5 °
Ninhydrin-Positive Substances .....Passes Test
Chloride (Cl) .....max. 200 ppm
Sulfate (SO_4) .....max. 300 ppm
Ammonium (NH_4) .....max. 200 ppm
Iron (Fe) .....max. 10 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Loss on Drying at 100°C .....max. 0.5%
Ash (sulfated) .....max. 0.1%

Meets JP Chemical Specifications

Assay ($C_6H_{13}NO_2$) (dried basis) 98.5-101.0%
Identification .....Passes Test
Optical Rotation .....+14.5 - +16.0 °
pH 5.5-6.5
Clarity and Color of Solution .....Passes Test
Chloride (Cl) .....max. 0.021%
Sulfate (SO_4) .....max. 0.028%
Ammonium (NH_4) .....max. 0.02%
Heavy Metals (as Pb) .....max. 20 ppm

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 0.30%
Residue after Ignition ..... max. 0.10%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

CAS: 61-90-5 MERCK INDEX: 14,5451

Light Green 2G

See Light Green SF Yellowish

Light Green SF Yellowish

BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology and Cytology (C.I. 42095)

P399-03	Glass	25 g	non	106.25	

$C_{37}H_{34}N_2Na_2O_9S_3$ FW: 792.86

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum
(1.0 mg/200 mL in H_2O, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 5141-20-8 MERCK INDEX: 14,5485

Ligroine

See Petroleum Ether

Lime

See Calcium Oxide

Liquefied Phenol, USP

See Phenol, Liquefied

Liquid Paraffin

See Paraffin Oil

Liquid Petrolatum

See Paraffin Oil

Lithium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Lithium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(lithium carbonate in 5% HNO_3)
Plasma Standard

5733-04		100 mL	spr	112.60	

Li AW: 6.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lithium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(lithium carbonate in 5% HNO_3)
Plasma Standard

5766-04		100 mL	spr	72.00	

Li AW: 6.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Lithium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(lithium carbonate in 5% HNO_3)

6456-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Li AW: 6.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Lithium meta-Borate

BAKER ANALYZED ACS Reagent

2382-05	Glass	100 g	csa	637.45	
		4 x 100 g	csa	424.95	1699.80

$LiBO_2$ FW: 49.75

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($LiBO_2$) 98.0-102.0%
Bulk Density (g/cc) ..... min. 0.25
Insoluble Matter ..... max. 0.01%
Loss on Fusion at 950°C ..... max. 2.0%
Aluminum (Al) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Phosphorus Compounds (as PO_4) ..... max. 0.004%
Potassium (K) ..... max. 0.005%
Silicon (Si) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Trace Impurities (in ppm):
Magnesium (Mg) ..... max. 5
The formula weight of this reagent is likely to deviate from the value cited above, since the natural distribution of $_6$Li and $_7$Li isotopes is often altered in current sources of lithium compounds.

CAS: 13453-69-5 MERCK INDEX: 14,5524

Lithium Carbonate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lithium Carbonate, Powder
BAKER ANALYZED ACS Reagent

2362-01	Poly	500 g	csa	234.40	
		4 x 500 g	csa	156.25	625.00

Li_2CO_3 FW: 73.89

Exceeds ACS Specifications

Assay (Li_2CO_3) (by acidimetry) ..... min. 99.0%
Insoluble in Dilute HCl ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Total Sulfur (as SO_4) ..... max. 0.2%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.002%
Calcium (Ca) ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Silicon (Si) ..... Actual Value Reported
Sodium (Na) ..... max. 0.01%
Nitrate (NO_3) ..... max. 5 ppm
Specific Surface Area, m^2/g ..... Actual Value Reported
Bulk Density (g/cc) ..... Actual Value Reported
Mesh (Wet Screen Analysis):
On U.S. No. 325 Sieve ..... Actual Value Reported

CAS: 554-13-2 MERCK INDEX: 14,5527

Lithium Chloride, Granular
BAKER ANALYZED ACS Reagent

2370-01	Poly	500 g	non	134.85	
2370-05	Glass	2.5 kg	csa	872.95	
		4 x 2.5 kg	csa	581.95	2327.80
2370-07	Poly Pail	12 kg	bks	Inquire	

LiCl FW: 42.39

Meets ACS Specifications

Assay (LiCl) (by Ag titrn) ..... min. 99.0%
Insoluble Matter ..... max. 0.01%
Loss on Drying ..... max. 1.0%
Titrable Base (meq/g) ..... max. 0.008
Sulfate (SO_4) ..... max. 0.01%
Barium (Ba) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.20%

CAS: 7447-41-8 MERCK INDEX: 14,5528

Lithium Chloride, Granular
ULTRAPURE BIOREAGENT
Suitable for RNA Concentration

4002-01	Poly	500 g	upr	121.05	

LiCl FW: 42.39

Assay (LiCl) (by Ag titrn) ..... min. 99.0%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Insoluble Matter ..... max. 0.01%
Loss on Drying at 105°C ..... max. 1.0%
Titrable Base (meq/g) ..... max. 0.008
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.2%

CAS: 7447-41-8 MERCK INDEX: 14,5528

Lithium Hydroxide, Monohydrate
BAKER ANALYZED ACS Reagent

P406-04	Poly	125 g	non	69.95	
P406-07	Poly	500 g	non	125.10	
P406-08	Poly	1 kg	non	167.55	

$LiOH{\cdot}H_2O$ FW: 41.96

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($LiOH{\cdot}H_2O$) ..... min. 98.0%
Lithium Carbonate (Li_2CO_3) ..... max. 2.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.002%

CAS: 1310-66-3 MERCK INDEX: 14,5534 IMO: 8:2680

Lithium Nitrate, Crystal
BAKER ANALYZED Reagent

2384-01	Poly	500 g	non	205.20	
2384-05	Poly	2.5 kg	csa	777.60	
		4 x 2.5 kg	csa	518.40	2073.60
2384-07	Lined Fiber Dr	12 kg	bks	Inquire	

$LiNO_3$ FW: 68.94

Meets Reagent Specifications for testing USP/NF monographs

Assay ($LiNO_3$) (by acidimetry) ..... min. 97.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.1%
Barium (Ba) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Calcium (Ca)(by FES) ..... max. 0.02%
Potassium (K)(by FES) ..... max. 0.05%
Sodium (Na)(by FES) ..... max. 0.05%

CAS: 7790-69-4 MERCK INDEX: 14,5536 IMO: 5.1:2722

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lithium Perchlorate, Anhydrous
BAKER ANALYZED ACS Reagent

2385-01	Glass	100 g	non	189.95	

$LiClO_4$ FW: 106.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($LiClO_4$) (by Ag titrn) ..... min. 95.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 6.0-7.5
Chloride (Cl) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.001%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 7791-03-9 MERCK INDEX: 14,5539 IMO: 5.1:1481

Lithium Sulfate, Monohydrate, Granular
BAKER ANALYZED ACS Reagent

2388-01	Poly	500 g	csa	224.95	
		4 x 500 g	csa	149.95	599.80

$Li_2SO_4 \cdot H_2O$ FW: 127.95

Meets ACS Specifications
Assay (anhydrous basis) ..... min. 99.0%
Loss on Drying at 150°C 13.0-15.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.002%
Nitrate (NO_3) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Potassium (K) ..... max. 0.05%
Sodium (Na) ..... max. 0.05%

CAS: 10102-25-7 MERCK INDEX: 14,5541

Lithium Tetraborate, Flux Grade
BAKER INSTRA-ANALYZED Reagent

4503-01	Poly	500 g	spr	278.20	
		4 x 500 g	spr	185.45	741.80
4503-05	Poly	2 kg	spr	739.90	
		4 x 2 kg	spr	493.25	1973.00

$Li_2B_4O_7$ FW: 169.11

B_2O_3/Li_2O Ratio 1.95-2.05
Loss on Drying at 285°C ..... max. 1%
Lithium Oxide (Li_2O) ..... min. 17.0%
Water (H_2O) ..... max. 1.0%
Ferric Oxide (Fe_2O_3) ..... max. 0.03%
Sodium (Na) ..... max. 0.015%
Calcium (Ca) ..... max. 0.015%
Silicon Dioxide (SiO_2) ..... max. 0.03%
Titanium Dioxide (TiO_2) ..... max. 0.02%
Bulk Density, Loose (g/cc) ..... max. 0.38

CAS: 12007-60-2 MERCK INDEX: 14,5524

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

L-Lysine Hydrochloride, USP
cGMP
Multi-Compendial

2084-06	Poly	1 kg	bio	158.35	
2084-09	Poly Drum	50 kg	bul	Inquire	

$C_6H_{14}N_2O_2 \cdot HCl$ FW: 182.65

Meets USP Requirements
Assay ($C_6H_{14}N_2O_2 \cdot HCl$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +20.4 - +21.4 °
Loss on Drying at 105°C ..... max. 0.4%
Residue on Ignition ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%
Heavy Metals (as Pb) ..... max. 0.0015%
Chloride (Cl) 19.0-19.6%

Meets FCC Requirements
Assay ($C_6H_{14}N_2O_2 \cdot HCl$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying at 105°C ..... max. 1.0%
Residue on Ignition ..... max. 0.2%
Specific Rotation $[\alpha]_D^{20}$ ..... +20.3 - +21.5 °

Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_6H_{14}N_2O_2 \cdot HCl$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification E ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +21.0 - +22.5 °
Ninhydrin-Positive Substances ..... Passes Test
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 30 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying at 100°C ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%

Meets JP Chemical Specifications
Assay ($C_6H_{14}N_2O_2 \cdot HCl$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Optical Rotation ..... +19.0 - +21.5 °
pH (1 in 10) 5.0-6.0
Clarity and Color of Solution ..... Passes Test
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 10 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 1.0%
Residue on Ignition ..... max. 0.10%
Endotoxin Concentration, IU/mg ..... Actual Value Reported
Preserve in well-closed containers.
Store protected from light.

CAS: 657-27-2 MERCK INDEX: 14,5636

Lysine Hydrochloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

L-Lysine Hydrochloride, USP

cGMP

Multi-Compendial

2184-06	Poly	1 kg	bio	158.35	
2184-09	Poly Drum	50 kg	bul	Inquire	

$C_6H_{14}N_2O_2$·HCl FW: 182.65

Meets USP Requirements

Assay ($C_6H_{14}N_2O_2$·HCl) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +20.4 - +21.4 °
Loss on Drying at 105°C ..... max. 0.4%
Residue on Ignition ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0015%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%
Chloride (Cl) 19.0-19.6%

Meets FCC Requirements

Assay ($C_6H_{14}N_2O_2$·HC1) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying at 105°C ..... max. 1.0%
Residue on Ignition ..... max. 0.2%
Specific Rotation $[\alpha]_D^{20}$ ..... +20.3 - +21.5 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_6H_{14}N_2O_2$·HC1) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification E ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +21.0 - +22.5 °
Ninhydrin-Positive Substances ..... Passes Test
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 30 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%

Meets JP Chemical Specifications

Assay ($C_6H_{14}N_2O_2$·HC1) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Optical Rotation ..... +19.0 - +21.5 °
pH (1 in 10) 5.0-6.0
Clarity and Color of Solution ..... Passes Test
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 10 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 1.0%
Residue on Ignition ..... max. 0.10%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

Preserve in well-closed containers.
Store protected from light.

CAS: 657-27-2 MERCK INDEX: 14,5636

L-(+)-Lysine, Monohydrate

BAKER

P432-02	Glass	10 g	bio	80.55	

$NH_2(CH_2)_4CH(NH_2)COOH·H_2O$ FW: 164.19

Identification (by IR) ..... Passes Test

CAS: 39665-12-8 MERCK INDEX: 14,5636

DL-Lysine Monohydrochloride

BAKER

P448-03	Glass	25 g	bio	82.40	

$NH_2(CH_2)_4CH(NH_2)COOH·HCl$ FW: 182.65

Identification (by IR) ..... Passes Test

CAS: 70-53-1 MERCK INDEX: 14,5636

p-Magenta

See Pararosanilin Hydrochloride

Magnesia

See Magnesium Oxide

Magnesia Silica Gel

See Florisil (60-100 Mesh)

Magnesium, Ribbon

Purified

2418-00		28 g	non	114.20	

Mg AW: 24.31

Meets Reagent Specifications for testing USP/NF monographs

Assay (Mg) ..... min. 99%

CAS: 7439-95-4 MERCK INDEX: 14,5653 IMO: 4.1:1869

Magnesium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Magnesium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Mg metal in 5% HNO_3)
Plasma Standard

5734-04		100 mL	spr	112.60	

Mg AW: 24.31

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Mg metal in 5% HNO_3)
Plasma Standard

5767-04		100 mL	spr	72.00	

Mg AW: 24.31

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Magnesium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Mg metal in 5% HNO_3)

6457-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Mg AW: 24.31

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Magnesium Acetate, 4-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

2424-01	Poly	500 g	csa	345.10	
		4 x 500 g	csa	230.05	920.20
2424-05	Poly	2.5 kg	csa	864.70	
		4 x 2.5 kg	csa	576.45	2305.80
2424-R	Poly Drum	250 lb	bul	Inquire	

$(CH_3COO)_2Mg{\cdot}4H_2O$ FW: 214.45

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3COO)_2Mg{\cdot}4H_2O$) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 6.5-8.5
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Manganese (Mn) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Strontium (Sr) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 16674-78-5 MERCK INDEX: 14,5654

Magnesium Acetate, 4-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
Endotoxin Tested

2425-07	Poly Pail	12 kg	bks	Inquire	

$(CH_3COO)_2Mg{\cdot}4H_2O$ FW: 214.45

Meets ACS Specifications

Assay ($(CH_3COO)_2Mg{\cdot}4H_2O$) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 6.5-8.5
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Manganese (Mn) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Strontium (Sr) ..... max. 0.005%
Endotoxin Concentration (2.5 EU/g max.) ..... Passes Test
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 16674-78-5 MERCK INDEX: 14,5654

Magnesium Carbonate, Powder
USP

2436-01	Poly	500 g	rss	117.40	
		4 x 500 g	rss	78.25	313.00

Meets USP Requirements

Identification ..... Passes Test
Soluble Salts ..... max. 1.0%
Acid-Insoluble Substances ..... max. 0.05%
Arsenic (As) ..... max. 4 ppm
Calcium (Ca) ..... max. 0.45%
Heavy Metals (as Pb) ..... max. 0.003%
Iron (Fe) ..... max. 0.02%
Assay (as MgO) 40.0-43.5%
Microbial Limits:
Escherichia coli ..... Passes Test

CAS: 23389-33-5 MERCK INDEX: 14,5660

Magnesium Carbonate, Powder, USP
Multi-Compendial

2437-01	Poly	500 g	rss	141.15	
		4 x 500 g	rss	94.10	376.40

Meets USP Requirements

Identification ..... Passes Test
Microbial Limits:
Escherichia coli ..... Passes Test
Soluble Salts ..... max. 1.0%
Acid-Insoluble Substances ..... max. 0.05%
Arsenic (As) ..... max. 4 ppm
Limit of Calcium ..... max. 0.45%
Heavy Metals (as Pb) ..... max. 0.003%
Iron (Fe) ..... max. 0.02%
Assay (as MgO) 40.0-43.5%

Magnesium Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Soluble Matter ..... max. 1.0%
Insoluble in CH_3COOH ..... max. 0.05%
Chloride (Cl) ..... max. 0.07%
Sulfate (SO_4) ..... max. 0.3%
Arsenic (As) ..... max. 2 ppm
Calcium (Ca) ..... max. 0.75%
Iron (Fe) ..... max. 400 ppm
Heavy Metals (as Pb) ..... max. 20 ppm
Assay (MgO) 40.0-45.0%

Meets JP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Soluble Salts ..... max. 1.0%
Heavy Metals (as Pb) ..... max. 30 ppm
Iron (Fe) ..... max. 200 ppm
Arsenic (As) ..... max. 5 ppm
Calcium Oxide ..... max. 0.6%
Acid-Insoluble Substances ..... max. 0.05%
Precipitation Test, mL ..... max. 11.9
Assay (MgO) 40.0-44.0%

CAS: 23389-33-5 MERCK INDEX: 14,5660

Magnesium Chloride, 6-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

2444-01	Poly	500 g	csa	105.10	
		4 x 500 g	csa	70.05	280.20
2444-05	Poly	2.5 kg	csa	386.20	
		4 x 2.5 kg	csa	257.45	1029.80
2444-07	Poly Pail	12 kg	bks	Inquire	
2444-R	Lined Fiber Dr	250 lb	bul	Inquire	

$MgCl_2 \cdot 6H_2O$ FW: 203.30

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($MgCl_2 \cdot 6H_2O$) 99.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 4.5-7.0
Nitrate (NO_3) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Ammonium (NH_4) ..... max. 0.002%
Barium (Ba) ..... max. 0.005%
Calcium (Ca) ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Strontium (Sr) ..... max. 0.005%
Trace Impurities (in ppm):
Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
Manganese (Mn) ..... max. 5

CAS: 7791-18-6 MERCK INDEX: 14,5662

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Chloride, 6-Hydrate, Crystal
USP, FCC

cGMP

2448-01	Poly	500 g	rss	146.35	
		4 x 500 g	rss	97.55	390.20
2448-05	Poly	2.5 kg	rss	547.80	
		4 x 2.5 kg	rss	365.20	1460.80
2448-07	Poly Pail	12 kg	bks	Inquire	
2448-08	Poly Drum	90 lb	bul	Inquire	
2448-R	Lined Fiber Dr	250 lb	bul	Inquire	

$MgCl_2 \cdot 6H_2O$ FW: 203.30

Meets USP & FCC Requirements

Assay 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
pH (1 in 20) 4.5-7.0
Ammonium (NH_4) ..... max. 0.005%
Insoluble Matter ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... Passes Test
Calcium (Ca) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
Lead (Pb) ..... max 4 mg/kg
Potassium (K) ..... Passes Test
Preserve in Tight Containers

CAS: 7791-18-6 MERCK INDEX: 14,5662

Magnesium Chloride, 6-Hydrate, Crystal
ULTRAPURE BIOREAGENT

4003-01	Poly	500 g	upr	57.30	
4003-05	Poly	2.5 kg	upr	223.15	

$MgCl_2 \cdot 6H_2O$ FW: 203.30

Assay ($MgCl_2 \cdot 6H_2O$) 99.0-102.0%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Insoluble Matter ..... max. 0.005%
Ammonium (NH_4) ..... max. 0.002%
Calcium (Ca) ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
Manganese (Mn) ..... max. 5

CAS: 7791-18-6 MERCK INDEX: 14,5662

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Chloride, 6-Hydrate, Crystal, USP

cGMP

Multi-Compendial

2449-01	Poly	500 g	rss	174.45	
		4 x 500 g	rss	116.30	465.20
2449-07	Poly Pail	12 kg	bks	Inquire	

$MgCl_2 \cdot 6H_2O$ FW: 203.30

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
pH (1 in 20) 4.5-7.0
Insoluble Matter ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... Passes Test
Calcium (Ca) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
Potassium (K) ..... Passes Test
Assay 98.0-101.0%
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets BP/Ph.Eur. Chemical Specifications

Assay 98.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Bromide (Br) ..... max. 500 ppm
Sulfate (SO_4) ..... max. 100 ppm
Arsenic (As) ..... max. 2 ppm
Calcium (Ca) ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Water (H_2O) 51.0-55.0%

Preserve in Tight Containers

CAS: 7791-18-6 MERCK INDEX: 14,5662

Magnesium Nitrate, 6-Hydrate, Flake

BAKER ANALYZED ACS Reagent

2468-01	Poly	500 g	csa	88.95	
		4 x 500 g	csa	59.30	237.20

$Mg(NO_3)_2 \cdot 6H_2O$ FW: 256.41

Exceeds ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Assay ($Mg(NO_3)_2 \cdot 6H_2O$) (by EDTA titrn) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 5.0-7.0
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Ammonium (NH_4) ..... max. 0.002%
Barium (Ba) ..... max. 0.002%
Calcium (Ca)(by AAS) ..... max. 0.01%
Potassium (K)(by AAS) ..... max. 0.005%
Sodium (Na)(by AAS) ..... max. 0.005%
Strontium (Sr)(by AAS) ..... max. 0.005%

Trace Impurities (in ppm):

Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
Manganese (Mn)(by AAS) ..... max. 5

CAS: 13446-18-9 MERCK INDEX: 14,5674 IMO: 5.1:1474

Magnesium Oxide, Heavy Powder

cGMP

USP, FCC

2484-01	Poly	500 g	rss	149.10	
		4 x 500 g	rss	99.40	397.60
2484-05	Poly Pail	2.5 kg	rnc	215.55	

MgO FW: 40.30

Meets USP & FCC Requirements

Identification ..... Passes Test
Loss on Ignition ..... max. 10.0%
Free Alkali and Soluble Salts ..... max. 2.0%
Acid-Insoluble Substances ..... max. 0.1%
Arsenic (As) ..... max 3 mg/kg
Bulk Density ..... Actual Value Reported
Calcium Oxide ..... max. 1.5%
Calcium (Ca) ..... max. 1.1%
Heavy Metals (as Pb) ..... max. 20 ppm
Iron (Fe) ..... max. 0.05%
Assay (MgO) (ignited basis) 96.0-100.5%
Lead (Pb) ..... max 4 mg/kg

STORAGE: Preserve in tight containers.

CAS: 1309-48-4 MERCK INDEX: 14,5677

Magnesium Oxide, Powder

cGMP

USP, FCC

2480-01	Poly	500 g	rss	182.10	
		4 x 500 g	rss	121.40	485.60
2480-05	Poly Pail	2 kg	rnc	258.25	

MgO FW: 40.30

Meets USP & FCC Requirements

Identification ..... Passes Test
Assay (MgO) (ignited basis) 96.0-100.5%
Loss on Ignition ..... max. 10.0%
Free Alkali and Soluble Salts ..... max. 2.0%
Acid-Insoluble Substances ..... max. 0.1%
Arsenic (As) ..... max 3 mg/kg
Bulk Density ..... Actual Value Reported
Calcium Oxide ..... max. 1.5%
Calcium (Ca) ..... max. 1.1%
Heavy Metals (as Pb) ..... max. 20 ppm
Iron (Fe) ..... max. 0.05%
Lead (Pb) ..... max 4 mg/kg

CAS: 1309-48-4 MERCK INDEX: 14,5677

Magnesium Oxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Oxide, Powder
BAKER ANALYZED ACS Reagent

2476-01	Poly	500 g	csa	681.40	
		4 x 500 g	csa	454.25	1817.00

MgO FW: 40.30

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (MgO) (ignited basis)(by EDTA titrn) ..... min. 95.0%
Insoluble in Dilute HCl ..... max. 0.02%
Water-Soluble Substances ..... max. 0.4%
Loss on Ignition ..... max. 2.0%
Chloride (Cl) ..... max. 0.01%
Nitrate (NO_3) ..... max. 0.005%
Barium (Ba) ..... max. 0.005%
Calcium (Ca) ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.003%
Iron (Fe) ..... max. 0.01%
Manganese (Mn) ..... max. 5 ppm
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.5%
Strontium (Sr) ..... max. 0.005%
Sulfate and Sulfite (as SO_4) ..... max. 0.02%

Product Information (not specifications):

Average Particle Diameter, µm (APD) (by Sedigraph) (typical) 4
Specific Surface Area, m^2/g (typical) 7
Bulk Density (g/cc) (typical) 0.5

CAS: 1309-48-4 MERCK INDEX: 14,5677

Magnesium Perchlorate, Desiccant
See ANHYDRONE

Magnesium Sulfate, 7-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

2500-01	Poly	500 g	csa	100.90	
		4 x 500 g	csa	67.25	269.00
2500-05	Poly	2.5 kg	csa	346.15	
		4 x 2.5 kg	csa	230.75	923.00
2500-07	Poly Pail	12 kg	bks	Inquire	

$MgSO_4 \cdot 7H_2O$ FW: 246.47

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($MgSO_4 \cdot 7H_2O$) (by EDTA titrn) 99.0-102.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 5.0-7.0
Nitrate (NO_3) ..... max. 0.002%
Ammonium (NH_4) ..... max. 0.002%
Calcium (Ca) ..... max. 0.02%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Strontium (Sr) ..... max. 0.005%

Trace Impurities (in ppm):

Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
Manganese (Mn) ..... max. 5

CAS: 10034-99-8 MERCK INDEX: 14,5691

Magnesium Sulfate, 7-Hydrate, Crystal, USP
cGMP
Multi-Compendial

2504-01	Poly	500 g	rss	133.50	
		4 x 500 g	rss	89.00	356.00
2504-05	Poly	2.5 kg	rss	447.75	
		4 x 2.5 kg	rss	298.50	1194.00
2504-07	Poly Pail	12 kg	bks	Inquire	
2504-08	Poly Drum	175 lb	bul	Inquire	

$MgSO_4 \cdot 7H_2O$ FW: 246.47

Meets USP Requirements

Identification ..... Passes Test
pH (1 in 20) 5.0-9.2
Loss on Ignition 40.0-52.0%
Chloride (Cl) ..... max. 0.014%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.5 ppm
Selenium (Se) ..... max. 0.003%
Solution Test ..... Passes Test
Assay ($MgSO_4$) (anhydrous basis) 99.0-100.5%
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Chloride (Cl) ..... max. 300 ppm
Arsenic (As) ..... max. 2 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 20 ppm
Loss on Drying 48.0-52.0%
Assay ($MgSO_4$) (anhydrous basis) 99.0-100.5%

This product is intended for use in preparing parenteral and nonparenteral dosage forms.

Preserve in well-closed containers.

CAS: 10034-99-8 MERCK INDEX: 14,5691

Magnesium Sulfate, 7-Hydrate, Crystal
cGMP
USP
Endotoxin Tested

2505-07	Poly Pail	12 kg	bks	Inquire	

$MgSO_4 \cdot 7H_2O$ FW: 246.47

Meets USP Requirements

Identification ..... Passes Test
pH (1 in 20) 5.0-9.2
Loss on Ignition 40.0-52.0%
Chloride (Cl) ..... max. 0.014%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.5 ppm
Selenium (Se) ..... max. 0.003%
Assay ($MgSO_4$) (anhydrous basis) 99.0-100.5%
Endotoxin Concentration (2.5 EU/g max.) ..... Passes Test

This product is intended for use in preparing parenteral and nonparenteral dosage forms.

CAS: 10034-99-8 MERCK INDEX: 14,5691

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Sulfate, Anhydrous, Powder
BAKER ANALYZED Reagent

2506-01	Poly	500 g	csa	109.75	
		4 x 500 g	csa	73.15	292.60
2506-05	Poly	2.5 kg	csa	395.55	
		4 x 2.5 kg	csa	263.70	1054.80
2506-R	Lined Fiber Dr	200 lb	bul	Inquire	

$MgSO_4$ FW: 120.37

Meets Reagent Specifications for testing USP/NF monographs

Assay ($MgSO_4$) (ignited basis) ..... min. 99.0%
Loss on Ignition ..... max. 2.0%
Chloride (Cl) ..... max. 0.001%
Nitrate (NO_3) ..... max. 0.004%
Ammonium (NH_4) ..... max. 0.004%
Calcium (Ca) ..... max. 0.06%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Manganese (Mn) ..... max. 0.001%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1

CAS: 7487-88-9 MERCK INDEX: 14,5691

Malachite Green Oxalate
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology and Bacteriology (Staining) (C.I. 42000)

P450-03	Glass	25 g	non	57.00	

$C_{52}H_{52}N_4O_{12}$ FW: 927.02

Certified by the Biological Stain Commission
Biological Test ..... Passes Test

CAS: 02437-29-8 MERCK INDEX: 14,5699 IMO: 6.1:2928

Maleic Acid
BAKER

P460-07	Poly	500 g	non	85.35	
P460-08	Poly	1 kg	non	146.00	

HOCOCH:CHCOOH FW: 116.07

Assay ($C_4H_4O_4$) (by acidimetry) ..... min. 99%

CAS: 110-16-7 MERCK INDEX: 14,5703

Maleic Anhydride
BAKER

P469-05	Glass	100 g	non	47.90	

$C_4H_2O_3$ FW: 98.06

Melting Point ..... 51-54 °C.

CAS: 108-31-6 MERCK INDEX: 14,5704 IMO: 8:2215
FLASH POINT: 102°C

DL-Malic Acid
Practical

P494-07	Poly	500 g	bio	46.55	

$HOCOCH_2CHOHCOOH$ FW: 134.09

Melting Point ..... 126-131 °C.

CAS: 617-48-1 MERCK INDEX: 14,5707

Maltose High Purity, Hydrate
USP

2115-06	Poly Pail	5 kg	bks	Inquire
2115-07	Poly Pail	12 kg	bks	Inquire

$C_{12}H_{22}O_{11}\cdot H_2O$ FW: 360.31

Meets USP Requirements

Assay ($C_{12}H_{22}O_{11}\cdot H_2O$) (dried basis) ..... min. 97.0%
Clarity ..... Passes Test
Specific Rotation ..... +129.1 - +131.7 °
Identification A ..... Passes Test
Identification B ..... Passes Test
Residue on Ignition ..... max. 0.05%
pH 4.0-5.5
Destrin, Starch and Sulfite ..... Passes Test
Water (by KF) 4.5-6.5%
Residual Ethanol ..... max. 600 ppm
Residual Methanol ..... max. 300 ppm
Arsenic (As) ..... max. 0.5 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Endotoxin Concentration (EU/g) ..... max. 1.0

CAS: 69-79-4 MERCK INDEX: 14,5714

Manganese, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Manganese, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Mn metal in 5% HNO_3)
Plasma Standard

5735-04		100 mL	spr	112.60	

Mn AW: 54.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Manganese

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Manganese, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Mn metal in 5% HNO_3)
Plasma Standard

5793-04		100 mL	spr	72.00	

Mn AW: 54.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Manganese, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Mn metal in 5% HNO_3)

6458-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Mn AW: 54.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Manganese(II) Compounds
See Manganous listings

Manganese Dioxide, Powder
BAKER ANALYZED Reagent
(manganese(IV) oxide)

8392-01	Poly	500 g	csa	153.40	
		4 x 500 g	csa	102.25	409.00
8392-07	Poly Pail	12 kg	bks	Inquire	

MnO_2 FW: 86.94

Assay (MnO_2) (by EDTA titrn) ..... min. 99.0%
Insoluble in HCl ..... max. 0.03%
Chloride (Cl) ..... max. 0.01%
Nitrate (NO_3) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.08%
Iron (Fe) ..... max. 0.05%

CAS: 1313-13-9 MERCK INDEX: 14,5730

Manganese Dioxide, Powder
Technical
(manganese(IV) oxide)

2526-07	Poly Pail	12 kg	bks	Inquire	
2526-R	Lined Fiber Dr	325 lb	bul	Inquire	

CAS: 1313-13-9 MERCK INDEX: 14,5730

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Manganous Carbonate, Powder
BAKER ANALYZED Reagent
(manganese(II) carbonate)

2536-05	Poly	2.5 kg	non	341.75	
2536-07	Poly Pail	12 kg	bks	Inquire	
2536-R	Lined Fiber Dr	250 lb	bul	Inquire	

$MnCO_3$ FW: 114.95

Assay (as Mn) ..... min. 43.0%
Insoluble in HCl ..... max. 0.01%
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.02%
Magnesium (Mg) ..... max. 0.01%
Potassium (K) ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.005%
Other Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.02%
Sodium (Na) ..... max. 0.02%
Zinc (Zn) ..... max. 0.05%
Average Particle Diameter, µm (APD) ..... max. 3

CAS: 598-62-9 MERCK INDEX: 14,5726

Manganous Chloride, 4-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
(manganese(II) chloride, tetrahydrate)

2540-04	Poly	125 g	non	45.70	
2540-01	Poly	500 g	csa	141.55	
		4 x 500 g	csa	94.35	377.40
2540-05	Poly	2.5 kg	non	284.80	
2540-07	Poly Pail	12 kg	bks	Inquire	
2540-R	Lined Fiber Dr	200 lb	bul	Inquire	

$MnCl_2 \cdot 4H_2O$ FW: 197.90

Meets ACS Specifications
Assay ($MnCl_2 \cdot 4H_2O$) (by EDTA titrn) 98.0-101.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 3.5-6.0
Sulfate (SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Zinc (Zn) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 13446-34-9 MERCK INDEX: 14,5728

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Manganous Nitrate, 50-52% Solution

BAKER ANALYZED Reagent
(manganese(II) nitrate)

2544-01	Glass	500 mL	cso	78.55	
		12 x 500 mL	cso	52.35	628.20
2544-05	Glass	2.5 L	cso	360.00	
		6 x 2.5 L	cso	240.00	1440.00
2544-08	Poly Drum	160 lb	bul	Inquire	

$Mn(NO_3)_2$ FW: 178.95

Assay ($Mn(NO_3)_2$) 50.0-52.0%
Chloride (Cl) .....max. 0.002%
Sulfate (SO_4) .....max. 0.01%
Substances Not Precipitated by $(NH_4)_2S$ (as SO_4) .....max. 0.2%
Other Heavy Metals (as Pb) .....max. 0.002%
Iron (Fe) .....max. 0.001%
Zinc (Zn) .....max. 0.02%

To ensure homogeneity, gently heat and mix prior to use.

CAS: 10377-66-9 DENSITY: 1 L = 1.54 kg IMO: 8:3264

Manganous Sulfate, Monohydrate, Powder

BAKER ANALYZED ACS Reagent
(manganese(II) sulfate, monohydrate)

2550-01	Poly	500 g	csa	178.20	
		4 x 500 g	csa	118.80	475.20
2550-05	Poly	2.5 kg	csa	622.60	
		4 x 2.5 kg	csa	415.05	1660.20

$MnSO_4 \cdot H_2O$ FW: 169.02

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($MnSO_4 \cdot H_2O$) 98.0-101.0%
Insoluble Matter .....max. 0.01%
Loss on Ignition 10.0-12.0%
pH of 5% Solution at 25°C 2.0-4.0
Chloride (Cl) .....max. 0.001%
Calcium (Ca) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.002%
Iron (Fe) .....max. 0.002%
Magnesium (Mg) .....max. 0.005%
Nickel (Ni) .....max. 0.005%
Potassium (K) .....max. 0.01%
Sodium (Na) .....max. 0.05%
Zinc (Zn) .....max. 0.005%
Substances Reducing Permanganate .....Passes Test

CAS: 10034-96-5 MERCK INDEX: 14,5739

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mannitol, Powder

BAKER ANALYZED ACS Reagent

2554-01	Poly	500 g	csa	134.50	
		4 x 500 g	csa	89.65	358.60
2554-07	Poly Pail	12 kg	bks	Inquire	

$HOCH_2(CHOH)_4CH_2OH$ FW: 182.17

Meets ACS Specifications

Specific Rotation $[\alpha]_D^{25}$ .....+23.3 - +24.3 °
Insoluble Matter .....max. 0.01%
Loss on Drying at 105°C .....max. 0.05%
Residue after Ignition .....max. 0.01%
Titrable Acid (meq/g) .....max. 0.0008
Reducing Sugars .....Passes Test
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5

CAS: 69-65-8 MERCK INDEX: 14,5745

Mannitol, Powder

USP

cGMP

2555-05	Poly	2.5 kg	rss	481.00	
		4 x 2.5 kg	rss	320.65	1282.60

$HOCH_2(CHOH)_4CH_2OH$ FW: 182.17

Meets USP Requirements

Assay (as $HOCH_2(CHOH)_4CH_2OH$)
(calculated on anhydrous basis) 96.0-101.5%
Acidity .....Passes Test
Arsenic (As) .....max. 1 ppm
Chloride (Cl) .....max. 0.007%
Identification .....Passes Test
Loss on Drying at 105°C .....max. 0.3%
Melting Range .....164-169 °C.
Reducing Sugars .....Passes Test
Specific Rotation $[\alpha]_D^{25}$ .....+137 - +145 °
Sulfate (SO_4) .....max. 0.01%

CAS: 69-65-8 MERCK INDEX: 14,5745

Mannitol, Powder, USP

Multi-Compendial

cGMP

2553-01	Poly	500 g	rss	199.75	
		4 x 500 g	rss	133.15	532.60
2553-05	Poly	2.5 kg	rss	533.85	
		4 x 2.5 kg	rss	355.90	1423.60
2553-07	Poly Pail	12 kg	bks	Inquire	
2553-09	Poly Drum	50 kg	bul	Inquire	
2553-19	Poly Drum	90 kg	bul	Inquire	

$HOCH_2(CHOH)_4CH_2OH$ FW: 182.17

Meets USP Requirements

Assay (as $HOCH_2(CHOH)_4CH_2OH$)
(calculated on anhydrous basis) 96.0-101.5%
Acidity .....Passes Test
Arsenic (As) .....max. 1 ppm
Chloride (Cl) .....max. 0.007%
Identification .....Passes Test

Marble Chips

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Loss on Drying at 105°C ..... max. 0.3%
Melting Range ..... 164-169 °C.
Reducing Sugars ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +137 - +145 °
Sulfate (SO_4) ..... max. 0.01%

Meets BP/Ph.Eur. Chemical Specifications

Assay (as $HOCH_2(CHOH)_4CH_2OH$)
(calculated on anhydrous basis) 98.0-102.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Appearance of Solution ..... Passes Test
Conductivity, uS cm-1 ..... max. 20
Reducing Sugars ..... max. 0.2%
Related Substances
Impurities A,B,C ..... max. 2.0%
Any other Impurity ..... max. 0.10%
Total ..... max. 2.0%
Lead (Pb) ..... max. 0.5 ppm
Nickel (Ni) ..... max. 1 ppm
Water (H_2O) ..... max. 0.5%
Escherichia coli (absent) ..... Passes Test
Salmonella (absent) ..... Passes Test
Endotoxin Concentration, <2.5 IU/g ..... Passes Test
Total Yeast and Mold Count, cfu/g ..... max. 100
Total Aerobic Microbial Count, cfu/g ..... max. 100

Meets JP Chemical Specifications

Assay ($HOCH_2(CHOH)_4CH_2OH$) (dried basis) 98.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +137 - +145 °
Melting Point ..... 166-169 °C.
Clarity and Color ..... Passes Test
Acidity ..... Passes Test
Chloride (Cl) ..... max. 0.007%
Sulfate (SO_4) ..... max. 0.010%
Heavy Metals (as Pb) ..... max. 5 ppm
Nickel (Ni) ..... Passes Test
Arsenic (As) ..... max. 1.3 ppm
Sugars ..... Passes Test
Loss on Drying at 105°C ..... max. 0.30%
Residue on Ignition ..... max. 0.10%

CAS: 69-65-8 MERCK INDEX: 14,5745

Marble Chips

P547-02	Poly	2.5 kg	non	93.45	

CAS: 471-34-1

Marshall's Reagent

See N-1-Naphthylethylenediamine Dihydrochloride

Material Safety Data Sheets (MSDS)

See Academic Section, p. 91-93

MEK

See under Methyl Ethyl Ketone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mercaptoacetic Acid

BAKER
(thioglycolic acid)

P601-07	Glass	500 g	non	121.30	

$HSCH_2COOH$ FW: 92.12

Assay ($C_2H_4O_2S$) ..... min. 95.0%
Residue after Ignition ..... max. 0.05%

CAS: 68-11-1 DENSITY: 1 L = 1.33 kg MERCK INDEX: 14,9336
IMO: 8:1940 FLASH POINT: > 113°C

3-Mercaptoalanine

See L-(+)-Cysteine

beta-Mercaptoethanol

See 2-Mercaptoethanol

2-Mercaptoethanol

ULTRAPURE BIOREAGENT
For Electrophoresis and other Molecular Biology Applications

4049-00		100 g	upr	40.30	
4049-01		500 g	upr	59.80	

$HSCH_2CH_2OH$ FW: 78.13

Assay ($HSCH_2CH_2OH$) (by GC) ..... min. 99.0%
Appearance ..... Passes Test
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Trace Impurities (in ppm):
Copper (Cu) ..... max. 10
Iron (Fe) ..... max. 5
Lead (Pb) ..... max. 5
Zinc (Zn) ..... max. 5

CAS: 60-24-2 DENSITY: 1 L = 1.114 kg MERCK INDEX: 14,5869
IMO: 6.1:2966 FLASH POINT: 74°C

2-Mercapto-4, 6-pyrimidinediol

See 2-Thiobarbituric Acid

Mercuric Acetate, Powder

BAKER ANALYZED ACS Reagent
(mercury(II) acetate)

2584-04	Glass	125 g	csa	301.80	
		4 x 125 g	csa	201.20	804.80
2584-01	Poly	500 g	non	712.80	

$(CH_3COO)_2Hg$ FW: 318.68

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3COO)_2Hg$) ..... min. 98.0%
Insoluble Matter ..... max. 0.01%
Residue after Reduction ..... max. 0.02%
Chloride (Cl) ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Other Heavy Metals (as Pb) ..... max. 0.002%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iron (Fe) ..... max. 0.001%
Mercurous Mercury (as Hg) ..... max. 0.4%
CAS: 1600-27-7 MERCK INDEX: 14,5873 IMO: 6.1:1629

Mercuric Chloride
BAKER ANALYZED ACS Reagent
(mercury(II) chloride)

2594-04	Poly	125 g	csa	209.20	
		4 x 125 g	csa	139.45	557.80
2594-01	Poly	500 g	non	432.85	
2594-05	Poly	2.5 kg	non	1552.40	

$HgCl_2$ FW: 271.50

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($HgCl_2$) ..... min. 99.5%
Residue after Reduction ..... max. 0.02%
Solution in Ether ..... Passes Test
Iron (Fe) ..... max. 0.002%
CAS: 7487-94-7 MERCK INDEX: 14,5876 IMO: 6.1:1624

Mercuric Iodide, Red, Powder
BAKER ANALYZED ACS Reagent
(mercury(II) iodide)

2608-04	Poly	125 g	non	132.05	
2608-01	Poly	500 g	non	484.75	

HgI_2 FW: 454.40

Meets ACS Specifications
Assay (HgI_2) ..... min. 99.0%
Solubility in Potassium Iodide Solution ..... Passes Test
Mercurous Mercury (as Hg) ..... max. 0.1%
Soluble Mercury Salts (as Hg) ..... max. 0.05%
CAS: 7774-29-0 MERCK INDEX: 14,5879 IMO: 6.1:1638

Mercuric Nitrate, Monohydrate
BAKER ANALYZED ACS Reagent
(mercury(II) nitrate, monohydrate)

2614-04	Glass	125 g	csa	214.20	
		4 x 125 g	csa	142.80	571.20
2614-01	Glass	500 g	non	332.10	
2614-05	Poly	2.5 kg	non	1307.05	

$Hg(NO_3)_2{\cdot}H_2O$ FW: 342.62

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Hg(NO_3)_2{\cdot}H_2O$) ..... min. 98.0%
Residue after Reduction ..... max. 0.01%
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
CAS: 7783-34-8 MERCK INDEX: 14,5880 IMO: 6.1:1625

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mercuric Oxide, Red, Powder
BAKER ANALYZED ACS Reagent
(mercury(II) oxide, red)

2620-04	Glass	125 g	csa	216.00	
		4 x 125 g	csa	144.00	576.00
2620-01	Glass	500 g	non	442.15	
2620-05	Glass	2.5 kg	non	1312.15	

HgO FW: 216.59

Meets ACS Specifications
Assay (HgO) ..... min. 99.0%
Insoluble in Dilute HCl ..... max. 0.03%
Residue after Reduction ..... max. 0.025%
Chloride (Cl) ..... max. 0.025%
Sulfate (SO_4) ..... max. 0.015%
Nitrogen Compounds (as N) ..... max. 0.005%
Iron (Fe) ..... max. 0.005%
CAS: 21908-53-2 MERCK INDEX: 14,5882 IMO: 6.1:1641

Mercuric Oxide, Yellow, Powder
BAKER ANALYZED ACS Reagent
(mercury(II) oxide, yellow)

2630-04	Glass	125 g	csa	241.95	
		4 x 125 g	csa	161.30	645.20

HgO FW: 216.59

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (HgO) ..... min. 99.5%
Insoluble in Dilute HCl ..... max. 0.03%
Residue after Reduction ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.01%
Chloride (Cl) ..... max. 0.025%
Sulfate (SO_4) ..... max. 0.01%
Nitrogen Compounds (as N) ..... max. 0.005%
Iron (Fe) ..... max. 0.003%
CAS: 21908-53-2 MERCK INDEX: 14,5883 IMO: 6.1:1641

Mercuric Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mercuric Sulfate
BAKER ANALYZED ACS Reagent
(mercury(II) sulfate)

2640-04	Glass	125 g	csa	208.15	
		4 x 125 g	csa	138.75	555.00
2640-01	Poly	500 g	non	488.00	

$HgSO_4$ FW: 296.65

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($HgSO_4$) ..... min. 98.0%
Residue after Reduction ..... max. 0.02%
Chloride (Cl) ..... max. 0.003%
Nitrate (NO_3) ..... Passes Test
Iron (Fe) ..... max. 0.001%
Mercurous Mercury (as Hg) ..... max. 0.15%
Suitability for Chemical Oxygen Demand (COD) Determination ..... Passes Test

CAS: 7783-35-9 MERCK INDEX: 14,5887 IMO: 6.1:1645

Mercuric Thiocyanate
BAKER ANALYZED Reagent
(mercury(II) thiocyanate)

P651-04	Glass	125 g	cor	546.60	
		4 x 125 g	cor	364.40	1457.60

$Hg(SCN)_2$ FW: 316.78

Meets Reagent Specifications for testing USP/NF monographs

Chloride (Cl) ..... max. 0.002%
Sensitivity ..... Passes Test

CAS: 592-85-8 MERCK INDEX: 14,5890 IMO: 6.1:1646

Mercurous Nitrate, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent
(mercury(I) nitrate, dihydrate)

2660-01	Poly	500 g	non	347.95	

$Hg_2(NO_3)_2 \cdot 2H_2O$ FW: 561.22

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Hg_2(NO_3)_2 \cdot 2H_2O$) ..... min. 97.0%
Insoluble Matter ..... max. 0.005%
Residue after Reduction ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Mercuric Mercury (as Hg) ..... max. 1.0%

CAS: 14836-60-3 MERCK INDEX: 14,5896 IMO: 6.1:1627

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mercury, Triple Distilled
BAKER ANALYZED ACS Reagent

2564-01	Glass S/S	454 g	non	342.70	

Hg AW: 200.59

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance ..... Passes Test
Nonvolatile Matter ..... max. 5 ppm

CAS: 7439-97-6 DENSITY: 1 L = 13.55 kg MERCK INDEX: 14,5898
IMO: 8:2809

Mercury Spill Cleanup Products available. See pp. 378.

Mercury, Triple Distilled
BAKER INSTRA-ANALYZED Reagent
For Instrument Applications

2567-01	Poison Pack	125 g	spr	251.75	

Hg AW: 200.59

Appearance ..... Passes Test
Trace Impurities (in ppm):
Aluminum (Al) ..... max. 0.2
Copper (Cu) ..... max. 0.05
Gold (Au) ..... max. 0.1
Iron (Fe) ..... max. 0.1
Lead (Pb) ..... max. 0.1
Magnesium (Mg) ..... max. 0.05
Silicon (Si) ..... max. 0.1
Silver (Ag) ..... max. 0.5

CAS: 7439-97-6 DENSITY: 1 L = 13.55 kg MERCK INDEX: 14,5898
IMO: 8:2809

Mercury Spill Cleanup Products available. See pp. 378.

Mercury, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Mercury, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Hg metal in 5% HNO_3)
Plasma Standard

5736-04		100 mL	spr	112.60	

Hg AW: 200.59

IMO: 8:3264

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mercury, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Hg metal in 5% HNO_3)
Plasma Standard

5768-04		100 mL	spr	72.00	

Hg AW: 200.59

IMO: 8:3264

Mercury, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Hg metal in 5% HNO_3)

6459-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Hg AW: 200.59

IMO: 8:3264

Mercury(I) and Mercury(II) Compounds
See Mercurous and Mercuric listings

Mercury Spill Cleanup Products
See under Spill Cleanup Products

Mercury Sponge
See under Spill Cleanup Products

MES, Monohydrate, Free Acid, Crystalline
ULTRAPURE BIOREAGENT
(2-(n-morpholino)ethanesulfonic acid, monohydrate)
Buffer for LC and Other Molecular Biology Applications

4014-00	Poly	20 g	upr	32.40
4014-02	Poly	200 g	upr	159.75
4014-04	Poly	1 kg	upr	472.10
4014-07	Poly Pail	12 kg	bks	Inquire
4014-09	Poly Drum	50 kg	bul	Inquire

$C_6H_{13}NO_4S{\cdot}H_2O$ FW: 213.25

Assay ($C_6H_{13}NO_4S{\cdot}H_2O$) .....min. 98%
Appearance .....Passes Test
Identification (by IR) .....Passes Test
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected
Color of a 1M Alkaline Solution .....Passes Test
Loss on Drying at 130°C 7-10%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 2
Product Information (not specifications):
pK_a at 20°C 6.15

CAS: 145224-94-8

MES, Monohydrate Free Acid
Purified
Suitable for Use in Biopharmaceutical Manufacturing Applications

4812-02	Poly	1 kg	bks	Inquire
4812-04	Poly Pail	5 kg	bks	Inquire
4812-06	Poly Pail	10 kg	bks	Inquire
4812-08		25 kg	bul	Inquire
4812-09		50 kg	bul	Inquire

$C_6H_{13}NO_4S{\cdot}H_2O$ FW: 213.25

Assay ($C_6H_{13}NO_4S{\cdot}H_2O$) .....min. 98%
Appearance .....Passes Test
Identification (by IR) .....Passes Test
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected
Color of a 1M Alkaline Solution .....Passes Test
Loss on Drying at 130°C 7-10%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 2

CAS: 145224-94-8

MES, Sodium Salt
Purified
Suitable for Use in Biopharmaceutical Manufacturing Applications

4813-02	Poly	1 kg	bks	Inquire
4813-04	Poly Pail	5 kg	bks	Inquire
4813-06	Poly Pail	10 kg	bks	Inquire
4813-08		25 kg	bul	Inquire
4813-09		50 kg	bul	Inquire

$C_6H_{12}NNaO_4S$ FW: 217.2

Assay ($C_6H_{12}NNaO_4S$) .....min. 85.0%
Appearance .....Passes Test
Identification (by IR) .....Passes Test
pH of 1% Aqueous Solution at 25°C 8.9-10.1
Solubility .....Passes Test
Ultraviolet Absorbance of a 10% Aqueous Solution:
280 nm .....max. 0.03
260 nm .....max. 0.05
Water (H_2O) .....max. 15.0%

Mesitylene
BAKER
(1,3,5-trimethylbenzene)

P649-07	Glass	500 mL	non	159.45

1,3,5-$(CH_3)_3C_6H_3$ FW: 120.20

Assay (1,3,5-$(CH_3)_3C_6H_3$) (by GC) .....min. 97%

CAS: 108-67-8 DENSITY: 1 L = 0.864 kg MERCK INDEX: 14,5907
IMO: 3:2325 FLASH POINT: 50°C

Solvent Spill Cleanup Products available. See pp. 378.

Meta Cresol Purple

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Meta Cresol Purple
See m-Cresol Purple

Metal Alloys
See Devarda's Alloy and Wood's Alloy

Metaphosphoric Acid
See meta-Phosphoric Acid

Methanal
See Formaldehyde

Methanesulfonic Acid
BAKER

P684-07	Glass S/S	500 g	org	90.55	
P684-09		5 kg	org	713.25	

CH_3SO_3H FW: 96.10

Assay (CH_4O_3S) (by acid-base titration) .....min. 98%
Water (H_2O)(by Karl Fischer titrn) .....max. 2%
Appearance .....Passes Test

CAS: 75-75-2 DENSITY: 1 L = 1.5 kg MERCK INDEX: 14,5954
IMO: 8:2922

Methanoic Acid
See Formic Acid

Methanol
BAKER ANALYZED ACS Reagent
(methyl alcohol)

9070-01	Glass	500 mL	cso	26.95	
		12 x 500 mL	cso	17.95	215.40
9070-03	Glass	4 L	cso	102.85	
		4 x 4 L	cso	68.55	274.20
9070-05	Poly	4 L	cso	101.20	
		4 x 4 L	cso	67.45	269.80
9070-33	Poly Coated	4 L	cso	120.30	
		4 x 4 L	cso	80.20	320.80
9070-07	Lined Steel Dr	20 L	sbk	221.55	
9070-09	Poly Drum	358 lb	bul	Inquire	
9070-R	Steel Drum	358 lb	bul	Inquire	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

CH_3OH FW: 32.04

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (CH_3OH) (by GC) .....min. 99.8%
Substances Darkened by H_2SO_4 .....Passes Test
Substances Reducing $KMnO_4$ .....Passes Test
Solubility in H_2O .....Passes Test
Color (APHA) .....max. 10
Water (by KF, coulometric) .....max. 0.1%
Residue after Evaporation .....max. 0.001%
Carbonyl Compounds:
Acetaldehyde .....max. 0.001%
Acetone .....max. 0.001%
Formaldehyde .....max. 0.001%
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.2
Heavy Metals (as Pb) .....max. 0.5 ppm
Trace Impurities (in ppm):
Copper (Cu) .....max. 0.1
Iron (Fe) .....max. 0.1
Nickel (Ni) .....max. 0.1

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Methanol
HPLC
(methyl alcohol)
For Use in Liquid Chromatography and Spectrophotometry

9093-02	Glass	1 L	chp	59.50	
		6 x 1 L	chp	39.65	237.90
9093-03	Glass	4 L	chp	109.60	
		4 x 4 L	chp	73.05	292.20
9093-33	Poly Coated	4 L	chp	127.80	
		4 x 4 L	chp	85.20	340.80

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

CH_3OH FW: 32.04

Assay (CH_3OH) (by GC, corrected for water) .....min. 99.8%
Ultraviolet Absorbance (1.00-cm cell vs. water):
400-254 nm .....max. 0.01
225 nm .....max. 0.15
UV Cut-off, nm .....max. 205
Gradient Elution Test (a.u.):
254 nm .....max. 0.002
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
Acetone .....max. 0.001%
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.1
Water (by KF, coulometric) .....max. 0.05%

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Methanol
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9830-02	Glass	1 L	cbs	60.40	
		6 x 1 L	cbs	40.25	241.50
9830-03	Glass	4 L	cbs	113.80	
		4 x 4 L	cbs	75.85	303.40
9830-23	NOWPak	20 L	npk	993.45	

CH_3OH FW: 32.04

Assay (CH_3OH) .....min. 99.9%
Appearance .....Passes Test
Gradient Elution Test (a.u.):
254 nm .....max. 0.01

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission ..... max. 0.3
at Emission Maximum for Impurities ..... max. 1.0
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 1.0 ppm
Water (H_2O) ..... max. 500 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) ..... max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) ..... max. 50
* Calcium (Ca) ..... max. 50
Iron (Fe) ..... max. 50
Lithium (Li) ..... max. 30
Magnesium (Mg) ..... max. 50
Nickel (Ni) ..... max. 30
Potassium (K) ..... max. 50
* Sodium (Na) ..... max. 50
* May change over time due to extraction from glass container.
Filtered through a 0.2 micron filter.

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Methanol
BAKER ANALYZED ULTRA LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9863-01	Glass	2 x 1 L	spr	102.55	205.10
9863-02	Glass	1 L	spr	123.10	
		6 x 1 L	spr	82.05	492.30

CH_3OH FW: 32.04

Appearance ..... Passes Test
Gradient Elution Test (a.u.):
254 nm ..... max. 0.01
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission ..... max. 0.3
at Emission Maximum for Impurities ..... max. 1.0
Assay (CH_3OH) ..... min. 99.9%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 1.0 ppm
Water (H_2O) ..... max. 500 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) ..... max. 25 ppb
Largest Response on ESI-Negative Mode
(as 4-Nitrophenol) ..... max. 25 ppb
Trace Impurities (in ppb):
Aluminum (Al) ..... max. 10
Calcium (Ca) ..... max. 20
Chromium (Cr) ..... max. 5
Cobalt (Co) ..... max. 5
Copper (Cu) ..... max. 5
Iron (Fe) ..... max. 5
Lead (Pb) ..... max. 5
Lithium (Li) ..... max. 10
Magnesium (Mg) ..... max. 10
Manganese (Mn) ..... max. 5
Nickel (Ni) ..... max. 5
Potassium (K) ..... max. 10
Sodium (Na) ..... max. 50
Tin (Sn) ..... max. 5
Zinc (Zn) ..... max. 10
Filtered through a 0.1 micron filter.

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methanol
BAKER BIO-ANALYZED Reagent
(methyl alcohol)
For Biotech Applications

9098-13	Glass	4 L	cbs	158.05	
		4 x 4 L	cbs	105.35	421.40

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

CH_3OH FW: 32.04

Assay (CH_3OH) (by GC, corrected for water) ..... min. 99.8%
Ultraviolet Absorbance (1.00-cm cell vs. water):
400-254 nm ..... max. 0.01
225 nm ..... max. 0.15
UV Cut-off, nm ..... max. 205
Acetone ..... max. 0.001%
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0001
Residue after Evaporation ..... max. 2.0 ppm
Water (by KF, coulometric) ..... max. 0.005%
Gradient Elution Test (a.u.):
254 nm ..... max. 0.005
Physical Data (not specifications):
Density, g/mL at 20°C 0.791

CAS: 67-56-1 MERCK INDEX: 14,5957 IMO: 3:1230
FLASH POINT: 12°C

Methanol
ULTRA RESI-ANALYZED
(methyl alcohol)
For Organic Residue Analysis

9263-02	Glass	1 L	chp	65.10	
		6 x 1 L	chp	43.40	260.40
9263-03	Glass	4 L	chp	112.65	
		4 x 4 L	chp	75.10	300.40

CH_3OH FW: 32.04

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) ..... max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) ..... max. 10
Assay (CH_3OH) (by GC, corrected for water) ..... min. 99.8%
Acetone ..... max. 0.001%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 1 ppm
Substances Darkened by H_2SO_4 ..... Passes Test
Titrable Acid (µeq/g) ..... max. 0.3
Titrable Base (µeq/g) ..... max. 0.1
Water (H_2O)(by coulometry) ..... max. 0.08%

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Methanol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

9077-02	Glass	1 L	spr	78.25	
		6 x 1 L	spr	52.15	312.90

CH_3OH FW: 32.04

Assay (CH_3OH) (by GC, corrected for water) .....min. 99.9%
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.1
Water (by KF, coulometric) .....max. 0.08%
Volatile Organic Trace Analysis:
Gas Chromatography with Purge and Trap Concentration (EPA Contract Required Quantitation Limit -CRQL):
Photoionization Detection (PID) Below CRQL .....Passes Test
Electroconductivity Detection (ELCD) Below CRQL .....Passes Test

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Methanol
BAKER
(methyl alcohol)
For Histological Use

9076-01	Poly	500 mL	cso	22.95	
		12 x 500 mL	cso	15.30	183.60
9076-03	Poly	4 L	cso	90.15	
		4 x 4 L	cso	60.10	240.40
9076-07	Lined Steel Dr	20 L	sbk	136.10	

CH_3OH FW: 32.04

Assay (CH_3OH) (by GC) .....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Water (by KF, coulometric) .....max. 0.1%
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.2
Carbonyl Compounds:
Acetaldehyde .....max. 0.001%
Acetone .....max. 0.001%
Formaldehyde .....max. 0.001%
Heavy Metals .....max. 0.5 ppm
Solubility in H_2O .....Passes Test
Substances Darkened by H_2SO_4 .....Passes Test
Substances Reducing $KMnO_4$ .....Passes Test
Copper (Cu) .....max. 0.1
Iron (Fe) .....max. 0.1
Nickel (Ni) .....max. 0.1

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methanol, Absolute
PHOTREX Reagent
(methyl alcohol)
For Spectrophotometry

9069-01	Glass	500 mL	cso	35.70	
		12 x 500 mL	cso	23.80	285.60
9069-03	Glass	4 L	cso	143.65	
		4 x 4 L	cso	95.75	383.00

CH_3OH FW: 32.04

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (CH_3OH) (by GC) .....min. 99.8%
Appearance (Clear, colorless liquid) .....Passes Test
Color (APHA) .....max. 10
Water (by KF, coulometric) .....max. 0.1%
Residue after Evaporation .....max. 0.0005%
Solubility in H_2O .....Passes Test
Carbonyl Compounds:
Acetone .....max. 0.001%
Formaldehyde .....max. 0.001%
Acetaldehyde .....max. 0.001%
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.2
Substances Darkened by H_2SO_4 .....Passes Test
Substances Reducing $KMnO_4$ .....Passes Test
Ultraviolet Absorbance (1.00-cm cell vs. water):
400-280 nm .....max. 0.01
260 nm .....max. 0.04
240 nm .....max. 0.10
230 nm .....max. 0.20
220 nm .....max. 0.40
210 nm .....max. 0.80
205 nm .....max. 1.00

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Methanol, Anhydrous
BAKER ANALYZED ACS Reagent
(methyl alcohol)
For Moisture Titration

9049-02	Glass	1 L	cso	81.60	
		6 x 1 L	cso	54.40	326.40
9049-03	Glass	4 L	cso	137.95	
		4 x 4 L	cso	91.95	367.80
9049-33	Poly Coated	4 L	cso	160.65	
		4 x 4 L	cso	107.10	428.40

CH_3OH FW: 32.04

Exceeds ACS Specifications
Assay (CH_3OH) (by GC, corrected for water) .....min. 99.8%
Substances Darkened by H_2SO_4 .....Passes Test
Substances Reducing Permanganate .....Passes Test
Solubility in H_2O .....Passes Test
Color (APHA) .....max. 10
Water (H_2O) .....max. 0.007%
Residue after Evaporation .....max. 0.001%
Carbonyl Compounds:
Acetaldehyde .....max. 0.001%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetone .....max. 0.001%
Formaldehyde .....max. 0.001%
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.2
Product Information (not specifications):
Appearance (Clear, colorless liquid)

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

Methanol, Low Water
BakerDRY
(methyl alcohol)

9097-10	Septum-Seal Cap	100 mL	lws	39.45	
		6 x 100 mL	lws	31.55	189.30
9097-12	Septum-Seal Cap	1 L	lws	62.40	
		6 x 1 L	lws	49.90	299.40

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

CH_3OH FW: 32.04

Meets ACS Specifications
Assay (CH_3OH) (by GC, corrected for water) .....min. 99.8%
Appearance .....Passes Test
Carbonyl Compounds:
Acetaldehyde .....max. 0.001%
Acetone .....max. 0.001%
Formaldehyde .....max. 0.001%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Solubility in H_2O .....Passes Test
Substances Darkened by H_2SO_4 .....Passes Test
Substances Reducing Permanganate .....Passes Test
Titrable Acid (µeq/g) .....max. 0.3
Titrable Base (µeq/g) .....max. 0.2
Water (by KF, coulometric) .....max. 30 ppm

CAS: 67-56-1 DENSITY: 1 L = .7866 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 12°C

60% Methanol and Water
BAKER ANALYZED Reagent
Premixed Methanol (60%) Solution

9146-03	Cubitainer	4 x 4 L	cso	Inquire
9146-07	Cubitainer	20 L	sbk	Inquire

CH_3OH FW: 32.04

Assay (CH_3OH) 58-62%
Fluorescence .....Passes Test

CAS: 67-56-1 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 11°C

80% Methanol and Water
BAKER ANALYZED Reagent
Premixed Methanol (80%) Solution

9148-03	Cubitainer	4 x 4 L	cso	Inquire
9148-07	Cubitainer	20 L	bks	Inquire

CH_3OH FW: 32.04

Assay (CH_3OH) 78-82%
Fluorescence .....Passes Test

CAS: 67-56-1 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,5957
IMO: 3:1230 FLASH POINT: 11°C

Methenamine
See Hexamethylenetetramine

DL-Methionine
BAKER ANALYZED Biochemical Reagent

P725-07	Poly	500 g	bio	161.95

$CH_3SCH_2CH_2CH(NH_2)COOH$ FW: 149.21

Assay ($C_5H_{11}NO_2S$) (by non-aqueous titration) .....min. 99.0%
Homogeneity by TLC .....No Extraneous Spots
Ash (sulfated) .....max. 0.1%
Loss on Drying at 105°C .....max. 0.3%
Water-Insoluble Matter .....Passes Test
Arsenic (As) .....max. 0.0002%
Heavy Metals (as Pb) .....max. 0.002%
Iron (Fe) .....max. 0.003%

CAS: 59-51-8 MERCK INDEX: 14,5975

L-Methionine, USP
cGMP
Multi-Compendial

2085-05	Poly	100 g	bio	94.95
2085-06	Poly	1 kg	bio	498.10

$C_5H_{11}NO_2S$ FW: 149.21

Meets USP Requirements
Assay ($C_5H_{11}NO_2S$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Specific Rotation $[\alpha]_D^{25}$ .....+22.4 - +24.7 °
pH 5.6-6.1
Loss on Drying at 105°C .....max. 0.3%
Residue on Ignition .....max. 0.4%
Chloride (Cl) .....max. 0.05%
Sulfate (SO_4) .....max. 0.03%
Iron (Fe) .....max. 0.003%
Chromatographic Purity:
Individual Impurities .....max. 0.5%
Total Impurities .....max. 2.0%
Heavy Metals (as Pb) .....max. 0.0015%
Meets FCC Requirements
Assay ($C_5H_{11}NO_2S$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Lead (Pb) .....max 5 mg/kg
Loss on Drying at 105°C .....max. 0.5%
Residue on Ignition .....max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ .....+21.0 - +25.0 °

Methods Development Kit

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_5H_{11}NO_2S$) (dried basis) 99.0-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Appearance of Solution .....Passes Test
pH 5.5-6.5
Specific Rotation $[\alpha]_D^{20}$.....+22.5 - +24.0 °
Ninhydrin-Positive Substances .....Passes Test
Chloride (Cl) .....max. 200 ppm
Sulfate (SO_4) .....max. 300 ppm
Ammonium (NH_4) .....max. 200 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Iron (Fe) .....max. 10 ppm
Loss on Drying at 105°C .....max. 0.5%
Ash (sulfated) .....max. 0.1%

Meets JP Chemical Specifications

Assay ($C_5H_{11}NO_2S$) (dried basis) 98.5-101.0%
Identification .....Passes Test
Optical Rotation .....+21.0 - +25.0 °
pH 5.2-6.2
Clarity and Color of Solution .....Passes Test
Chloride (Cl) .....max. 0.021%
Sulfate (SO_4) .....max. 0.028%
Ammonium (NH_4) .....max. 0.02%
Heavy Metals (as Pb) .....max. 20 ppm
Arsenic (As) .....max. 2 ppm
Related Substances .....Passes Test
Loss on Drying at 105°C .....max. 0.30%
Residue after Ignition .....max. 0.10%
Endotoxin Concentration, IU/mg .....Actual Value Reported

CAS: 63-68-3 MERCK INDEX: 14,5975

Methods Development Kit

See Analytical Chromatography Section, p. 39

2-Methoxyethanol

BAKER ANALYZED ACS Reagent
(ethylene glycol monomethyl ether)

P784-07	Glass	500 mL	cor	94.50	
		12 x 500 mL	cor	63.00	756.00
P784-08	Glass	4 L	cor	589.60	
		4 x 4 L	cor	393.05	1572.20

$CH_3OCH_2CH_2OH$ FW: 76.10

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_3H_8O_2$) (by GC, corrected for water) .....min. 99.3%
Color (APHA) .....max. 10
Titrable Acid (meq/g) .....max. 0.002
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%

CAS: 109-86-4 DENSITY: 1 L = 0.96 kg MERCK INDEX: 14,6038
IMO: 3:1188 FLASH POINT: 39°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Methoxyethanol

See also Ethylene Glycol Monomethyl Ether

o-Methoxyphenol

See Guaiacol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methyl Acetate

BAKER

Q007-07	Glass S/S	500 mL	non	68.55	

CH_3COOCH_3 FW: 74.08

Assay (CH_3COOCH_3) (by GC) .....min. 98%

CAS: 79-20-9 DENSITY: 1 L = 0.9342 kg MERCK INDEX: 14,6008
IMO: 3:1231 FLASH POINT: -10°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Alcohol

See Methanol

p-(Methylamino)phenol Sulfate

BAKER ANALYZED ACS Reagent

Q067-07	Poly	500 g	non	169.40	

$(CH_3NHC_6H_4OH)_2{\cdot}H_2SO_4$ FW: 344.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3NHC_6H_4OH)_2{\cdot}H_2SO_4$) 99.0-101.5%
Residue after Ignition .....max. 0.1%
Suitability for Phosphate Determination .....Passes Test
Solubility in HCl .....Passes Test
o-Aminophenol .....Passes Test
Chloride (Cl) .....Passes Test

CAS: 55-55-0 FLASH POINT: 256°C

Methyl Benzoate

BAKER ANALYZED Reagent

Q139-07	Glass	500 mL	non	71.40	

$C_6H_5COOCH_3$ FW: 136.15

Assay ($C_8H_8O_2$) .....min. 98%

CAS: 93-58-3 DENSITY: 1 L = 1.094 kg MERCK INDEX: 14,6024
FLASH POINT: 83°C

2-Methylbutane

BAKER
(iso-pentane)

Q223-07	Al SAFETAINER	500 mL	non	64.90	
Q223-08	Al SAFETAINER	4 L	non	183.80	
Q223-01	Steel Pail	20 L	sbo	644.85	

$CH_3CH_2CH(CH_3)_2$ FW: 72.15

Assay .....min. 99.0%
Store at or below 68°F (20°C).

CAS: 78-78-4 DENSITY: 1 L = 0.62 kg IMO: 3:1265

Solvent Spill Cleanup Products available. See pp. 378.

Methyl iso-Butyl Ketone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2-Methyl-2-butanol

See tert-Amyl Alcohol

Methyl tert-Butyl Ether

BAKER ANALYZED ACS Reagent
(tert-Butyl Methyl Ether)

9034-03	Glass	4 L	cso	166.75	
		4 x 4 L	cso	111.15	444.60
9034-07	Steel Pail	20 L	sbk	405.65	
9034-09	Steel Drum	335 lb	bul	Inquire	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$(CH_3)_3COCH_3$ FW: 88.15

Meets ACS Specifications

Assay ($C_5H_{12}O$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Peroxide (as H_2O_2) .....max. 1 ppm
Residue after Evaporation .....max. 0.001%
Water (H_2O) .....max. 0.05%

CAS: 1634-04-4 DENSITY: 1 L = 0.74 kg MERCK INDEX: 14,6032
IMO: 3:2398 FLASH POINT: -27°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl tert-Butyl Ether

ULTRA RESI-ANALYZED
For Organic Residue Analysis

9043-02	Glass	1 L	chp	123.10	
		6 x 1 L	chp	82.05	492.30
9043-03	Glass	4 L	chp	313.05	
		4 x 4 L	chp	208.70	834.80

$(CH_3)_3COCH_3$ FW: 88.15

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 10
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Assay ($(CH_3)_3COCH_3$) (by GC, corrected for water) .....min. 99.0%
Residue after Evaporation .....max. 2 ppm
Peroxide (as H_2O_2) .....max. 1 ppm
Water (H_2O)(by coulometry) .....max. 0.05%

CAS: 1634-04-4 DENSITY: 1 L = 0.74 kg MERCK INDEX: 14,6032
IMO: 3:2398 FLASH POINT: -27°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl tert-Butyl Ether

HPLC
(tert-Butyl Methyl Ether)
For Use in High Performance Liquid Chromatography

9042-02	Glass	1 L	chp	96.90	
		6 x 1 L	chp	64.60	387.60
9042-03	Glass	4 L	chp	245.05	
		4 x 4 L	chp	163.35	653.40

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$(CH_3)_3COCH_3$ FW: 88.15

Assay ($C_5H_{12}O$) (by GC, corrected for water) .....min. 99.0%
Ultraviolet Absorbance (1.00-cm cell vs. water):
350 nm .....max. 0.01
280 nm .....max. 0.02
254 nm .....max. 0.1
UV Cut-off, nm .....max. 215
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
Peroxide (as H_2O_2) .....max. 1 ppm
Residue after Evaporation .....max. 3 ppm
Water (by KF, coulometric) .....max. 0.05%

CAS: 1634-04-4 DENSITY: 1 L = 0.74 kg MERCK INDEX: 14,6032
IMO: 3:2398 FLASH POINT: -27°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl iso-Butyl Ketone

BAKER ANALYZED ACS Reagent
(4-methyl-2-pentanone)

9322-01	Glass	500 mL	cso	82.05	
		12 x 500 mL	cso	54.70	656.40
9322-03	Glass	4 L	cso	321.70	
		4 x 4 L	cso	214.45	857.80

$CH_3COCH_2CH(CH_3)_2$ FW: 100.16

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CH_3COCH_2CH(CH_3)_2$) (by GC, corrected for water) .....min. 98.5%
Color (APHA) .....max. 15
Residue after Evaporation .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.002
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Product Information (not specifications):
Appearance (Clear, colorless liquid)
Boiling Point (typical) .....115.5 °C.
Density (g/mL) at 25°C (typical) 0.796

CAS: 108-10-1 MERCK INDEX: 14,5207 IMO: 3:1245
FLASH POINT: 14°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl iso-Butyl Ketone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methyl iso-Butyl Ketone
ULTREX Ultrapure Reagent
(4-methyl-2-pentanone)
Suitable for Trace Metal Analysis

4855-06	Glass	1 L	spr	271.05	

$CH_3COCH_2CH(CH_3)_2$ FW: 100.16

Certificate Provided Reports Actual Lot Analysis
Assay ($CH_3COCH_2CH(CH_3)_2$) (by GC, corrected for water) . . .99.0-100.0%
Density (g/mL) at 25°C .....Actual Value Reported
Titrable Acid (µeq/g) .....Actual Value Reported
Residue after Evaporation .....Information Only
Water (H_2O)(by Karl Fischer titrn) .....Information Only
Metallic Impurities (in ppb)(ng/g):
Bismuth (Bi) .....max. 1
Cadmium (Cd) .....max. 1
Chromium (Cr) .....max. 2
Cobalt (Co) .....max. 2
Copper (Cu) .....max. 1
Gallium (Ga) .....max. 1
Iron (Fe) .....max. 2
Lead (Pb) .....max. 1
Manganese (Mn) .....max. 1
Mercury (Hg) .....max. 5
Molybdenum (Mo) .....max. 1
Nickel (Ni) .....max. 1
Silver (Ag) .....max. 1
Thallium (Tl) .....max. 1
Tin (Sn) .....max. 1
Vanadium (V) .....max. 1
Zinc (Zn) .....max. 10
Zirconium (Zr) .....max. 1
Ultraviolet Absorbance (1.00-cm cell vs. water) (curve smooth throughout stated range with no extraneous impurity peaks):
400 nm .....Actual Value Reported
380 nm .....Actual Value Reported
360 nm .....Actual Value Reported
350 nm .....Actual Value Reported
340 nm .....Actual Value Reported
335 nm .....Actual Value Reported
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:

2.5-2.9	9.2-9.9
3.6-5.5	10.9-11.7
6.2-6.4	12.0-15.0

CAS: 108-10-1 DENSITY: 1 L = 0.80 kg MERCK INDEX: 14,5207
IMO: 3:1245 FLASH POINT: 14°C

Solvent Spill Cleanup Products available. See pp. 378.

For more information on products for drug discovery, see pages 58-63.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methyl iso-Butyl Ketone
PHOTREX Reagent
(4-methyl-2-pentanone)
For Spectrophotometry

9212-01	Glass	500 mL	cso	102.90	
		12 x 500 mL	cso	68.60	823.20
9212-03	Glass	4 L	cso	398.55	
		4 x 4 L	cso	265.70	1062.80

$CH_3COCH_2CH(CH_3)_2$ FW: 100.16

Meets ACS Specifications
Assay ($CH_3COCH_2CH(CH_3)_2$) (by GC, corrected for water) .....min. 98.5%
Appearance .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Titrable Acid (meq/g) .....max. 0.002
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
335 nm .....max. 1.00
340 nm .....max. 0.50
350 nm .....max. 0.25
360 nm .....max. 0.15
380 nm .....max. 0.02
400 nm .....max. 0.01
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:

2.5-3.2	9.2-9.9
3.6-5.5	10.9-11.7
6.2-6.4	12.0-15.0

Product Information (not specifications):
Boiling Point (typical) .....115.5 °C.
Density (g/mL) at 25°C (typical) 0.796
CAS: 108-10-1 MERCK INDEX: 14,5207 IMO: 3:1245
FLASH POINT: 14°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl CELLOSOLVE
See 2-Methoxyethanol and Ethylene Glycol Monomethyl Ether

Methyl Cyanide
See under Acetonitrile

Methylcyclohexane
BAKER ANALYZED Reagent

9317-01	Glass	500 mL	cso	478.95	
		12 x 500 mL	cso	319.30	3831.60

C_7H_{14} FW: 98.19

Assay (C_7H_{14}) (by GC) .....min. 99%
Residue after Evaporation .....max. 0.001%
Identification (by IR) .....Passes Test
Product Information (not specifications):
Boiling Point (typical) .....101.0 °C.
Density (g/mL) at 25°C (typical) 0.765
CAS: 108-87-2 IMO: 3:2296 FLASH POINT: -3.9°C

Solvent Spill Cleanup Products available. See pp. 378.

4-Methyl-1,3-dioxolan-2-one
See Propylene Carbonate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N,N'-Methylenebisacrylamide
ULTRAPURE BIOREAGENT
(Bisacrylamide)
Purified for Electrophoresis

4031-00	Glass	25 g	upr	40.65	
4031-04	Glass	100 g	upr	95.65	

$CH_2(NHCOCH{:}CH_2)_2$ FW: 154.20

Assay ($CH_2(NHCOCH{:}CH_2)_2$) .....min. 99.5%
pH of 1% Aqueous Solution at 25°C .....min. 5.3
Acrylic Acid (CH_2:CHCOOH) .....max. 0.01%
Absorbance of a 1% Solution at 290 nm
(1-cm path vs water)(au) .....max. 0.2
Conductivity of 2% Solution, µmho .....max. 10
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected

CAS: 110-26-9

Methylene Blue
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology, Bacteriology & Compounding of Blood Stains
(C.I. 52015)

Q475-03	Glass	25 g	non	60.05	

$C_{16}H_{18}ClN_3S{\cdot}3H_2O$ FW: 373.91

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum (0.6 mg/200 mL
in H_2O, 1-cm path) .....Actual Value Reported
Biological Test .....Passes Test

CAS: 7220-79-3 MERCK INDEX: 14,6060

Methylene Blue
BAKER ANALYZED Reagent
(3,7-bis(dimethylamino)phenazathionium chloride)
(C.I. 52015)

Q473-03	Glass	25 g	bio	62.15	
Q473-05	Glass	100 g	bio	126.30	
Q473-07	Glass	500 g	bio	315.05	

$C_{16}H_{18}ClN_3S{\cdot}3H_2O$ FW: 373.91

Solubility .....Passes Test
Identification .....Passes Test
Loss on Drying 8.0-18.0%
Residue after Ignition .....max. 1.2%
Copper (Cu) .....max. 0.02%
Zinc (Zn) .....Passes Test
Assay ($C_{16}H_{18}ClN_3S$) (dried basis) 98.0-103.0%
Trace Impurities (in ppm):
Arsenic (As) .....max. 8

CAS: 7220-79-3 MERCK INDEX: 14,6060

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methylene Chloride
BAKER ANALYZED ACS Reagent
(dichloromethane)

9324-01	Glass	500 mL	cso	59.55	
		12 x 500 mL	cso	39.70	476.40
9324-22	Al SAFETAINER	1 L	cso	136.15	
		6 x 1 L	cso	90.75	544.50
9324-03	Glass	4 L	cso	268.35	
		4 x 4 L	cso	178.90	715.60
9324-05	Al SAFETAINER	4 L	cso	310.90	
		4 x 4 L	cso	207.25	829.00
9324-33	Poly Coated	4 L	cso	305.95	
		4 x 4 L	cso	203.95	815.80
9324-07	Steel Pail	20 L	sbk	494.60	
9324-R	Steel Drum	600 lb	bul	Inquire	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

CH_2Cl_2 FW: 84.93

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (CH_2Cl_2) (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.002%
Titrable Acid (µeq/g) .....max. 0.3
Free Halogens .....Passes Test
Water (by KF, coulometric) .....max. 0.02%
Product Information (not specifications):
Appearance (Clear, colorless liquid)
Boiling Point (typical) .....39.5 °C.
Density (g/mL) at 25°C (typical) 1.318

CAS: 75-09-2 MERCK INDEX: 14,6063 IMO: 6.1:1593

Methylene Chloride
HPLC
For Use in Liquid Chromatography

9315-02	Glass	1 L	chp	67.60	
		6 x 1 L	chp	45.05	270.30
9315-03	Glass	4 L	chp	144.70	
		4 x 4 L	chp	96.45	385.80
9315-33	Poly Coated	4 L	chp	159.45	
		4 x 4 L	chp	106.30	425.20

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

CH_2Cl_2 FW: 84.93

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-254 nm .....max. 0.01
UV Cut-off, nm .....max. 233
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....Actual Value Reported
at Emission Maximum for Impurities .....Actual Value Reported
Assay (by GC, corrected for water, exclusive of preservative) ....min. 99.8%
Chloride (Cl) .....max. 10 ppm
Preservative (cyclohexene) .....min. 50 ppm

Methylene Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Residue after Evaporation .....max. 2 ppm
Titrable Acid (µeq/g) .....max. 0.3
Water (by KF, coulometric) .....max. 0.02%

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg MERCK INDEX: 14,6063
IMO: 6.1:1593

Methylene Chloride
BAKER BIO-ANALYZED Reagent (dichloromethane) For Biotech Applications

9348-13	Glass	4 L	cbs	154.50	
		4 x 4 L	cbs	103.00	412.00

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

CH_2Cl_2 FW: 84.93

Assay (by GC, corrected for water, exclusive of preservative) ....min. 99.8%
Ultraviolet Absorbance (1.00-cm cell vs. water):
254 nm .....max. 0.01
280 nm .....max. 0.01
350 nm .....max. 0.01
UV Cut-off, nm .....max. 233
Residue after Evaporation .....max. 2 ppm
Titrable Acid (meq/g) .....max. 0.0003
Chloride (Cl) .....max. 10 ppm
Water (by KF, coulometric) .....max. 0.010%
Preservative (cyclohexene) .....min. 50 ppm

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg MERCK INDEX: 14,6063
IMO: 6.1:1593

Methylene Chloride
ULTRA RESI-ANALYZED (dichloromethane) For Organic Residue Analysis

9264-02	Glass	1 L	chp	76.50	
		6 x 1 L	chp	51.00	306.00
9264-03	Glass	4 L	chp	155.10	
		4 x 4 L	chp	103.40	413.60

CH_2Cl_2 FW: 84.93

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.3
Chloride (Cl) .....max. 10 ppm
Water (by KF, coulometric) .....max. 0.02%

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg MERCK INDEX: 14,6063
IMO: 6.1:1593

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methylene Chloride
PHOTREX Reagent (dichloromethane) For Spectrophotometry

9329-01	Glass	500 mL	cso	96.55	
		12 x 500 mL	cso	64.35	772.20
9329-03	Glass	4 L	cso	334.05	
		4 x 4 L	cso	222.70	890.80

CH_2Cl_2 FW: 84.93

Meets ACS Specifications
Assay (CH_2Cl_2) (by GC, corrected for water) .....min. 99.5%
Appearance .....Passes Test
Color (APHA) .....max. 10
Free Halogens .....Passes Test
Residue after Evaporation .....max. 0.001%
Titrable Acid (µeq/g) .....max. 0.2
Ultraviolet Absorbance (1.00-cm cell vs. water):
340-400 nm .....max. 0.01
260 nm .....max. 0.04
250 nm .....max. 0.10
240 nm .....max. 0.35
235 nm .....max. 1.00
Water (by KF, coulometric) .....max. 0.02%
Product Information (not specifications):
Boiling Point (typical) .....39.5 °C.
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:
2.5-3.2 8.1-11.1
3.4-6.8 11.3-12.6
7.1-7.7

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg MERCK INDEX: 14,6063
IMO: 6.1:1593

Methylene Chloride
BAKER (dichloromethane)

Q480-09	Glass	4 L	non	240.50	

CH_2Cl_2 FW: 84.93

Assay (CH_2Cl_2) (by GC) .....min. 98.0%

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg MERCK INDEX: 14,6063
IMO: 6.1:1593

See Environmental Testing section for more information on pages 88-90.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methylene Chloride, Low Water
BakerDRY
(dichloromethane)

9295-10	Septum-Seal Cap	100 mL	lws	44.20	
		6 x 100 mL	lws	35.35	212.10
9295-12	Septum-Seal Cap	1 L	lws	70.40	
		6 x 1 L	lws	56.30	337.80

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

CH_2Cl_2 FW: 84.93

Meets ACS Specifications

Assay (by GC, corrected for water, exclusive of preservative) ....min. 99.5%
Appearance .....Passes Test
Color (APHA) .....max. 10
Free Halogens .....Passes Test
Preservative (cyclohexene) .....Information Only
Residue after Evaporation .....max. 2 ppm
Titrable Acid (µeq/g) .....max. 0.2
Water (by KF, coulometric) .....max. 60 ppm

Product Information (not specifications):

Boiling Point (typical) .....39.5°C.
Density (g/mL) at 25°C (typical) 1.318

CAS: 75-09-2 MERCK INDEX: 14,6063 IMO: 6.1:1593

Methylene Iodide
See Diiodomethane

Methyl Ethyl Ketone
BAKER ANALYZED ACS Reagent
(2-butanone)

9319-01	Glass	500 mL	cso	64.20	
		12 x 500 mL	cso	42.80	513.60
9319-22	Al SAFETAINER	1 L	cso	136.45	
		6 x 1 L	cso	90.95	545.70
9319-03	Glass	4 L	cso	241.00	
		4 x 4 L	cso	160.65	642.60
9319-05	Al SAFETAINER	4 L	cso	277.15	
		4 x 4 L	cso	184.75	739.00
9319-33	Poly Coated	4 L	cso	249.25	
		4 x 4 L	cso	166.15	664.60
9319-07	Steel Pail	20 L	sbk	436.10	
9319-R	Steel Drum	366 lb	bul	Inquire	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$CH_3COCH_2CH_3$ FW: 72.11

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CH_3COCH_2CH_3$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 15
Residue after Evaporation .....max. 0.001%
Titrable Acid (µeq/g) .....max. 0.5
Water (by KF, volumetric) .....max. 0.05%

CAS: 78-93-3 DENSITY: 1 L = 0.81 kg MERCK INDEX: 14,6072
IMO: 3:1193 FLASH POINT: -9°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Ethyl Ketone
HPLC
For Use in Liquid Chromatography and Spectrophotometry

9214-03	Glass	4 L	chp	169.95	
		4 x 4 L	chp	113.30	453.20

$CH_3COCH_2CH_3$ FW: 72.11

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-350 nm .....max. 0.01
340 nm .....max. 0.07
335 nm .....max. 0.40
UV Cut-off, nm .....max. 330
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.5
at Emission Maximum for Impurities .....max. 1.0
Assay ($CH_3COCH_2CH_3$) (by GC) .....min. 99.5%
Residue after Evaporation .....max. 3 ppm
Water (by KF, volumetric) .....max. 0.03%

Product Information (not specifications):
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:

2.0-2.8	9.4-9.8
2.9-3.2	11.0-12.8
3.6-5.5	13.5-15.0

CAS: 78-93-3 DENSITY: 1 L = 0.81 kg MERCK INDEX: 14,6072
IMO: 3:1193 FLASH POINT: -9°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl p-Hydroxybenzoate
BAKER

Q618-07	Poly	500 g	non	134.25	

$HOC_6H_4COOCH_3$ FW: 152.15

Melting Point .....126-128 °C.

CAS: 99-76-3 MERCK INDEX: 14,6107

Methyl Iodide
BAKER ANALYZED Reagent
(iodomethane)

2692-04		230 mL	non	257.55	

CH_3I FW: 141.94

Assay (CH_3I) .....min. 98.5%
Residue after Evaporation .....max. 0.01%
Reaction .....Passes Test
Boiling Range: .....41.5-43.0 °C.
Acidity .....Passes Test

CAS: 74-88-4 DENSITY: 1 L = 2.28 kg MERCK INDEX: 14,6087
IMO: 6.1:2644

Methyl Isobutyl Ketone
See Methyl iso-Butyl Ketone

Methyl Methacrylate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methyl Methacrylate
BAKER
(stabilized with hydroquinone)

Q690-09	Glass	4 L	non	171.45	

CH_2:$C(CH_3)COOCH_3$ FW: 100.12

Assay (CH_2:$C(CH_3)COOCH_3$) (by GC) .....min. 99%

CAS: 80-62-6 DENSITY: 1 L = 0.944 kg MERCK INDEX: 14,5941
IMO: 3:1247 FLASH POINT: 10°C

Solvent Spill Cleanup Products available. See pp. 378.

4-Methylmorpholine
BAKER

Q708-07	Glass	500 g	org	103.10	

$C_5H_{11}NO$ FW: 101.15

Assay ($C_5H_{11}NO$) (by GC) .....min. 99%
Appearance .....Passes Test

CAS: 109-02-4 DENSITY: 1 L = 0.92 kg MERCK INDEX: 14,6277
IMO: 3:2535 FLASH POINT: 24°C

Methyl Orange, Sodium Salt, Powder
BAKER ANALYZED ACS Reagent
(p-[[p-(dimethylamino)phenyl]azo]benzenesulfonic acid, sodium salt)
(C.I. 13025)

2694-00	Glass	30 g	bio	60.00	
2694-04	Glass	125 g	bio	101.95	

4-$(CH_3)_2NC_6H_4N$:NC_6H_4-4-SO_3Na FW: 327.34

Meets ACS Specifications
Clarity of Solution .....Passes Test
Visual Transition Interval:
pH .....(Red) 3.2
pH .....(Yellow) 4.4

CAS: 547-58-0 MERCK INDEX: 14,6105 IMO: 6.1:2811

Methyl Orange, T.S.
BAKER ANALYZED Reagent

5925-04	Glass	100 mL	sol	16.45	

Visual Transition Interval:
pH .....(Red) 3.2
pH .....(Yellow) 4.4
Product Information (not specifications):
Appearance (Clear, orange solution)
DENSITY: 1 L = 1.0 kg

4-Methyl-2-pentanone
See Methyl iso-Butyl Ketone

2-Methyl-1-propanol
See Isobutyl Alcohol

2-Methyl-2-propanol
See tert-Butyl Alcohol

2-Methyl-2-pyrrolidinone
See NMP

Methyl Red Hydrochloride, Crystal
BAKER ANALYZED ACS Reagent
(o-[[p-(dimethylamino)phenyl]azo] benzoic acid hydrochloride)
(C.I. 13020)

2696-00	Glass	30 g	bio	104.70	

$(CH_3)_2NC_6H_4N$:NC_6H_4COOH·HCl FW: 305.77

Meets ACS Specifications
Clarity of Alcohol Solution .....Passes Test
Visual Transition Interval:
pH .....(Pink) 4.2
pH .....(Yellow) 6.2

CAS: 63451-28-5 MERCK INDEX: 14,6119

Methyl Red, Sodium Salt
BAKER ANALYZED ACS Reagent
(o-[[p-(dimethylamino)phenyl]azo]benzoic acid, sodium salt)
(C.I. 13020)

R086-02	Glass	10 g	bio	119.40	
R086-03	Glass	25 g	bio	271.25	

$(CH_3)_2NC_6H_4N$:NC_6H_4COONa FW: 291.29

Meets ACS Specifications
Clarity of Alcohol Solution .....Passes Test
Clarity of Aqueous Solution .....Passes Test
Visual Transition Interval:
pH .....(Pink) 4.2
pH .....(Yellow) 6.2

CAS: 845-10-3 MERCK INDEX: 14,6119

Methyl Red, T.S.
BAKER ANALYZED Reagent

5926-04	Glass	100 mL	sol	18.70	
5926-01	Glass	500 mL	sol	27.20	

Visual Transition Interval:
pH .....(Red) 4.2
pH .....(Yellow) 6.2
Product Information (not specifications):
Appearance (Clear, red solution)

DENSITY: 1 L = 0.83 kg IMO: 3:1170 FLASH POINT: 13°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methyl Salicylate, Synthetic
cGMP
NF, FCC

2700-01	Glass	500 mL	rss	108.15	
		12 x 500 mL	rss	72.10	865.20
2700-03	Glass	4 L	rss	437.05	
		4 x 4 L	rss	291.35	1165.40

$2\text{-}HOC_6H_4COOCH_3$ FW: 152.15

Meets NF & FCC Requirements

Assay ($C_8H_8O_3$) 98.0-100.5%
Identification ..... Passes Test
Solubility in 70% Alcohol ..... Passes Test
Specific Gravity at 25°/25°C 1.180-1.185
Acid Value ..... max. 1.0
Angular Rotation ..... Passes Test
Refractive Index, η^{20}_D 1.535-1.538
Heavy Metals (as Pb) ..... max. 20 ppm

CAS: 119-36-8 DENSITY: 1 L = 1.180-1.185 kg MERCK INDEX: 14,6120 FLASH POINT: 96°C

Methyl Sulfoxide
See Dimethyl Sulfoxide

Methylthymol Blue, Sodium Salt
BAKER

R164-01	Glass	5 g	bio	184.85	

$C_{37}H_{43}N_2O_{13}NaS$ FW: 778.82

Sensitivity as Metal Indicator ..... Passes Test
CAS: 1945-77-3

Methyl Violet 2B, Powder
BAKER ANALYZED Reagent
(C.I. 42535)

R275-03	Glass	25 g	bio	79.25	

$[(CH_3)_2NC_6H_4]_2C{:}C_6H_4{:}NCH_3{\cdot}HCl$ FW: 393.96

Insoluble Matter ..... Passes Test
Visual Transition Interval:
pH ..... (Blue) 1.5
pH ..... (Violet) 3.2
CAS: 8004-87-3

MIBK
See under Methyl iso-Butyl Ketone

Mineral Oil
cGMP
USP
(white mineral oil)
Contains Vitamin E as a stablizer in the range of 10-100 ppm

2705-01	Glass	500 mL	rss	58.95	
		12 x 500 mL	rss	39.30	471.60

Meets USP Requirements

Acidity ..... Passes Test
Limit of Polycyclic Aromatic Hydrocarbons ..... Passes Test
Limit of Sulfur Compounds ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Gravity at 25°/25°C 0.845-0.905
Viscosity at 40°C, cSt 34.5-150.0
Readily Carbonizable Substances ..... Passes Test
Solid Paraffin ..... Passes Test

CAS: 8012-95-1 MERCK INDEX: 14,7186 FLASH POINT: 135°C

Mineral Spirits
See Stoddard Solvent

Mixed Element Standards for ICP
See Analytical Standards Section, p. 94-98

Molecular Sieve, Activated, Type 3A (8-12 Mesh)
BAKER ANALYZED Reagent

2710-01	Glass	500 g	spr	89.45
2710-05	Poly Coated	2.5 kg	spr	334.50

Loss on Drying at 150°C ..... max. 5%
Mesh:
On U.S. No. 8 Sieve ..... max. 20%
Thru U.S. No. 12 Sieve ..... max. 20%
MERCK INDEX: 14,2340

Molecular Sieve, Activated, Type 4A (8-12 Mesh)
BAKER ANALYZED Reagent

2708-01	Glass	500 g	spr	85.05
2708-05	Poly Coated	2.5 kg	spr	324.35

Loss on Drying at 150°C ..... max. 5%
Mesh:
On U.S. No. 8 Sieve ..... max. 20%
Thru U.S. No. 12 Sieve ..... max. 20%
MERCK INDEX: 14,2340

Molecular Sieve

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Molecular Sieve, Activated, Type 5A (8-12 Mesh)
BAKER ANALYZED Reagent

2709-03	Poly	12 x 250 g	spr	60.45	725.40
2709-01	Glass	500 g	spr	70.10	
2709-05	Poly Coated	2.5 kg	spr	211.10	

Loss on Drying at 150°C .....max. 5%
Mesh:
On U.S. No. 12 Sieve .....min. 80%
Thru U.S. No. 20 Sieve .....max. 1%

MERCK INDEX: 14,2340

Molybdenum, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Molybdenum, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Mo metal in 5% HNO_3 and a trace of HF)
Plasma Standard

5737-04		100 mL	spr	112.60	

Mo AW: 95.94

IMO: 8:2922

Molybdenum, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Mo metal in 5% HNO_3 and a trace of HF)
Plasma Standard

5769-04		100 mL	spr	72.00	

Mo AW: 95.94

IMO: 8:2922

Molybdenum, 1000 µg/mL
BAKER INSTRA-ANALYZED Reagent
(Mo metal in 5% HNO_3/trace HF)

6460-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Mo AW: 95.94

IMO: 8:2922

Molybdenum(VI) Oxide
See Molybdenum Trioxide

Molybdenum Trioxide, Powder
BAKER ANALYZED ACS Reagent
(molybdenum(VI) oxide)

0208-01	Poly	500 g	spr	259.85	

MoO_3 FW: 143.94

Meets ACS Specifications
Assay (MoO_3) .....min. 99.5%
Insoluble in Dilute NH_4OH .....max. 0.01%
Chloride (Cl) .....max. 0.002%
Nitrate (NO_3) .....Passes Test
Arsenate, Phosphate and Silicate (as SiO_2) .....max. 0.001%
Phosphate (PO_4) .....max. 5 ppm
Sulfate (SO_4) .....max. 0.02%
Ammonium (NH_4) .....max. 0.002%
Heavy Metals (as Pb) .....max. 0.005%

CAS: 1313-27-5 MERCK INDEX: 14,6239

Molybdic Acid, 85% Powder
BAKER ANALYZED ACS Reagent
Consists largely of Ammonium Molybdate

0206-01	Poly	500 g	spr	173.10	
0206-05	Poly	2.5 kg	spr	788.75	

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (as MoO_3) .....min. 85.0%
Insoluble in Dilute NH_4OH .....max. 0.01%
Chloride (Cl) .....max. 0.002%
Arsenate, Phosphate and Silicate (as SiO_2) .....max. 0.001%
Sulfate (SO_4) .....max. 0.2%
Heavy Metals (as Pb) .....max. 0.003%
Trace Impurities (in ppm):
Phosphate (PO_4) .....max. 5

CAS: 7782-91-4 MERCK INDEX: 14,6240

Molybdic Acid Anhydride
See Molybdenum Trioxide

Molybdophosphoric Acid
See Phosphomolybdic Acid

Monobasic Phosphates
See under Potassium or Sodium

Monochloroacetic Acid
See Chloroacetic Acid

Monochlorobenzene
See Chlorobenzene

Monoclonal Antibody HPLC Columns
See Analytical Chromatography Section, p. 22-45

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Monoethanolamine
BAKER ANALYZED ACS Reagent
(2-aminoethanol)

9314-01	Glass	500 mL	cso	173.05	
		12 x 500 mL	cso	115.35	1384.20
9314-03	Glass	4 L	cso	311.25	
		4 x 4 L	cso	207.50	830.00

$HOCH_2CH_2NH_2$ FW: 61.08

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($HOCH_2CH_2NH_2$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 15
Water (H_2O)(by coulometry) .....max. 0.30%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.012
CAS: 141-43-5 MERCK INDEX: 14,3727 IMO: 8:2491
FLASH POINT: 86°C

Monoglyme
See 1,2-Dimethoxyethane

Monosodium Glutamate
BAKER ANALYZED Biochemical Reagent

2091-07	Poly Pail	12 kg	bks	Inquire

$C_5H_8NNaO_4 \cdot H_2O$ FW: 187.13

Assay 99.0-100.5%
Clarity and Color of Solution .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Specific Rotation .....+24.8 - +25.3 °
pH (1 in 20) 6.7-7.2
Loss on Drying .....max. 0.5%
Chloride (Cl) .....max. 0.25%
Lead (Pb) .....max. 10 ppm
Heavy Metals (as Pb) .....max. 0.002%
CAS: 6106-04-3

MOPS
ULTRAPURE BIOREAGENT
(3-[N-morpholino]-propanesulfonic acid)

4004-00	Poly	100 g	upr	66.10	
4004-01	Poly	500 g	upr	242.55	
4004-05	Poly Pail	2.5 kg	upr	1179.35	
4004-09	Poly Drum	50 kg	bul	Inquire	

$C_7H_{15}NO_4S$ FW: 209.26

Assay ($C_7H_{15}NO_4S$) (dried basis) .....min. 99%
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Appearance (powder to crystalline powder) .....Passes Test
pH of 1% Solution at 25°C 2.5-4.5
Solution (10%) in Water .....Passes Test
Loss on Drying .....max. 1%
Absorbance of a 0.1M Solution (1-cm path vs water) at:
260 nm .....max. 0.02
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5
Product Information (not specifications):
pK_a at 20°C 7.20
CAS: 1132-61-2 MERCK INDEX: 14,6265 FLASH POINT: 116°C

MOPS
Purified
Suitable for Use in Biopharmaceutical Manufacturing Applications

4810-02	Poly	1 kg	bks	Inquire
4810-04	Poly Pail	5 kg	bks	Inquire
4810-06	Poly Pail	10 kg	bks	Inquire
4810-08		25 kg	bul	Inquire
4810-09		50 kg	bul	Inquire

$C_7H_{15}NO_4S$ FW: 209.26

Assay ($C_7H_{15}NO_4S$) (dried basis) .....min. 99%
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Appearance .....Passes Test
pH of 1% Solution at 25°C 2.5-4.5
Solution (10%) in Water .....Passes Test
Loss on Drying .....max. 1%
Absorbance of a 0.1M Solution (1-cm path vs water) at:
260 nm .....max. 0.02
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5
CAS: 1132-61-2 MERCK INDEX: 14,6265 FLASH POINT: 116°C

MOPS, Sodium Salt
ULTRAPURE BIOREAGENT
(3-(4-morpholine)propanesulfonic acid, sodium salt)

4163-00	Poly	25 g	upr	42.00
4163-01	Poly	100 g	upr	63.70
4163-07	Poly Pail	12 kg	bks	Inquire

$C_7H_{14}NNaO_4S$ FW: 231.25

Assay ($C_7H_{14}NNaO_4S$) (dried basis) .....min. 99.0%
Appearance .....Passes Test
Solubility .....Passes Test
pH of 0.1M Solution at 25°C 10.0-11.0
Absorbance of a 0.1M Solution (1-cm path vs water) at:
260 nm .....max. 0.03
Loss on Drying .....max. 1.0%
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 1.0%
Identification (by IR) .....Passes Test

MOPS

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Product Information (not specifications):
pK_a at 20°C 7.20
CAS: 71119-22-7

MOPS, Sodium Salt

Purified
Suitable for use in biopharmaceutical manufacturing applications

4811-02	Poly	1 kg	bks	Inquire
4811-04	Poly Pail	5 kg	bks	Inquire
4811-06	Poly Pail	10 kg	bks	Inquire
4811-08		25 kg	bul	Inquire
4811-09		50 kg	bul	Inquire

$C_7H_{14}NNaO_4S$ FW: 231.25

Assay ($C_7H_{14}NNaO_4S$) (dried basis) ..... min. 99.0%
Appearance ..... Passes Test
Solubility ..... Passes Test
pH of 0.1M Solution at 25°C 10.0-11.0
Absorbance of a 0.1M Solution (1-cm path vs water) at:
260 nm ..... max. 0.03
Loss on Drying ..... max. 1.0%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 1.0%
Identification (by IR) ..... Passes Test
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
CAS: 71119-22-7

Morpholine

BAKER ANALYZED ACS Reagent

R357-07	Glass	500 g	non	60.90	
R357-09	Glass	3 kg	non	159.70	

C_4H_9NO FW: 87.12

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (C_4H_9NO) ..... min. 99.0%
Boiling Range: ..... 126.0-130.0 °C.
Color (APHA) ..... max. 15
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 0.996
CAS: 110-91-8 MERCK INDEX: 14,6277 IMO: 8:2054
FLASH POINT: 38°C

Solvent Spill Cleanup Products available. See pp. 378.

2-(N-Morpholino)ethanesulfonic Acid, Monohydrate

See MES, Monohydrate, Free Acid, Crystalline

MSDS

See Academic Section, p. 91-93

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

MTBE

See under Methyl tert-Butyl Ether

Multi-element Standards for ICP

See Analytical Standards Section, p. 94-98

Murexide, Monohydrate, Powder

BAKER ANALYZED Reagent
(acid ammonium purpurate)
(C.I. 56085)

R372-01	Glass	5 g	bio	72.45	

$C_8H_8N_6O_6 \cdot H_2O$ FW: 302.22

Sensitivity as Indicator ..... Passes Test
CAS: 6032-80-0 MERCK INDEX: 14,6306

Muriate of Ammonia

See Ammonium Chloride

Naphtha, Precipitation

See Petroleum Ether

Naphthalene Black 12B

See Amido Black 10B

α-Naphthol

See 1-Naphthol

1-Naphthol

BAKER ANALYZED Reagent
(alpha-naphthol)

R528-05	Glass	100 g	non	88.95	
R528-07	Glass	500 g	non	124.40	

$C_{10}H_7OH$ FW: 144.17

Melting Point ..... 93-96 °C.
Assay ..... min. 99%
Appearance ..... Passes Test
Residue after Ignition ..... max. 1%
Water (by KF, volumetric) ..... max. 0.1%
CAS: 90-15-3 MERCK INDEX: 14,6383

2-Naphthol

Purified
(beta-naphthol)

2742-01	Glass	500 g	csa	122.80	
		4 x 500 g	csa	81.85	327.40

$C_{10}H_7OH$ FW: 144.17

Melting Range ..... 120-123 °C.
Residue after Ignition ..... max. 0.1%
CAS: 135-19-3 MERCK INDEX: 14,6384 FLASH POINT: 153°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

p-Naphtholbenzein
Practical

R539-03	Glass	25 g	non	171.30	

4-$HOC_{10}H_6C(C_6H_5)$:$C_{10}H_6$-4-:O FW: 374.44

Sensitivity as Indicator ..... Passes Test

CAS: 145-50-6

Naphthol Blue Black
See Amido Black 10B

N-1-Naphthylethylenediamine Dihydrochloride
BAKER ANALYZED ACS Reagent
(Marshall's Reagent)
For Nitrogen Dioxide Determination (ASTM D-1607)

R701-03	Glass	25 g	non	139.25	
R701-05	Glass	100 g	non	397.15	

$C_{10}H_7NHCH_2CH_2NH_2 \cdot 2HCl$ FW: 259.18

Meets Reagent Specifications for testing USP/NF monographs
Meets ACS Specifications

Sensitivity for Sulfanilamide ..... Passes Test
Solubility ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... max. 5%
Suitability for Nitrogen Dioxide Determination (ASTM D-1607) ..... Passes Test

CAS: 1465-25-4 MERCK INDEX: 14,6409

narc-1 Columns
See Analytical Chromatography Section, p. 22-45

narc-2 Columns
See Analytical Chromatography Section, p. 22-45

Natural Black 1
See Hematoxylin

NEUTRACIT-2 Caustic Neturalizer
See under Spill Cleanup Products

Neutral Red
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Supravital Staining
(C.I. 50040)

R746-03	Glass	25 g	non	60.75	

$C_{15}H_{16}N_4 \cdot HCl$ FW: 288.78

Certified by the Biological Stain Commission
Biological Test ..... Passes Test

CAS: 553-24-2 MERCK INDEX: 14,6488

NEUTRASORB Acid Neutralizer
See under Spill Cleanup Products

New Methylene Blue N, Brecher Formula
BAKER
(5.0 g/L New Methylene Blue N, 16.0 g/L potassium oxalate, monohydrate in water)
For Reticulocyte Staining

R769-01	Poly	500 mL	non	88.65	

Absorbance of a 1:500 Water Solution (10-mm path vs Water):
632 nm 0.45-0.72
285 nm 0.30-0.45
Reticulocyte Staining Characteristics ..... Passes Test

DENSITY: 1 L = 1.10 kg

Niacin
USP, FCC

cGMP

2745-03	Glass	25 g	rnc	65.15	
2745-01	Poly Coated	500 g	rnc	1170.20	

$C_6H_5NO_2$ FW: 123.11

Meets USP & FCC Requirements
Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_6H_5NO_2$) (dried basis) 99.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Melting Range ..... 234-238 °C.
Heavy Metals (as Pb) ..... max. 0.002%
Loss on Drying ..... max. 1.0%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.02%
Ordinary Impurities ..... Passes Test

CAS: 59-67-6 MERCK INDEX: 14,6525

Niacin
See Nicotinic Acid

Nickel, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Nickel, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Ni metal in 5% HNO_3)
Plasma Standard

5738-04		100 mL	spr	112.60	

Ni AW: 58.69

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Nickel

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nickel, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Ni metal in 5% HNO_3)
Plasma Standard

5770-04		100 mL	spr	72.00	

Ni AW: 58.69

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Nickel, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Ni metal in 5% HNO_3)

6461-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Ni AW: 58.69

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Nickel(II) Carbonate
See Nickelous Carbonate

Nickel(II) Chloride, Hexahydrate
See Nickelous Chloride, 6-Hydrate

Nickel Oxide, Black, Powder
BAKER ANALYZED Reagent

2792-05	Poly	2.5 kg	csa	1307.40	
		4 x 2.5 kg	csa	871.60	3486.40
2792-R	Lined Fiber Dr	250 lb	bul	Inquire	

Ni_2O_3 FW: 165.39

Assay (as Ni) ..... min. 77.0%
Nitrogen Compounds (as N) ..... max. 0.01%
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.05%
Cobalt (Co) ..... max. 0.2%
Copper (Cu) ..... max. 0.02%
Iron (Fe) ..... max. 0.005%
Lead (Pb) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Zinc (Zn) ..... max. 0.02%

CAS: 1314-06-3 MERCK INDEX: 14,6516

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nickelous Carbonate, Powder
BAKER ANALYZED Reagent
(nickel(II) carbonate)

2764-01	Poly	500 g	csa	364.15	
		4 x 500 g	csa	242.75	971.00
2764-05	Poly	1.5 kg	csa	893.65	
		4 x 1.5 kg	csa	595.75	2383.00

$NiCO_3$ FW: 118.70

Assay (as Ni) (by EDTA titrn) ..... min. 45.0%
Insoluble in HCl ..... max. 0.01%
Chloride (Cl) ..... max. 0.002%
Nitrogen Compounds (as N) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.01%
Lead (Pb)(by AAS) ..... max. 0.002%
Copper (Cu)(by AAS) ..... max. 0.01%
Cobalt (Co)(by AAS) ..... max. 0.1%
Iron (Fe)(by AAS) ..... max. 0.004%
Zinc (Zn)(by AAS) ..... max. 0.01%

CAS: 3333-67-3

Nickelous Chloride, 6-Hydrate, Crystal
BAKER ANALYZED Reagent
(nickel(II) chloride, hexahydrate)

2768-04	Poly	125 g	csa	74.80	
		4 x 125 g	csa	49.85	199.40
2768-01	Poly	500 g	csa	200.95	
		4 x 500 g	csa	133.95	535.80
2768-07	Poly Pail	12 kg	bks	Inquire	
2768-R	Lined Fiber Dr	100 lb	bul	Inquire	

$NiCl_2 \cdot 6H_2O$ FW: 237.71

Assay ($NiCl_2 \cdot 6H_2O$) (by EDTA titrn) 97.0-103.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 4.0-7.0
Sulfate (SO_4) ..... max. 0.005%
Nitrogen Compounds (as N) ..... max. 0.005%
Barium (Ba) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 0.002%
Lead (Pb) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.001%
Sodium (Na) ..... max. 0.01%
Cobalt (Co) ..... max. 0.002%
Trace Impurities (in ppm):
Copper (Cu) ..... max. 5
Lithium (Li) ..... max. 1
Zinc (Zn) ..... max. 50

CAS: 7791-20-0 MERCK INDEX: 14,6505 IMO: 6.1:3288

Nickelous Oxide, Green, Powder

BAKER ANALYZED Reagent, For Electronic Ceramics
(nickel(II) oxide)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2796-01	Glass	500 g	non	309.25	
2796-05	Poly	2.5 kg	csa	1554.75	
		4 x 2.5 kg	csa	1036.50	4146.00
2796-R	Lined Fiber Dr	250 lb	bul	Inquire	

NiO FW: 74.69

Assay (NiO) (by EDTA titrn) ..... min. 99.0%
Nitrogen Compounds (as N) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Total Sulfur (S) ..... max. 0.01%
Aluminum (Al) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Cobalt (Co) ..... max. 0.2%
Copper (Cu) ..... max. 0.005%
Iron (Fe) ..... max. 0.01%
Lead (Pb) ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Silicon (Si) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%
Zinc (Zn) ..... max. 0.02%
Average (median) Particle Diameter, µm (APD) ..... max. 3

CAS: 1313-99-1 MERCK INDEX: 14,6512

Nickelous Sulfate, 6-Hydrate, Crystal

BAKER ANALYZED ACS Reagent
(nickel(II) sulfate, hexahydrate)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2808-04	Poly	125 g	csa	78.60	
		4 x 125 g	csa	52.40	209.60
2808-01	Poly	500 g	csa	214.45	
		4 x 500 g	csa	142.95	571.80
2808-05	Poly	2.5 kg	csa	782.80	
		4 x 2.5 kg	csa	521.85	2087.40
2808-07	Poly Pail	12 kg	bks	Inquire	
2808-R	Lined Fiber Dr	100 lb	bul	Inquire	

$NiSO_4 \cdot 6H_2O$ FW: 262.85

Exceeds ACS Specifications

Assay ($NiSO_4 \cdot 6H_2O$) (by EDTA titrn) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Cobalt (Co) ..... max. 0.002%
Copper (Cu) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.005%
Manganese (Mn) ..... max. 0.002%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%

CAS: 10101-97-0 MERCK INDEX: 14,6517 IMO: 9:3077

Nickel(II) Oxide

See Nickelous Oxide, Green

Nickel(II) Sulfate, Hexahydrate

See Nickelous Sulfate, 6-Hydrate

Nicotinic Acid

BAKER

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
R763-07	Glass	500 g	non	85.75	

$C_6H_5NO_2$ FW: 123.11

Melting Point ..... 236-238 °C.

CAS: 59-67-6 MERCK INDEX: 14,6525

Nicotinic Acid

See Niacin

Ninhydrin, Monohydrate

BAKER ANALYZED ACS Reagent
(1,2,3-indantrione)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
N862-02	Glass	10 g	bio	69.80	
N862-03	Glass	25 g	bio	90.30	

$C_9H_4O_3 \cdot H_2O$ FW: 178.14

Meets ACS Specifications

Identification and Melting Point ..... Passes Test
Solubility ..... Passes Test
Sensitivity to Amino Acids ..... Passes Test

CAS: 485-47-2 MERCK INDEX: 14,6554

Niobium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Niobium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(niobium pentachloride in 2% HF)
Plasma Standard

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5760-04	Poison Pack	100 mL	spr	112.60	

Nb AW: 92.91

MERCK INDEX: 14,6555 IMO: 8:2922

Niobium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(niobium pentachloride in 2% HF)
Plasma Standard

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5771-04	Poison Pack	100 mL	spr	72.00	

Nb AW: 92.91

IMO: 8:2922

Nitric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nitric Acid
ULTREX II Ultrapure Reagent

6901-05	Fluoropolymer	500 mL	spr	396.60	
6901-01	Fluoropolymer	1 L	spr	776.55	
6901-02	Fluoropolymer	2 L	spr	1262.50	

HNO_3 FW: 63.01

Certificate Provided Reports Actual Lot Analysis

Assay (HNO_3)(w/w) 67-70%

Trace Impurities in ppt (pg/g):

Aluminum (Al) .....max. 20
Antimony (Sb) .....max. 10
Arsenic (As) .....max. 20
Barium (Ba) .....max. 10
Beryllium (Be) .....max. 10
Bismuth (Bi) .....max. 10
Boron (B) .....max. 20
Cadmium (Cd) .....max. 10
Calcium (Ca) .....max. 20
Cerium (Ce) .....max. 10
Cesium (Cs) .....max. 10
Chromium (Cr) .....max. 20
Cobalt (Co) .....max. 10
Copper (Cu) .....max. 20
Dysprosium (Dy) .....max. 1
Erbium (Er) .....max. 1
Europium (Eu) .....max. 1
Gadolinium (Gd) .....max. 1
Gallium (Ga) .....max. 10
Germanium (Ge) .....max. 10
Gold (Au) .....max. 20
Hafnium (Hf) .....max. 10
Holmium (Ho) .....max. 1
Indium (In) .....max. 1
Iron (Fe) .....max. 20
Lanthanum (La) .....max. 1
Lead (Pb) .....max. 10
Lithium (Li) .....max. 10
Lutetium (Lu) .....max. 1
Magnesium (Mg) .....max. 10
Manganese (Mn) .....max. 10
Mercury (Hg) .....max. 100
Molybdenum (Mo) .....max. 10
Neodymium (Nd) .....max. 1
Nickel (Ni) .....max. 50
Niobium (Nb) .....max. 1
Palladium (Pd) .....max. 20
Platinum (Pt) .....max. 20
Potassium (K) .....max. 10
Praseodymium (Pr) .....max. 1
Rhenium (Re) .....max. 10
Rhodium (Rh) .....max. 10
Rubidium (Rb) .....max. 10
Ruthenium (Ru) .....max. 20
Samarium (Sm) .....max. 1
Scandium (Sc) .....max. 10
Selenium (Se) .....Actual Value Reported
Silver (Ag) .....max. 10
Sodium (Na) .....max. 10
Strontium (Sr) .....max. 10
Tantalum (Ta) .....Actual Value Reported
Tellurium (Te) .....max. 1
Terbium (Tb) .....max. 1
Thallium (Tl) .....max. 10
Thorium (Th) .....max. 1
Thulium (Tm) .....max. 1
Tin (Sn) .....max. 20
Titanium (Ti) .....max. 10
Tungsten (W) .....max. 10
Uranium (U) .....max. 1
Vanadium (V) .....max. 10
Ytterbium (Yb) .....max. 1
Yttrium (Y) .....max. 1
Zinc (Zn) .....max. 20
Zirconium (Zr) .....max. 10

CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg MERCK INDEX: 14,6577
IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid, 69.0-70.0%
BAKER ANALYZED ACS Reagent

9601-02	Glass S/S	500 mL	cma	70.65	
		12 x 500 mL	cma	70.65	847.80
9601-01	Glass	6 x 500 mL	cma	44.40	266.40
9601-00	Poly Coated	6 x 500 mL	cma	46.80	280.80
9601-05	Glass S/S	2.5 L	cma	97.95	
		6 x 2.5 L	cma	97.95	587.70
9601-04	Glass	4 x 2.5 L	cma	55.30	221.20
9601-34	Poly Coated	4 x 2.5 L	cma	65.20	260.80
9601-10	Glass Carboy	75 lb	bul	Inquire	

HNO_3 FW: 63.01

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance .....Passes Test
Assay (HNO_3) 69.0-70.0%
Arsenic (As) .....max. 0.01 ppm
Color (APHA) .....max. 10
Specific Gravity at 60°/60°F 1.416-1.420
Residue after Ignition .....max. 4 ppm

Trace Impurities (in ppm):

Chloride (Cl) .....max. 0.1
Phosphate (PO_4) .....max. 0.2
Sulfate (SO_4) .....max. 0.5

Trace Impurities (in ppb):

Aluminum (Al) .....max. 100
Arsenic and Antimony (as As) .....max. 4
Boron (B) .....max. 50
Cadmium (Cd) .....Actual Value Reported
Calcium (Ca) .....max. 200
Chromium (Cr) .....max. 100
Copper (Cu) .....max. 50
Gold (Au) .....max. 200
Heavy Metals (as Pb) .....max. 100
Iron (Fe) .....max. 100
Lead (Pb) .....max. 100
Magnesium (Mg) .....max. 100
Manganese (Mn) .....max. 100
Mercury (Hg) .....max. 5
Nickel (Ni) .....max. 50
Potassium (K) .....max. 300
Tin (Sn) .....max. 200
Titanium (Ti) .....max. 200
Zinc (Zn) .....max. 200

CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg MERCK INDEX: 14,6577
IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nitric Acid, 69.0-70.0%
NF cGMP

9607-04	Glass	2.5 L	rac	108.85	
		4 x 2.5 L	rac	62.20	248.80
9607-33	Poly Coated	2.5 L	rac	128.00	
		6 x 2.5 L	rac	73.15	438.90

HNO_3 FW: 63.01

Meets NF Requirements

Assay (as HNO_3) 69.0-70.0%
Clarity and Color ..... Passes Test
Identification ..... Passes Test
Chloride (Cl) ..... max. 0.5 ppm
Sulfate (SO_4) ..... max. 1 ppm
Heavy Metals (as Pb) ..... max. 0.2 ppm
Iron (Fe) ..... max. 0.2 ppm
Residue on Ignition ..... max. 5 ppm

CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg MERCK INDEX: 14,6577
IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid, 69.0-70.0%
BAKER INSTRA-ANALYZED Reagent
For Trace Metal Analysis

9598-00	Poly Coated	6 x 500 mL	spr	59.35	356.10
9598-51	Glass	6 x 500 mL	spr	71.55	429.30
9598-05	Glass S/S	2.5 L	spr	140.95	
		6 x 2.5 L	spr	140.95	845.70
9598-34	Poly Coated	4 x 2.5 L	spr	78.30	313.20

HNO_3 FW: 63.01

Meets ACS Specifications

Assay (HNO_3) 69.0-70.0%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 2 ppm
Specific Gravity at 60°/60°F 1.416-1.420
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 0.04
Phosphate (PO_4) ..... max. 0.1
Sulfate (SO_4) ..... max. 0.4
Trace Impurities (in ppb):
Aluminum (Al) ..... max. 30
Arsenic and Antimony (as As) ..... max. 5
Barium (Ba) ..... max. 1
Beryllium (Be) ..... max. 1
Bismuth (Bi) ..... max. 1
Boron (B) ..... max. 4
Cadmium (Cd) ..... max. 1
Calcium (Ca) ..... max. 50
Chromium (Cr) ..... max. 10
Cobalt (Co) ..... max. 1
Copper (Cu) ..... max. 1
Gallium (Ga) ..... max. 20
Germanium (Ge) ..... max. 4
Gold (Au) ..... max. 4
Heavy Metals (as Pb) ..... max. 100
Iron (Fe) ..... max. 10
Lead (Pb) ..... max. 0.5
Lithium (Li) ..... max. 1
Magnesium (Mg) ..... max. 7
Manganese (Mn) ..... max. 1
Mercury (Hg) ..... max. 0.5
Molybdenum (Mo) ..... max. 5
Nickel (Ni) ..... max. 1
Niobium (Nb) ..... max. 1
Potassium (K) ..... max. 5
Silicon (Si) ..... max. 20
Silver (Ag) ..... max. 1
Sodium (Na) ..... max. 200
Strontium (Sr) ..... max. 1
Tantalum (Ta) ..... max. 2
Thallium (Tl) ..... max. 5
Tin (Sn) ..... max. 5
Vanadium (V) ..... max. 1
Zinc (Zn) ..... max. 5
Zirconium (Zr) ..... max. 1

CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg MERCK INDEX: 14,6577
IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid, Huey, 65%
BAKER ANALYZED Reagent

9597-04	Glass	4 x 2.5 L	cac	67.15	268.60
9597-33	Poly Coated	6 x 2.5 L	cac	42.80	256.80

HNO_3 FW: 63.01

Assay (as HNO_3) (by acidimetry) 64.8-65.2%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 0.0005%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 0.05
Phosphate (PO_4) ..... max. 0.2
Sulfate (SO_4) ..... max. 0.5
Arsenic (As) ..... max. 0.005
Chromium (Cr) ..... max. 0.1
Copper (Cu) ..... max. 0.05
Heavy Metals (as Pb) ..... max. 0.1
Iron (Fe) ..... max. 0.1
Nickel (Ni) ..... max. 0.05
Fluoride (F) ..... max. 1

CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg MERCK INDEX: 14,6577
IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid, Fuming, 90%
BAKER ANALYZED ACS Reagent

9624-02	500 mL	non	255.60		
9624-05	2.5 L	non	446.85		

HNO_3 FW: 63.01

Meets Reagent Specifications for testing USP/NF monographs
Meets ACS Specifications

Assay (as HNO_3) (by acidimetry) ..... min. 90.0%
Dilution Test ..... Passes Test
Residue after Ignition ..... max. 0.002%
Dissolved Oxides (as N_2O_3) ..... max. 0.1%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 0.7
Sulfate (SO_4) ..... max. 5

Nitric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Arsenic (As) ..... max. 0.3
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 2

CAS: 7697-37-2 DENSITY: 1 L = 1.5 kg IMO: 8:2031

Product is a poison inhalation hazard, an oxidizer, corrosive, and toxic. For your safety, packaging includes a poly coated bottle in a steel or HDPE container over-packed with a HDPE pail.

Nitric Acid, 2N Volumetric Solution
BAKER ANALYZED Reagent

5639-02	Glass	1 L	sol	95.50	
		6 x 1 L	sol	79.60	477.60

HNO_3 FW: 63.01

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 1.995-2.005

CAS: 7697-37-2 IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5600-02	Glass	1 L	sol	57.55	
		6 x 1 L	sol	47.95	287.70

HNO_3 FW: 63.01

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.0995-0.1005

CAS: 7697-37-2 IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid, DILUT-IT Analytical Concentrate, 0.1N
(1/10 equiv. = 6.301 g HNO_3)

4712-01	Ampoule	1 pk	spr	40.80	
		6 x 1 pk	spr	34.00	204.00

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7697-37-2 DENSITY: 1 L = 1.07 kg IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

2,2′,2″-Nitrilotriethanol
See Triethanolamine

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nitrobenzene
BAKER ANALYZED ACS Reagent

9325-01	Glass	500 mL	cso	90.70	
		12 x 500 mL	cso	60.45	725.40
9325-03	Glass	4 L	non	395.85	

$C_6H_5NO_2$ FW: 123.11

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_6H_5NO_2$) (by GC, corrected for water) ..... min. 99.0%
Residue after Evaporation ..... max. 0.005%
Water-Soluble Titrable Acid, meq/g ..... max. 0.0005
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.198
Freezing Point (typical) ..... 5.5°C.

CAS: 98-95-3 MERCK INDEX: 14,6588 IMO: 6.1:1662
FLASH POINT: 88°C

Nitromethane
BAKER ANALYZED ACS Reagent

S161-07	Glass S/S	500 mL	non	78.30	

CH_3NO_2 FW: 61.04

Meets ACS Specifications
Assay (CH_3NO_2) (by GC) ..... min. 95%
Color (APHA) ..... max. 10
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 1.13

CAS: 75-52-5 MERCK INDEX: 14,6611 IMO: 3:1261
FLASH POINT: 35°C

Solvent Spill Cleanup Products available. See pp. 378.

m-Nitrophenol
BAKER

S222-05	Glass	100 g	non	713.65	

$NO_2C_6H_4OH$ FW: 139.11

Visual Transition Interval:
pH ..... (Colorless) 6.8
pH ..... (Yellow) 8.6

CAS: 554-84-7 MERCK INDEX: 14,6619 IMO: 6.1:1663

p-Nitrophenol
BAKER

S229-05	Poly	100 g	non	47.55	

$NO_2C_6H_4OH$ FW: 139.11

Melting Point ..... 112-114 °C.

CAS: 100-02-7 MERCK INDEX: 14,6621 IMO: 6.1:1663

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N-Nitroso-N-phenylhydroxylamine, Ammonium Derivative
See Cupferron

NMP (1-Methyl-2-pyrrolidinone)
BAKER ANALYZED Reagent

R053-07	Glass	500 mL	cor	136.80	
		12 x 500 mL	cor	91.20	1094.40
R053-09	Glass	4 L	cor	404.70	
		4 x 4 L	cor	269.80	1079.20

C_5H_9NO FW: 99.13

Assay (C_5H_9NO) (by GC, corrected for water) .....min. 99%
Color (APHA) .....max. 50
Density (g/mL) at 25°C 1.024-1.028
Water (H_2O)(by Karl Fischer titrn) .....max. 0.20%

CAS: 872-50-4 FLASH POINT: 93°C

Solvent Spill Cleanup Products available. See pp. 378.

NMP (1-Methyl-2-pyrrolidinone)
BAKER BIO-ANALYZED Reagent
For Biotech Applications

9261-13	Glass	4 L	cbs	457.95	
		4 x 4 L	cbs	305.30	1221.20
9261-07	Poly Pail	19 L	bks	Inquire	
9261-09	Poly Drum	200 L	bul	Inquire	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

C_5H_9NO FW: 99.13

Assay (C_5H_9NO) .....min. 99.5%
Color (APHA) .....max. 20
Free Amines (as CH_3NH_2) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.1 ppm
Residue after Ignition .....max. 10 ppm
Ultraviolet Absorbance (1.00-cm cell vs. water):
400 nm .....max. 0.01
350 nm .....max. 0.03
325 nm .....max. 0.1
300 nm .....max. 0.5
UV Cut-off, nm .....max. 285
Water (H_2O)(by coulometry) .....max. 200 ppm

CAS: 872-50-4 DENSITY: 1 L = 1.03 kg FLASH POINT: 93°C

Solvent Spill Cleanup Products available. See pp. 378.

Nuclear Fast Red
BAKER
(kernechtrot)

S635-01	Glass	5 g	bio	120.05	

CAS: 6409-77-4 MERCK INDEX: 14,6488

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Octane
BAKER ANALYZED Reagent

S687-07	Glass	500 mL	non	475.95	

$CH_3(CH_2)_6CH_3$ FW: 114.23

Assay (C_8H_{18}) (by GC, corrected for water) .....min. 97%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.002%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.01%
Product Information (not specifications):
Boiling Point (typical) .....126°C.
Density (g/mL) at 25°C (typical) 0.705

CAS: 111-65-9 MERCK INDEX: 14,6749 IMO: 3:1262
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

1-Octanesulfonic Acid, Sodium Salt
HPLC
For Ion-Pair Chromatography of Basic Compounds

2818-05	Glass	25 g	org	122.85	
2818-01	Glass	500 g	org	1718.60	

$CH_3(CH_2)_7SO_3Na$ FW: 216.27

Meets Reagent Specifications for testing USP/NF monographs
Assay (as $C_8H_{17}SO_3Na$) (by acidimetry) .....min. 98.0%
UV Absorbance of 0.25 M Solution:
250 nm .....max. 0.05
240 nm .....max. 0.05
230 nm .....max. 0.05
220 nm .....max. 0.06
210 nm .....max. 0.08
200 nm .....max. 0.2

CAS: 5324-84-5

Octanoic Acid
BAKER

S705-08	Glass	1 kg	org	174.40	

$CH_3(CH_2)_6COOH$ FW: 144.21

Assay ($C_8H_{16}O_2$) (by GC) .....min. 98%
Appearance .....Passes Test

CAS: 124-07-2 DENSITY: 1 L = 0.91 kg MERCK INDEX: 14,1765
IMO: 8:1760 FLASH POINT: 109°C

Octanol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1-Octanol
BAKER ANALYZED Reagent (octyl alcohol)

9085-01	Glass	500 mL	cso	142.80	
		12 x 500 mL	cso	95.20	1142.40

$CH_3(CH_2)_7OH$ FW: 130.23

Assay ($CH_3(CH_2)_7OH$) (by GC) .....min. 99%
Density (g/mL) at 25°C 0.819-0.823
Water (by KF, coulometric) .....max. 0.2%

CAS: 111-87-5 MERCK INDEX: 14,6751 FLASH POINT: 81°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Octanol
Purified

9332-01	Glass	500 mL	non	72.85	
9332-03	Glass	4 L	cso	273.10	
		4 x 4 L	cso	182.05	728.20

$CH_3(CH_2)_5CHOHCH_3$ FW: 130.23

Assay ($CH_3(CH_2)_5CHOHCH_3$) (by GC) .....min. 96%

CAS: 123-96-6 DENSITY: 1 L = 0.82 kg MERCK INDEX: 14,6752
FLASH POINT: 88°C

Octyl Phenol Ethoxylate
BAKER ANALYZED Reagent (alkylaryl polyether alcohol)

X198-05	Glass	120 mL	bio	35.85	
X198-07	Glass	500 mL	bio	49.20	
X198-09	Glass	4 L	bio	263.35	

Appearance .....Passes Test
Color (APHA) .....max. 125
Specific Gravity at 25°/25°C 1.055-1.070

DENSITY: 1 L = 1.067 kg MERCK INDEX: 14,6761 FLASH POINT: 251°C

Orange G
BAKER ANALYZED Reagent, Certified Stain Certified for Use in Histology (C.I. 16230)

S752-03	Glass	25 g	non	49.25	

$C_6H_5N{:}NC_{10}H_4(OH)(SO_3Na)_2$ FW: 452.38

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum
(3.0 mg/200 mL in Water, 1-cm path) .....Actual Value Reported
Biological Test .....Passes Test

CAS: 1936-15-8

L-(+)-Ornithine Monohydrochloride
BAKER

S762-03	Glass	25 g	bio	89.55	

$NH_2(CH_2)_3CH(NH_2)COOH{\cdot}HCl$ FW: 168.63

Specific Rotation, $[\alpha]_D^{20}$(c = 5.5 in water) .....+10 - +12 °

CAS: 3184-13-2 MERCK INDEX: 14,6874

Orthoperiodic Acid
See Periodic Acid

Orthophosphoric Acid
See under Phosphoric Acid

Oxalaldehyde
See Glyoxal

Oxalic Acid, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5628-02	Poly	1 L	sol	61.40	
		6 x 1 L	sol	51.15	306.90

$H_2C_2O_4{\cdot}2H_2O$ FW: 126.07

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.095-0.105

CAS: 144-62-7 DENSITY: 1 L = 1.0 kg

Acid Spill Cleanup Products available. See pp. 378.

Oxalic Acid, DILUT-IT Analytical Concentrate, 0.1N
(1/10 equiv. = 4.502 g HOCOCOOH)

4665-01	Ampoule	1 pk	spr	62.45	
		6 x 1 pk	spr	52.05	312.30

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) .....Passes Test

CAS: 144-62-7 IMO: 8:3265

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Oxalic Acid, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent

0230-01	Poly	500 g	csa	157.15	
		4 x 500 g	csa	104.75	419.00
0230-05	Poly	2.5 kg	csa	628.00	
		4 x 2.5 kg	csa	418.65	1674.60
0230-07	Poly Pail	12 kg	bks	Inquire	

$HOCOCOOH{\cdot}2H_2O$ FW: 126.07

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($HOCOCOOH{\cdot}2H_2O$) (by $KMnO_4$ titrn) 99.5-102.5%
Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.01%
Chloride (Cl) .....max. 0.002%
Sulfate (SO_4) .....max. 0.002%
Calcium (Ca)(by FES) .....max. 0.001%
Nitrogen Compounds (as N) .....max. 0.001%
Substances Darkened by Hot H_2SO_4 .....Passes Test
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2

CAS: 6153-56-6 MERCK INDEX: 14,6911 IMO: 8:3261

Oxine
See 8-Quinolinol

2,2'-Oxydiethanol
BAKER ANALYZED Reagent
(diethylene glycol)

S856-07	Glass	500 mL	non	22.15	

$HOCH_2CH_2OCH_2CH_2OH$ FW: 106.12

Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_4H_{10}O_3$) (by GC) .....min. 99.0%
Acidity (as CH_3COOH) .....max. 0.005%
Color (APHA) .....max. 10
Distilling Range: .....240-250 °C.
Specific Gravity at 20°/20°C 1.117-1.120
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%

CAS: 111-46-6 DENSITY: 1 L = 1.1800 kg MERCK INDEX: 14,3119
FLASH POINT: 143°C

Palladium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Palladium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pd metal in 20% HCl)
Plasma Standard

5739-04		100 mL	spr	451.70	

Pd AW: 106.42

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Palladium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pd metal in 20% HCl)
Plasma Standard

5772-04		100 mL	spr	150.30	

Pd AW: 106.42

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Palladium, 1000 µg/mL (0.1% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pd metal in 20% HCl)

6462-04	Poly	150 mL	spr	110.45	

Pd AW: 106.42

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Palmitic Acid
BAKER
(hexadecanoic acid)

S874-05	Poly	100 g	non	50.85	

$CH_3(CH_2)_{14}COOH$ FW: 256.43

Melting Point .....61-63 °C.

CAS: 57-10-3 MERCK INDEX: 14,6996

PAN

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

PAN
BAKER ANALYZED Reagent
(1-(2-pyridylazo)-2-naphthol)

S891-00	Glass	1 g	non	60.25	
S891-01	Glass	5 g	non	141.80	

$C_5H_4NN{:}NC_{10}H_6OH$ FW: 249.28

Sensitivity as Indicator .....Passes Test

CAS: 85-85-8

Paraffin, Prills
Purified

4227-01	Poly	500 g	non	46.55	

Description .....Passes Test
Solubility .....Passes Test
Identification .....Passes Test
Congealing Range .....47-65 °C.
Reaction .....Passes Test
Readily Carbonizable Substances .....Passes Test
STORAGE: Store below 40°C (104°F)

CAS: 8002-74-2 MERCK INDEX: 14,7023 FLASH POINT: 204°C

Paraffin Oil
PHOTREX Reagent
For Spectrophotometry

9388-01	Glass	500 mL	cso	93.90	
		12 x 500 mL	cso	62.60	751.20

Color (APHA) .....max. 10
Neutrality .....Passes Test
Readily Carbonizable Substances .....Passes Test
Water (H_2O)(by Karl Fischer titrn) .....Actual Value Reported
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:
2.5-3.3 3.9-6.7 8.0-13.0

Physical Data (not specifications):
Saybolt Viscosity at 100°F (sec) 345-355

CAS: 8012-95-1 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,7186
FLASH POINT: 193°C

Paraffin Oil
BAKER

S894-07	Glass	500 mL	non	37.35	
S894-00	Glass	4 L	non	152.20	

Identification (by IR) .....Passes Test
Product Information (not specifications):
Saybolt Viscosity at 100°F (sec) 345-355

CAS: 8012-95-1 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,7186
FLASH POINT: 193°C

Paraformaldehyde
BAKER

S898-04	Poly	125 g	non	47.75	
S898-07	Poly	500 g	non	57.55	
S898-09	Poly Pail	3 kg	non	132.00	

$(CH_2O)n$

Assay ($(CH_2O)n$) (by acidimetry) .....min. 95%

CAS: 30525-89-4 MERCK INDEX: 14,7025 IMO: 4.1:2213
FLASH POINT: 70°C

Pararosanilin Hydrochloride
BAKER
(C.I. 42500)

S903-03	Glass	25 g	non	116.90	

$(NH_2C_6H_4)_2C{:}C_6H_4{:}NH{\cdot}HCl$ FW: 323.85

Identification (by IR) .....Passes Test

CAS: 569-61-9

Paris Violet
See Methyl Violet 2B

Pentamethyl-pararosanilin Chloride
See Methyl Violet 2B

n-Pentane
BAKER ANALYZED Reagent

T007-07	Glass	500 mL	non	43.80	
T007-09	Glass	4 L	non	97.95	
T007-01	Steel Pail	20 L	sbo	658.65	

$CH_3(CH_2)_3CH_3$ FW: 72.15

Meets Reagent Specifications for testing USP/NF monographs
Assay ($CH_3(CH_2)_3CH_3$) (by GC, corrected for water) .....min. 98%
Boiling Range (95%) .....34-36 °C.
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.002%
Sulfur Compounds (as S) .....max. 0.005%
Water (by KF, coulometric) .....max. 0.02%

CAS: 109-66-0 DENSITY: 1 L = 0.63 kg MERCK INDEX: 14,7116
IMO: 3:1265 FLASH POINT: -49°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Pentane
HPLC
For Use in Liquid Chromatography and Spectrophotometry

9331-03	Glass	4 L	chp	252.90	
		4 x 4 L	chp	168.60	674.40
9331-33	Poly Coated	4 L	chp	266.50	
		4 x 4 L	chp	177.65	710.60

$CH_3(CH_2)_3CH_3$ FW: 72.15

Ultraviolet Absorbance (1.00-cm cell vs. water):
- 400-245 nm .....max. 0.01
- 220 nm .....max. 0.10
- 210 nm .....max. 0.4

UV Cut-off, nm .....max. 190

Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
- at 450 nm Emission .....max. 0.5
- at Emission Maximum for Impurities .....max. 1.5

Assay ($CH_3(CH_2)_3CH_3$) (by GC, corrected for water) .....min. 99.0%
Residue after Evaporation .....max. 1 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 0.01%

CAS: 109-66-0 DENSITY: 1 L = 0.63 kg MERCK INDEX: 14,7116
IMO: 3:1265 FLASH POINT: -49°C

Solvent Spill Cleanup Products available. See pp. 378.

Pentane
ULTRA RESI-ANALYZED
For Organic Residue Analysis

9333-02	Glass	1 L	chp	85.90	
		6 x 1 L	chp	57.25	343.50
9333-03	Glass	4 L	chp	245.10	
		4 x 4 L	chp	163.40	653.60

$CH_3(CH_2)_3CH_3$ FW: 72.15

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
- Single Impurity Peak (ng/mL) .....max. 5

ECD-Sensitive Impurities (as Heptachlor Epoxide)
- Single Impurity Peak (pg/mL) .....max. 10

Neat Solvent Front Characterization:
ECD-Sensitive Impurities (as Ethylene Dibromide)
- Single Impurity Peak (ng/mL) .....max. 5

Assay ($CH_3(CH_2)_3CH_3$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 100 ppm

CAS: 109-66-0 DENSITY: 1 L = 0.63 kg MERCK INDEX: 14,7116
IMO: 3:1265 FLASH POINT: -49°C

Solvent Spill Cleanup Products available. See pp. 378.

1,5-Pentanedial
See under Glutaraldehyde

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2,4-Pentanedione
Practical
(acetylacetone)

S985-07	Glass S/S	500 mL	non	66.70	

$CH_3COCH_2COCH_3$ FW: 100.02

Assay ($C_5H_8O_2$) (by GC) .....min. 98%
Identification (by IR) .....Passes Test

CAS: 123-54-6 DENSITY: 1 L = 0.975 kg MERCK INDEX: 14,81
IMO: 3:2310 FLASH POINT: 34°C

Solvent Spill Cleanup Products available. See pp. 378.

2,4-Pentanedione
BAKER ANALYZED Reagent
(acetylacetone)

S926-06	Glass	250 mL	non	99.75	

$CH_3COCH_2COCH_3$ FW: 100.02

Assay ($C_5H_8O_2$) (by GC, corrected for water) .....min. 99.0%
Acidity (as CH_3COOH) .....max. 0.2%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%

CAS: 123-54-6 DENSITY: 1 L = 0.975 kg MERCK INDEX: 14,81
IMO: 3:2310 FLASH POINT: 34°C

Solvent Spill Cleanup Products available. See pp. 378.

1-Pentanesulfonic Acid, Sodium Salt
HPLC
For Ion-Pair Chromatography of Basic Compounds

2841-05	Glass	25 g	org	104.75	
2841-06	Glass	100 g	org	271.15	

$CH_3(CH_2)_4SO_3Na$ FW: 174.21

Assay (as $C_5H_{11}SO_3Na$) (by acidimetry) .....min. 98.0%
UV Absorbance of 0.25 M Solution:
- 250 nm .....max. 0.05
- 240 nm .....max. 0.05
- 230 nm .....max. 0.05
- 220 nm .....max. 0.06
- 210 nm .....max. 0.08
- 200 nm .....max. 0.2

CAS: 22767-49-3

Pentanol
See Amyl Alcohol

Pentyl Acetate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Pentyl Acetate (Mixed Isomers)
BAKER

T026-07	Glass	500 mL	non	111.60	

$C_7H_{14}O_2$ FW: 130.19

Assay ($C_7H_{14}O_2$) (by GC)(total isomers) ..... min. 98%

CAS: 123-92-2 DENSITY: 1 L = 0.88 kg IMO: 3:1104
FLASH POINT: 25°C

Solvent Spill Cleanup Products available. See pp. 378.

Pentyl Alcohol
See Amyl Alcohol

iso-Pentyl Alcohol
See iso-Amyl Alcohol

tert-Pentyl Alcohol
See tert-Amyl Alcohol

Pepsin, Powder
Purified

2844-01	Poly	500 g	non	246.15	

Description ..... Passes Test
Identification ..... Passes Test
Assay (Digested egg albumen x wt) 2000-3500
Total Viable Count (per g) ..... max. 10000
Test for Salmonella Species ..... Passes Test
Test for Escherichia Coli ..... Passes Test
Test for Pseudomonas ..... Passes Test
Test for Staphylococcus ..... Passes Test

CAS: 9001-75-6 MERCK INDEX: 14,7146

Perchloric Acid, 70%
ULTREX II Ultrapure Reagent

4806-01	Fluoropolymer	500 mL	spr	650.60	

$HClO_4$ FW: 100.46

Certificate Provided Reports Actual Lot Analysis
Assay ($HClO_4$) 65-71%
Trace Impurities in ppt (pg/g):
Aluminum (Al) ..... max. 100
Antimony (Sb) ..... max. 100
Arsenic (As) ..... max. 100
Barium (Ba) ..... max. 100
Beryllium (Be) ..... max. 100
Bismuth (Bi) ..... max. 10
Cadmium (Cd) ..... max. 10
Calcium (Ca) ..... max. 100
Cesium (Cs) ..... max. 10
Cobalt (Co) ..... max. 100
Copper (Cu) ..... max. 100
Dysprosium (Dy) ..... max. 10
Erbium (Er) ..... max. 10
Europium (Eu) ..... max. 10
Gadolinium (Gd) ..... max. 10
Gallium (Ga) ..... max. 10
Hafnium (Hf) ..... Actual Value Reported

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Holmium (Ho) ..... max. 10
Indium (In) ..... max. 10
Iron (Fe) ..... max. 100
Lanthanum (La) ..... max. 10
Lead (Pb) ..... max. 10
Lithium (Li) ..... max. 100
Lutetium (Lu) ..... max. 10
Magnesium (Mg) ..... max. 100
Manganese (Mn) ..... max. 100
Molybdenum (Mo) ..... max. 100
Neodymium (Nd) ..... max. 10
Nickel (Ni) ..... max. 100
Niobium (Nb) ..... Actual Value Reported
Palladium (Pd) ..... max. 10
Platinum (Pt) ..... max. 100
Potassium (K) ..... max. 100
Praseodymium (Pr) ..... max. 10
Rhodium (Rh) ..... max. 10
Rubidium (Rb) ..... max. 10
Samarium (Sm) ..... max. 10
Scandium (Sc) ..... max. 100
Silver (Ag) ..... max. 100
Sodium (Na) ..... max. 100
Strontium (Sr) ..... max. 100
Tellurium (Te) ..... max. 10
Terbium (Tb) ..... max. 10
Thallium (Tl) ..... max. 100
Thorium (Th) ..... max. 10
Thulium (Tm) ..... max. 10
Tin (Sn) ..... max. 100
Titanium (Ti) ..... max. 100
Tungsten (W) ..... Actual Value Reported
Uranium (U) ..... max. 10
Vanadium (V) ..... max. 100
Ytterbium (Yb) ..... max. 10
Yttrium (Y) ..... max. 10
Zinc (Zn) ..... max. 100
Zirconium (Zr) ..... max. 100
Trace Impurities (in ppt):
Cerium (Ce) ..... max. 10
Tantalum (Ta) ..... Actual Value Reported

CAS: 7601-90-3 MERCK INDEX: 14,7153 IMO: 5.1:1873

Acid Spill Cleanup Products available. See pp. 378.

See ULTREX II acids for trace metal analysis on pages 47-48.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Perchloric Acid, 69-72%
BAKER ANALYZED ACS Reagent
(Normality about 12)

9652-02	Glass S/S	500 mL	cac	189.35	
		12 x 500 mL	cac	189.35	2272.20
9652-01	Glass	6 x 500 mL	cac	110.45	662.70
9652-00	Poly Coated	6 x 500 mL	cac	111.35	668.10
9652-05	Glass S/S	2.5 L	cac	431.05	
		6 x 2.5 L	cac	431.05	2586.30
9652-04	Glass	4 x 2.5 L	cac	238.25	953.00
9652-33	Poly Coated	4 x 2.5 L	cac	246.75	987.00

$HClO_4$ FW: 100.46

Meets ACS Specifications

Assay ($HClO_4$) 69.0-72.0%
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 0.003%
Chloride (Cl) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.001%
Trace Impurities (in ppm):
Silicate and Phosphate (as SiO_2) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 1

CAS: 7601-90-3 MERCK INDEX: 14,7153 IMO: 5.1:1873

Acid Spill Cleanup Products available. See pp. 378.

Perchloric Acid, 69-72%
BAKER INSTRA-ANALYZED Reagent
For Trace Metal Analysis

9653-02	Poly Coated S/S	500 mL	spr	273.00	
		12 x 500 mL	spr	273.00	3276.00
9653-00	Poly Coated	6 x 500 mL	spr	169.10	1014.60
9653-33	Poly Coated	4 x 2.5 L	spr	519.00	2076.00

$HClO_4$ FW: 100.46

Meets ACS Specifications

Assay ($HClO_4$) 69.0-72.0%
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 10 ppm
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 10
Nitrogen Compounds (as N) ..... max. 10
Silicate and Phosphate (as SiO_2) ..... max. 5
Sulfate (SO_4) ..... max. 10
Aluminum (Al) ..... max. 0.05
Barium (Ba) ..... max. 0.1
Cadmium (Cd) ..... max. 0.005
Calcium (Ca) ..... max. 1
Chromium (Cr) ..... max. 0.05
Cobalt (Co) ..... max. 0.005
Copper (Cu) ..... max. 0.05
Heavy Metals (as Pb) ..... max. 0.1
Iron (Fe) ..... max. 0.05
Lead (Pb) ..... max. 0.01
Lithium (Li) ..... max. 0.1
Magnesium (Mg) ..... max. 0.05
Manganese (Mn) ..... max. 0.005
Mercury (Hg) ..... max. 0.005
Nickel (Ni) ..... max. 0.005
Potassium (K) ..... max. 0.5
Silicon (Si) ..... max. 0.1
Silver (Ag) ..... max. 0.005
Sodium (Na) ..... max. 1
Strontium (Sr) ..... max. 0.02
Tin (Sn) ..... max. 0.01
Zinc (Zn) ..... max. 0.05

CAS: 7601-90-3 MERCK INDEX: 14,7153 IMO: 5.1:1873

Acid Spill Cleanup Products available. See pp. 378.

Perchloric Acid, 60-62%
BAKER ANALYZED ACS Reagent

9656-00	Poly Coated	6 x 500 mL	cac	103.25	619.50
9656-33	Poly Coated	4 x 2.5 L	cac	249.60	998.40

$HClO_4$ FW: 100.46

Meets ACS Specifications

Assay ($HClO_4$) 60.0-62.0%
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 0.003%
Chloride (Cl) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.001%
Trace Impurities (in ppm):
Silicate and Phosphate (as SiO_2) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 1

CAS: 7601-90-3 MERCK INDEX: 14,7153 IMO: 5.1:1873

Acid Spill Cleanup Products available. See pp. 378.

Perchloric Acid, 0.1N in Glacial Acetic Acid Volumetric Solution
BAKER ANALYZED Reagent

5624-02	Glass	1 L	sol	151.60	
		6 x 1 L	sol	126.35	758.10

$HClO_4$ FW: 100.46

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label

CAS: 7601-90-3 IMO: 8:2920 FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Perchloroethylene
See under Tetrachloroethylene

Periodic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Periodic Acid
BAKER ANALYZED ACS Reagent
para-Periodic Acid

T146-03	Glass	25 g	non	69.30	
T146-05	Glass	100 g	non	181.55	
T146-10	Lined Fiber Dr	10 kg	non	Inquire	

H_5IO_6 FW: 227.96

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (H_5IO_6) 99.0-101.0%
Insoluble Matter .....max. 0.01%
Residue after Ignition .....max. 0.01%
Sulfate (SO_4) .....max. 0.01%
Other Halogens (as Cl) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.005%
Iron (Fe) .....max. 0.003%

CAS: 10450-60-9 MERCK INDEX: 14,7171 IMO: 5.1:3085

Acid Spill Cleanup Products available. See pp. 378.

Petrolatum, Liquid
See Paraffin Oil

Petroleum Ether, 20-40°C
BAKER ANALYZED Reagent

9272-22	Al SAFETAINER	1 L	cso	101.80	
		6 x 1 L	cso	67.85	407.10
9272-03	Al SAFETAINER	4 L	cso	200.20	
		4 x 4 L	cso	133.45	533.80

Appearance and Color .....Passes Test
Boiling Range: .....20-40 °C.
Residue after Evaporation .....max. 0.002%
Acidity .....Passes Test
Heavy Oils and Fats .....Passes Test

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg MERCK INDEX: 14,7188
IMO: 3:1268 FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Petroleum Ether, 30-60°C
ULTRA RESI-ANALYZED
For Organic Residue Analysis

9265-02	Glass	1 L	chp	74.40	
		6 x 1 L	chp	49.60	297.60
9265-03	Glass	4 L	chp	156.30	
		4 x 4 L	chp	104.20	416.80

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Neat Solvent Front Characterization:
ECD-Sensitive Impurities (as Ethylene Dibromide)
Single Impurity Peak (ng/mL) .....max. 5
Color (APHA) .....max. 10
Boiling Range (initial to dry point) .....30-60 °C.
Residue after Evaporation .....max. 5 ppm
Water (by KF, coulometric) .....max. 0.05%

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg MERCK INDEX: 14,7188
IMO: 3:1268 FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Petroleum Ether, 35-60°C
BAKER ANALYZED ACS Reagent

9268-22	Al SAFETAINER	1 L	cso	76.65	
		6 x 1 L	cso	51.10	306.60
9268-05	Glass	4 x 4 L	cso	91.85	367.40
9268-03	Al SAFETAINER	4 L	cso	152.20	
		4 x 4 L	cso	101.45	405.80
9268-07	Steel Pail	20 L	sbk	299.75	
9268-09	Steel Drum	275 lb	bul	Inquire	

Meets ACS Specifications

Color (APHA) .....max. 10
Boiling Range: .....35-60 °C.
Residue after Evaporation .....max. 0.001%
Acidity .....Passes Test

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg MERCK INDEX: 14,7188
IMO: 3:1268 FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Petroleum Ether, 35-60°C
PHOTREX Reagent
For Spectrophotometry

9270-03	Glass	4 L	cso	202.15	
		4 x 4 L	cso	134.75	539.00

Color (APHA) .....max. 10
Boiling Range: .....35-60 °C.
Residue after Evaporation .....max. 0.001%
Acidity .....Passes Test
Ultraviolet Absorbance (1.00-cm cell vs. water):
220 nm .....max. 1.0
230 nm .....max. 0.20
250 nm .....max. 0.05
270 nm .....max. 0.01
400 nm .....max. 0.01

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg MERCK INDEX: 14,7188
IMO: 3:1268 FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Petroleum Ether, 30-75°C

BAKER ANALYZED Reagent

9274-03	Al SAFETAINER	4 L	cso	203.50	
		4 x 4 L	cso	135.65	542.60

Appearance and Color .....Passes Test
Odor (Faint) .....Passes Test
Boiling Range: .....30-75 °C.
Residue after Evaporation .....max. 0.001%
Acidity .....Passes Test
Heavy Oils and Fats .....Passes Test

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg MERCK INDEX: 14,7188
IMO: 3:1268 FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Petroleum Ether, 50-110°C

BAKER ANALYZED Reagent
Precipitation Naphtha for ASTM D-91 Precipitation Number of Lubricating Oils

9273-22	Al SAFETAINER	1 L	cso	104.50	
		6 x 1 L	cso	69.65	417.90
9273-05	Glass	4 x 4 L	cso	199.60	798.40
9273-03	Al SAFETAINER	4 L	cso	267.55	
		4 x 4 L	cso	178.35	713.40
9273-07	Steel Pail	20 L	sbk	688.15	

Appearance and Color .....Passes Test
Odor (Faint) .....Passes Test
Aniline Point .....58-60 °C.
Density (g/mL) at 15°C 0.692-0.702
Boiling Range:
Initial Point .....min. 50 °C.
50% Point .....70-80 °C.
End Point .....max. 110 °C.
Residue after Evaporation .....max. 0.001%
Acidity .....Passes Test
Heavy Oils and Fats .....Passes Test

CAS: 8032-32-4 DENSITY: 1 L = 0.69 kg MERCK INDEX: 14,7188
IMO: 3:1268 FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

pH Buffer Solutions
See under Buffer

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

pH Products

BAKER-pHIX pH Indicator Sticks
pH 0 -14

4390-01		1 pk	spr	26.15	

BAKER-pHIX pH Indicator Sticks
pH 0.0 -6.0

4391-01		1 pk	spr	26.60	

BAKER-pHIX pH Indicator Sticks
pH 1.7 -3.8

4392-01		1 pk	spr	27.20	

BAKER-pHIX pH Indicator Sticks
pH 2.0 -9.0

4393-01		1 pk	spr	27.20	

BAKER-pHIX pH Indicator Sticks
pH 3.6 -6.1

4394-01		1 pk	spr	27.20	

BAKER-pHIX pH Indicator Sticks
pH 4.5 -10.0

4395-01		1 pk	spr	26.60	

BAKER-pHIX pH Indicator Sticks
pH 6.0 -7.7

4396-01		1 pk	spr	26.60	

BAKER-pHIX pH Indicator Sticks
pH 7 -14

4397-01		1 pk	spr	26.60	

BAKER-pHIX pH Indicator Sticks
pH 7.5 -9.5

4398-01		1 pk	spr	27.20	

BAKER-pHIX pH Papers With Color Scale
pH 1 -12

4399-01		1 pk	spr	40.10	

BAKER-pHIX pH Papers With Color Scale
pH 1.8 -3.8

4400-01		1 pk	spr	37.70	

pH Products

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
BAKER-pHIX pH Papers With Color Scale pH 3.8 -5.5					
4402-01		1 pk	spr	37.70	
BAKER-pHIX pH Papers With Color Scale pH 4.0 -9.0					
4403-01		1 pk	spr	39.40	
BAKER-pHIX pH Papers With Color Scale pH 6.0 -8.1					
4405-01		1 pk	spr	37.70	
DUAL-TINT, pH-Dispenser pH 1 -12					
2867-01		1 pk	spr	43.90	
DUAL-TINT, pH-Dispenser pH 5.0-8.0					
2869-01		1 pk	spr	42.00	
DUAL-TINT, pH-Refill pH 1 -12					
2873-01		1 pk	spr	61.20	
DUAL-TINT, pH-Refill pH 5.0 -8.0					
2875-01		1 pk	spr	57.25	

PharmaTest Reagents

See Drug Development and Manufacturing , p. 64-86

o-Phenanthroline

See 1,10-Phenanthroline, Monohydrate

1,10-Phenanthroline, Monohydrate

BAKER ANALYZED ACS Reagent (o-phenanthroline)

T170-02	Glass	10 g	bio	87.05	

$C_{12}H_8N_2 \cdot H_2O$ FW: 198.22

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Suitability as Redox Indicator .....Passes Test
Suitability for Determination of Iron .....Passes Test

Product Information (not specifications):

Melting Point (typical) .....98.0°C.

CAS: 5144-89-8 MERCK INDEX: 14,7214

1,10-Phenanthroline Monohydrochloride, Monohydrate

BAKER ANALYZED Reagent

T174-03	Glass	25 g	bio	266.85	

$C_{12}H_8N_2 \cdot HCl \cdot H_2O$ FW: 234.69

Assay ($C_{12}H_8N_2 \cdot HCl \cdot H_2O$) .....min. 99%
Suitability as Redox Indicator .....Passes Test
Suitability for Determination of Iron .....Passes Test

CAS: 03829-86-5 MERCK INDEX: 14,7214

Phenol, Crystal

BAKER ANALYZED ACS Reagent (Stabilized)

2858-04	Glass	125 g	csa	90.60	
		4 x 125 g	csa	60.40	241.60
2858-01	Glass	500 g	non	98.75	
2858-05	Poly Coated	2 kg	csa	400.90	
		4 x 2 kg	csa	267.25	1069.00

C_6H_5OH FW: 94.11

Exceeds ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Assay (C_6H_5OH) .....min. 99.0%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.4%
Freezing Point (dry basis) .....min. 40.5 °C.
Clarity of Solution .....Passes Test
Residue after Evaporation .....max. 0.05%
Preservative (H_3PO_2) .....max. 0.15%

CAS: 108-95-2 MERCK INDEX: 14,7241 IMO: 6.1:1671
FLASH POINT: 79°C

Phenol, Fused

cGMP

USP

2862-05	Poly Coated	2 kg	rss	510.10	
		4 x 2 kg	rss	340.05	1360.20

C_6H_5OH FW: 94.11

Meets USP Requirements

Identification A .....Passes Test
Identification B .....Passes Test
Congealing Temperature .....min. 39 °C.
Clarity of Solution and Reaction .....Passes Test
Water (H_2O) .....max. 0.5%
Nonvolatile Residue .....max. 0.05%
Assay (C_6H_6O) (anhydrous basis) 99.0-100.5%
Benzene .....max. 2 ppm

Product contains about 20 ppm Citric Acid as a preservative.

CAS: 108-95-2 MERCK INDEX: 14,7241 IMO: 6.1:1671
FLASH POINT: 79°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phenol, White Fused Crystal
ULTRAPURE BIOREAGENT
Contains No Preservatives
Suitable for Extraction of Nucleic Acids

4056-00	Glass in Can	100 g	upr	66.00	
4056-01	Glass in Can	500 g	upr	144.35	
4056-02	Glass in Can	1 kg	upr	238.40	

C_6H_5OH FW: 94.11

Assay (C_6H_5OH) ..... min. 99%
Melting Point ..... 39-41 °C.
Appearance ..... Passes Test
DNase Activity ..... None Detected
RNase Activity ..... None Detected
pH (saturated) 4.5-6.0
Heavy Metals (as Pb) ..... max. 0.001%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.4%

CAS: 108-95-2 MERCK INDEX: 14,7241 IMO: 6.1:1671
FLASH POINT: 79°C

Phenol, Liquefied
BAKER ANALYZED Reagent
Contains about 20 ppm Citric Acid as a Preservative

2859-04	Glass	150 mL	non	57.60	
2859-01	Glass	500 mL	cso	110.55	
		12 x 500 mL	cso	73.70	884.40
2859-33		4 L	cso	689.10	
		4 x 4 L	cso	459.40	1837.60

C_6H_5OH FW: 94.11

Assay (C_6H_5OH) ..... min. 89.0%
Solubility and Reaction ..... Passes Test
Residue after Evaporation ..... max. 0.05%
Suitability for Amino Acid Determination ..... Passes Test
Appearance ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... Actual Value Reported
Preserve in tight, light-resistant glass containers.

CAS: 108-95-2 DENSITY: 1 L = 1.06 kg MERCK INDEX: 14,7241
IMO: 6.1:2821 FLASH POINT: 79°C

Phenol, Liquefied
USP
Contains about 20 ppm Citric Acid as a Preservative

2864-01	Glass	500 mL	rss	157.75	
		12 x 500 mL	rss	105.15	1261.80
2864-33	Poly Coated	4 L	rss	834.30	
		4 x 4 L	rss	556.20	2224.80

C_6H_5OH FW: 94.11

Meets USP Requirements
Distilling Range:
Initial Temperature ..... Actual Value Reported
Final Temperature ..... max. 182.5 °C.
Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity of Solution and Reaction ..... Passes Test
Nonvolatile Residue ..... max. 0.05%
Assay ..... min. 89.0%
Benzene ..... max. 2 ppm
Preserve in tight, light-resistant glass containers.

CAS: 108-95-2 DENSITY: 1 L = 1.06 kg MERCK INDEX: 14,7241
IMO: 6.1:2821 FLASH POINT: 79°C

Phenolphthalein, Powder
BAKER ANALYZED ACS Reagent

2870-04	Poly	125 g	bio	50.20	
2870-01	Poly	500 g	bio	191.15	

$C_{20}H_{14}O_4$ FW: 318.33

Meets ACS Specifications
Clarity of Solution ..... Passes Test
Visual Transition Interval:
pH ..... (Colorless) 8.0
pH ..... (Red) 10.0

CAS: 77-09-8 MERCK INDEX: 14,7243

Phenolphthalein, T.S.
BAKER ANALYZED Reagent

5927-04	Glass	100 mL	sol	13.25	
5927-01	Glass	500 mL	sol	49.80	

Visual Transition Interval:
pH ..... (Colorless) 8.0
pH ..... (Pink) 10.0
Product Information (not specifications):
Appearance (clear, colorless solution)

DENSITY: 1 L = 0.8 kg IMO: 3:1170 FLASH POINT: 13°C

Phenol Red
BAKER ANALYZED ACS Reagent
(phenolsulfonphthalein)

T254-01	Glass	5 g	bio	63.30	
T254-03	Glass	25 g	bio	150.10	

$C_{19}H_{14}O_5S$ FW: 354.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Clarity of Solution ..... Passes Test
Visual Transition Interval:
pH ..... (Yellow) 6.8
pH ..... (Red) 8.2

CAS: 143-74-8 MERCK INDEX: 14,7247

Phenol Red

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phenol Red, Sodium Salt, Powder

BAKER ANALYZED ACS Reagent
(phenolsulfonphthalein, sodium salt)

T265-01	Glass	5 g	bio	113.40	
T265-03	Glass	25 g	bio	431.70	
T265-07	Glass	500 g	bio	3473.20	
T265-08	Glass	1 kg	bio	6631.95	
T265-06	Poly Pail	5 kg	bio	17893.30	

$NaOSO_2C_6H_4C(C_6H_4\text{-}4\text{-}OH):C_6H_4\text{-}4\text{-}(:O)$ FW: 376.37

Meets ACS Specifications

Clarity of Solution ..... Passes Test
Visual Transition Interval:
pH ..... (Yellow) 6.8
pH ..... (Red) 8.2

CAS: 34487-61-1

Phenolsulfonphthalein

See Phenol Red

2-Phenoxyethanol

Practical

T319-07	Glass	500 mL	non	41.40	
T319-09	Glass	4 L	non	104.60	

$C_6H_5OCH_2CH_2OH$ FW: 138.17

Identification (by IR) ..... Passes Test

CAS: 122-99-6 DENSITY: 1 L = 1.11 kg MERCK INDEX: 14,7257
FLASH POINT: 121°C

N-Phenylacetamide

See Acetanilide

L-Phenylalanine, USP

cGMP

Multi-Compendial

2086-06	Poly	1 kg	bio	591.55	
2086-07	Poly Pail	12 kg	bks	Inquire	

$C_6H_5CH_2CH(NH_2)COOH$ FW: 165.19

Meets USP Requirements

Assay ($C_9H_{11}NO_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... -34.7 to -32.7 °
pH 5.4-6.0
Loss on Drying at 105°C ..... max. 0.3%
Residue on Ignition ..... max. 0.4%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%
Heavy Metals (as Pb) ..... max. 0.0015%

Meets FCC Requirements

Assay ($C_9H_{11}NO_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lead (Pb) ..... max 5 mg/kg
Loss on Drying ..... max. 0.2%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... -35.2 to -33.2 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_9H_{11}NO_2$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... -35.5 to -33.0 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%

Meets JP Chemical Specifications

Assay ($C_9H_{11}NO_2$) (dried basis) 98.5-101.0%
Identification ..... Passes Test
Optical Rotation ..... -35.5 to -33.0 °
pH 5.3-6.3
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.021%
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 0.30%
Residue on Ignition ..... max. 0.10%
Preserve in well-closed containers.
Store protected from light.

CAS: 63-91-2 MERCK INDEX: 14,7271

N-Phenylaniline

See Diphenylamine

(Phenylazo)formic Acid 2-Phenylhydrazide

See sym-Diphenylcabazone

Phenyl Cellosolve

See 2-Phenoxyethanol

Phenylethylene

See Styrene

Phenylhydrazine Hydrochloride

BAKER

T740-05	Glass	100 g	non	90.90	

$C_6H_5NHNH_2{\cdot}HCl$ FW: 144.61

Assay ($C_6H_5NHNH_2{\cdot}HCl$) ..... min. 99.0%
Residue after Ignition ..... max. 0.05%

CAS: 59-88-1 IMO: 8:3261

Phenylmethanol

See Benzyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phloroglucinol, Dihydrate
BAKER

U024-05	Poly	100 g	non	166.45	

$1,3,5\text{-}(HO)_3C_6H_3{\cdot}2H_2O$ FW: 162.14

Melting Point ..... 213-220 °C.

CAS: 6099-90-7 MERCK INDEX: 14,7328

Phloxine B
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology (C.I. 45410)

U029-03	Glass	25 g	non	109.60	

$C_{20}H_2Br_4Cl_4Na_2O_5$ FW: 829.67

Certified by the Biological Stain Commission

Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 50%
C_2H_5OH and 0.01% Na_2CO_3, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 18472-87-2

Phosphate Buffer, M/15, pH 6.8
BAKER ANALYZED Reagent
For Use with Wright-Giemsa Staining Solution

U033-03	Cubitainer	4 L	sol	142.85	

pH at 25°C 6.75-6.85
Phosphate (PO_4), Molarity 0.060-0.070
Sodium (Na), Molarity 0.079-0.086
Potassium (K), Molarity 0.030-0.036
Chloride (Cl) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Suitability for Blood Cell Staining ..... Passes Test
Appearance ..... Passes Test

Phosphomolybdic Acid, x-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
(molybdophosphoric acid)

0247-04	Glass	125 g	non	676.15	
0247-01	Glass	500 g	non	1257.50	

$H_3PMo_{12}O_{40}{\cdot}xH_2O$

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.025%
Ammonium (NH_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.005%

CAS: 51429-74-4 MERCK INDEX: 14,7342 IMO: 8:1759

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phosphoric Acid
BAKER ANALYZED ACS Reagent
(orthophosphoric acid)

0260-02	Glass S/S	500 mL	cac	114.65	
		12 x 500 mL	cac	114.65	1375.80
0260-01	Glass	12 x 500 mL	cac	67.75	813.00
0260-00	Poly Coated	6 x 500 mL	cac	74.60	447.60
0260-05	Glass S/S	2.5 L	cac	174.80	
		6 x 2.5 L	cac	174.80	1048.80
0260-03	Glass	6 x 2.5 L	cac	111.90	671.40
0260-18	Poly	6 x 2.5 L	spr	77.85	467.10
0260-33	Poly Coated	6 x 2.5 L	cac	109.00	654.00
0260-07	Poly Pail	70 lb	bul	Inquire	
0260-08	Poly Drum	200 lb	bul	Inquire	
0260-15	Poly Drum	700 lb	bul	Inquire	

H_3PO_4 FW: 98.00

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (H_3PO_4) (by acidimetry) 85.0-87.0%
Calcium (Ca) ..... max. 0.002%
Color (APHA) ..... max. 10
Insoluble Matter ..... max. 0.001%
Magnesium (Mg) ..... max. 0.002%
Sulfate (SO_4) ..... max. 12 ppm
Volatile Acids (as CH_3COOH) ..... max. 0.001%
Reducing Substances ..... Passes Test
Chloride (Cl) ..... max. 3 ppm
Nitrate (NO_3) ..... max. 5 ppm

Trace Impurities (in ppm):

Antimony (Sb) ..... max. 20
Arsenic (As) ..... max. 0.5
Iron (Fe) ..... max. 10
Heavy Metals (as Pb) ..... max. 8
Manganese (Mn) ..... max. 0.5
Potassium (K) ..... max. 40
Sodium (Na) ..... max. 200

CAS: 7664-38-2 DENSITY: 1 L = 1.69 kg MERCK INDEX: 14,7344
IMO: 8:1805

Acid Spill Cleanup Products available. See pp. 378.

Phosphoric Acid
ULTREX II Ultrapure Reagent

6908-04	Poly	50 g	spr	503.75	

H_3PO_4 FW: 98.00

Certificate Provided Reports Actual Lot Analysis
Analysis of Actual Lot (not specifications)

Appearance ..... Passes Test
Assay (H_3PO_4)(w/w) 91.5%
Density (g/mL) at 25°C 1.69

Trace Impurities (in ppm):

Arsenic (As) 0.002
Boron (B) ..... < 0.0005
Nitrate (NO_3) 2
Silicon (Si) ..... < 0.02
Sulfate (SO_4) 12

Trace Impurities (in ppb):

Aluminum (Al) 5
Antimony (Sb) ..... < 0.1
Barium (Ba) ..... < 0.3
Beryllium (Be) ..... < 0.1

Phosphoric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Bismuth (Bi) ..... < 0.1
Cadmium (Cd) ..... < 0.1
Calcium (Ca) ..... < 5
Cerium (Ce) ..... < 0.1
Cesium (Cs) ..... < 0.1
Chromium (Cr) 1
Cobalt (Co) ..... < 0.1
Copper (Cu) ..... < 5
Dysprosium (Dy) ..... < 0.1
Erbium (Er) ..... < 0.1
Europium (Eu) ..... < 0.1
Gadolinium (Gd) ..... < 0.1
Gallium (Ga) ..... < 0.2
Germanium (Ge) ..... < 0.1
Gold (Au) ..... < 0.1
Holmium (Ho) ..... < 0.1
Indium (In) ..... < 0.1
Iridium (Ir) ..... < 0.1
Iron (Fe) ..... < 0.1
Lanthanum (La) ..... < 0.1
Lead (Pb) ..... < 0.1
Lithium (Li) ..... < 0.1
Lutetium (Lu) ..... < 0.1
Magnesium (Mg) 3
Manganese (Mn) 0.04
Mercury (Hg) ..... < 1
Molybdenum (Mo) ..... < 0.1
Neodymium (Nd) ..... < 0.1
Nickel (Ni) ..... < 1
Niobium (Nb) ..... < 0.1
Palladium (Pd) ..... < 0.1
Platinum (Pt) ..... < 0.1
Potassium (K) ..... < 5
Praseodymium (Pr) ..... < 0.1
Rhodium (Rh) ..... < 0.1
Rubidium (Rb) ..... < 0.1
Ruthenium (Ru) ..... < 0.1
Samarium (Sm) ..... < 0.1
Scandium (Sc) 1.4
Silver (Ag) ..... < 5
Sodium (Na) ..... < 0.1
Strontium (Sr) ..... < 0.1
Tantalum (Ta) ..... < 0.1
Terbium (Tb) ..... < 0.1
Thallium (Tl) ..... < 0.1
Thorium (Th) ..... < 0.1
Thulium (Tm) ..... < 0.1
Tin (Sn) ..... < 0.1
Titanium (Ti) ..... < 1
Tungsten (W) ..... < 0.1
Uranium (U) ..... < 0.1
Vanadium (V) ..... < 0.1
Ytterbium (Yb) ..... < 0.1
Yttrium (Y) ..... < 0.1
Zinc (Zn) ..... < 5
Zirconium (Zr) ..... < 0.1

CAS: 7664-38-2 DENSITY: 1 L = 1.69 kg MERCK INDEX: 14,7344
IMO: 8:1805

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phosphoric Acid
NF, FCC cGMP

0262-02	Glass S/S	500 mL	rac	120.90	
		12 x 500 mL	rac	120.90	1450.80
0262-01	Glass	12 x 500 mL	rac	70.40	844.80
0262-05	Glass S/S	2.5 L	rac	188.40	
		6 x 2.5 L	rac	188.40	1130.40
0262-03	Glass	6 x 2.5 L	rac	116.75	700.50
0262-04	Poly	4 x 4 L	rac	162.90	651.60
0262-06	Poly Pail	70 lb	bul	Inquire	
0262-07	Poly Drum	200 lb	bul	Inquire	
0262-15	Poly Drum	700 lb	bul	Inquire	

H_3PO_4 FW: 98.00

Meets NF & FCC Requirements

Assay (H_3PO_4) 85.0-88.0%
Identification ..... Passes Test
Nitrate (NO_3) ..... Passes Test
Phosphorous or Hypophosphorous Acid ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Arsenic (As) ..... max 3 mg/kg
Cadmium (Cd) ..... max 3 mg/kg
Alkali Phosphates ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Lead (Pb) ..... max 3 mg/kg
Fluoride (F) ..... max 10 mg/kg

CAS: 7664-38-2 DENSITY: 1 L = 1.69 kg MERCK INDEX: 14,7344
IMO: 8:1805

Acid Spill Cleanup Products available. See pp. 378.

Phosphoric Acid, NF
Multi-Compendial cGMP

0268-00	Poly Coated	6 x 500 mL	rac	98.60	591.60
0268-05	Glass S/S	2.5 L	rac	234.00	
		6 x 2.5 L	rac	234.00	1404.00
0268-03	Glass	6 x 2.5 L	rac	144.50	867.00
0268-06	Poly	4 x 4 L	rac	201.00	804.00
0268-15	Poly Drum	700 lb	bul	Inquire	

H_3PO_4 FW: 98.00

Meets NF Requirements

Identification ..... Passes Test
Nitrate (NO_3) ..... Passes Test
Phosphorous or Hypophosphorous Acid ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Alkali Phosphates ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Assay 85.0-88.0%

Meets BP/Ph.Eur. Chemical Specifications

Assay (H_3PO_4) 84.0-90.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Substances Precipitated with Ammonia ..... Passes Test
Phosphorous or Hypophosphorous Acid ..... Passes Test
Chloride (Cl) ..... max. 50 ppm
Sulfate (SO_4) ..... max. 100 ppm
Arsenic (As) ..... max. 2 ppm

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 50 ppm

CAS: 7664-38-2 DENSITY: 1 L = 1.69 kg MERCK INDEX: 14,7344
IMO: 8:1805

Acid Spill Cleanup Products available. See pp. 378.

Phosphoric Acid, Diluted, NF

cGMP

Multi-Compendial
(10% Solution)

5683-07	Hedpak	19 L	bks	Inquire	
5683-09	Poly Drum	425 lb	bul	Inquire	

H_3PO_4 FW: 98.00

Meets NF Requirements

Alkali Phosphates ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Identification ..... Passes Test
Nitrate (NO_3) ..... Passes Test
Phosphorous or Hypophosphorous Acid ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Assay (as H_3PO_4), g/100 mL 9.5-10.5

Meets BP/Ph.Eur. Chemical Specifications

Appearance of Solution ..... Passes Test
Arsenic (As) ..... max. 0.2 ppm
Chloride (Cl) ..... max. 6 ppm
Phosphorous or Hypophosphorous Acid ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Iron (Fe) ..... max. 6 ppm
Heavy Metals (as Pb) ..... max. 1 ppm
Substances Precipitated with Ammonia ..... Passes Test
Sulfate (SO_4) ..... max. 10 ppm
Assay (H_3PO_4) 9.5-10.5%

CAS: 7664-38-2 DENSITY: 1 L = 1.05 kg IMO: 8:1805

Acid Spill Cleanup Products available. See pp. 378.

meta-Phosphoric Acid

BAKER ANALYZED ACS Reagent
(vitreous sodium acid metaphosphate)

0252-01	Poly	500 g	csa	471.25	
		4 x 500 g	csa	314.15	1256.60
0252-05	Poly	2.5 kg	csa	1850.80	
		4 x 2.5 kg	csa	1233.85	4935.40

Meets ACS Specifications

Assay (HPO_3) (by acidimetry) 33.5-36.5%
Stabilizer (as $NaPO_3$) 57.0-63.0%
Nitrate (NO_3) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%

Trace Impurities (in ppm):

Arsenic (As) ..... max. 1
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.005%
Substances Reducing Permanganate (as H_3PO_3) ..... max. 0.02%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

This product contains as a stabilizer a somewhat greater proportion of sodium metaphosphate than that corresponding to the formula $NaH(PO_3)_2$.

CAS: 37267-86-0 MERCK INDEX: 14,7345 IMO: 8:3260

Phosphoric Acid Solution, 33% (W/W)

cGMP

Biotech Reagent

0334-07	Hedpak	19 L	bks	Inquire
0334-09	Poly Drum	200 L	bul	Inquire

H_3PO_4 FW: 98.00

Made from USP Purified Water and Phosphoric Acid, NF (Multicompendial) which meets B.P. and Ph.Eur. Chemical Specifications.

Assay (H_3PO_4) 32.0-34.0%
Alkali Phosphates ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Nitrate (NO_3) ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Identification ..... Passes Test
Phosphorous or Hypophosphorous Acid ..... Passes Test
Arsenic (As) ..... max. 0.2 ppm
Appearance of Solution ..... Passes Test
Chloride (Cl) ..... max. 6 ppm
Filtered through 0.2 micron filter

CAS: 7664-38-2 IMO: 8:1805

Acid Spill Cleanup Products available. See pp. 378.

Phosphorus Pentoxide, Powder

BAKER ANALYZED ACS Reagent
(phosphorus(V) oxide) (phosphoric anhydride)

9374-04	Glass	125 g	non	92.00	
9374-01	Glass	500 g	csa	106.90	
		4 x 500 g	csa	71.25	285.00

P_2O_5 FW: 141.94

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (P_2O_5) ..... min. 99.0%
Insoluble Matter ..... max. 0.01%
Phosphorus Trioxide (P_2O_3) ..... Passes Test
Ammonium (NH_4) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.005%

CAS: 1314-56-3 MERCK INDEX: 14,7355 IMO: 8:1807

Phosphotungstic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phosphotungstic Acid, n-Hydrate, Crystal

BAKER ANALYZED Reagent
(tungstophosphoric acid)

2891-04	Poly	125 g	non	243.85	
2891-01	Poly	500 g	non	715.90	

$P_2O_5 \cdot 24WO_3 \cdot nH_2O$

Meets Reagent Specifications for testing USP/NF monographs

Insoluble Matter .....max. 0.01%
Chloride (Cl) .....max. 0.03%
Nitrate (NO_3) .....max. 0.005%
Sulfate (SO_4) .....max. 0.02%
Ammonium (NH_4) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.005%
Iron (Fe) .....max. 0.003%

CAS: 12067-99-1 MERCK INDEX: 14,7364

1,3-Phthalandione

See Phthalic Anhydride

Phthalic Acid, Monopotassium Salt

See Potassium Biphthalate

Phthalic Anhydride

BAKER ANALYZED ACS Reagent
1,1-Benzene Dicarboxilic Acid

0272-01	Poly	500 g	non	36.30	
0272-05	Poly	2.5 kg	non	63.35	

$C_8H_4O_3$ FW: 148.12

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance .....Passes Test
Assay ($C_8H_4O_3$) 99.0-100.2%
Melting Range .....max. 3°C.
Recorded Melting Point .....131°C.
Residue after Ignition .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.003%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 85-44-9 MERCK INDEX: 14,7372 IMO: 8:2214
FLASH POINT: 152°C

Pimelic Ketone

See under Cyclohexanone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Piperidine, 99%

BAKER

2895-05	Glass	2.5 L	org	297.60	

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$C_5H_{11}N$ FW: 85.15

Assay ($C_5H_{11}N$) (by GC) .....min. 99%
Water (H_2O) .....max. 0.2%

CAS: 110-89-4 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,7468
IMO: 8:2401 FLASH POINT: 16°C

Solvent Spill Cleanup Products available. See pp. 378.

PIPES

ULTRAPURE BIOREAGENT
(piperazine-N,N′-bis(2-ethanesulfonic acid))

4265-00	Poly	25 g	upr	25.00	
4265-01	Poly	100 g	upr	69.90	
4265-04	Poly	1 kg	upr	521.50	
4265-07	Poly Pail	12 kg	bks	Inquire	

$C_8H_{18}N_2O_6S_2$ FW: 302.37

Assay ($C_8H_{18}N_2O_6S_2$) .....min. 99.0%
Appearance .....Passes Test
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.3%
Product Information (not specifications):
pK_a at 20°C 6.80

CAS: 5625-37-6

PIPES

Purified
Suitable for use in biopharmaceutical manufacturing applications

4814-02	Poly	1 kg	bks	Inquire	
4814-04	Poly Pail	5 kg	bks	Inquire	
4814-06	Poly Pail	10 kg	bks	Inquire	
4814-08		25 kg	bul	Inquire	
4814-09		50 kg	bul	Inquire	

$C_8H_{18}N_2O_6S_2$ FW: 302.37

Assay ($C_8H_{18}N_2O_6S_2$) .....min. 99%
Appearance (white powder) .....Passes Test
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 0.005%
Residue after Ignition .....max. 0.3%

CAS: 5625-37-6

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

PIPES, Sodium Salt
ULTRAPURE BIOREAGENT
(piperazine-N,N′-bis(2-ethanesulfonic acid), sodium salt)

4266-01	Poly	100 g	upr	79.45	
4266-04	Poly	1 kg	upr	589.20	
4266-07	Poly Pail	12 kg	bks	Inquire	

$C_8H_{17}N_2Na_{1.5}O_6S_2$ FW: 335.85

Assay ($C_8H_{17}N_2Na_{1.5}O_6S_2$) ..... min. 99.0%
Appearance ..... Passes Test
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.05%
Product Information (not specifications):
pK_a at 20°C 6.80

CAS: 100037-69-2

PIPES, Sodium Salt
Purified
Suitable for Use in Biopharmaceutical Manufacturing Applications

4815-02	Poly	1 kg	bks	Inquire	
4815-04	Poly Pail	5 kg	bks	Inquire	
4815-06	Poly Pail	10 kg	bks	Inquire	
4815-08		25 kg	bul	Inquire	
4815-09		50 kg	bul	Inquire	

$C_8H_{17}N_2Na_{1.5}O_6S_2$ FW: 335.85

Assay ($C_8H_{17}N_2Na_{1.5}O_6S_2$) ..... min. 99.0%
Appearance ..... Passes Test
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.05%

CAS: 100037-69-2

Plasma Standards, Multi-Element
See Analytical Standards Section, p. 94-98

Plasma Standards, Multi-Element for CLP (EPA Contract Laboratory Program)
See Analytical Standards Section, p. 94-98

Platinum, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Platinum, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pt metal in 20% HCl)
Plasma Standard

5740-04		100 mL	spr	451.70	

Pt AW: 195.08

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Platinum, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pt metal in 20% HCl)
Plasma Standard

5773-04		100 mL	spr	150.30	

Pt AW: 195.08

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Platinum, 1000 µg/mL (0.1% w/v)
BAKER INSTRA-ANALYZED Reagent
(Pt metal in 20% HCl)

6463-04	Poly	150 mL	spr	150.20	

Pt AW: 195.08

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Platinum Chloride Solution
BAKER ANALYZED Reagent
(hexachloroplatinic(IV) acid, 10% solution)
10% $H_2PtCl_6 \cdot 6H_2O$

2896-00	Glass	30 g	spr	795.70	
		4 x 30 g	spr	530.45	2121.80

Assay (as Pt) 3.77-3.87%

CAS: 16941-12-1 DENSITY: 1 L = 1.0 kg MERCK INDEX: 14,7528
IMO: 8:3264

Platinum Chloride
See Chloroplatinic Acid

Poly(aziridine)
See Poly(ethyleneimine)

Polyethylene Glycol

Polyethylene Glycol 200, Liquid
BAKER
(av. mol. wt. 190 -210)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
U214-07	Glass S/S	500 mL	non	85.25	
U214-09	Glass	4 L	non	180.65	

Appearance ..... Passes Test
Identification (by IR) ..... Passes Test

CAS: 25322-68-3 MERCK INDEX: 14,7568

Polyethylene Glycol 400, Liquid
BAKER
(av. mol. wt. 380 -420)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
U216-07	Glass S/S	500 mL	non	91.30	
U216-09	Glass	4 L	non	195.45	
U216-01	Poly Pail	19 L	sbo	462.75	

Appearance ..... Passes Test
Identification (by IR) ..... Passes Test

CAS: 25322-68-3 MERCK INDEX: 14,7568

Polyethylene Glycol 1000, Waxy Soft Solid
BAKER
(av. mol. wt. 950 -1050)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
U218-07	Poly	500 mL	non	88.65	
U218-09	Poly	4 L	non	202.50	

Appearance ..... Passes Test
Identification (by IR) ..... Passes Test

CAS: 25322-68-3 MERCK INDEX: 14,7568

Polyethylene Glycol 1450, Waxy Soft Solid
BAKER
(av. mol. wt. 1300 -1600)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
U220-07	Poly	500 mL	non	93.10	
U220-09	Poly	4 L	non	204.35	

Appearance ..... Passes Test
Identification (by IR) ..... Passes Test

CAS: 25322-68-3 MERCK INDEX: 14,7568

Polyethylene Glycol 3350, Powder
BAKER
(av. mol. wt. 3000 -3700)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
U221-08	Glass	1 kg	non	106.00	
U221-09	Poly Pail	2 kg	non	150.20	
U221-01	Lined Fiber Dr	25 kg	bul	Inquire	

Appearance ..... Passes Test
Identification (by IR) ..... Passes Test

CAS: 25322-68-3 MERCK INDEX: 14,7568

Polyethylene Glycol 8000, Crystalline Powder
BAKER
(av. mol. wt. 7000-9000)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
U222-08	Glass	1 kg	non	114.20	
U222-09	Poly	2 kg	non	152.75	
U222-01	Lined Fiber Dr	25 kg	bul	Inquire	

Appearance ..... Passes Test
Viscosity, cSt 470-900
Average Molecular Weight 7000-9000

CAS: 25322-68-3 MERCK INDEX: 14,7568

Polyethylene Glycol 20,000, Flake
BAKER
(av. mol. wt. 15,000 -20,000)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
U204-07	Poly	500 g	non	76.85	
U204-08	Poly	2 kg	non	212.05	

Appearance ..... Passes Test
Identification (by IR) ..... Passes Test

CAS: 25322-68-3 MERCK INDEX: 14,7568

Poly(ethyleneimine) (50% in H_2O)
BAKER

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
U230-08	Glass	1 kg	org	124.65	

$(-CH_2CH_2NH-)_X$

Appearance ..... Passes Test
Identification (by IR) ..... Passes Test
pH of 5% Solution in water ..... Actual Value Reported
Residue after Evaporation ..... Actual Value Reported
Viscosity ..... Actual Value Reported

CAS: 9002-98-6

Polyoxyethylene (20) Sorbitan Monolaurate
Practical

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
X251-07	Glass	500 mL	non	70.80	
X251-09	Glass	4 L	non	500.40	

CAS: 9005-64-5 DENSITY: 1 L = 1.11 kg FLASH POINT: 148°C

Polyoxyethylene (20) Sorbitan Monooleate
Practical

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
X257-07	Glass	500 mL	non	72.35	
X257-09	Glass	4 L	non	455.55	
X257-01	Poly Pail	19 L	non	1916.30	

CAS: 9005-65-6 DENSITY: 1 L = 1.08 kg MERCK INDEX: 14,7582
FLASH POINT: 148°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Polysorbate 20

cGMP

NF
Vegetable-based
(polyoxyethylene (20) sorbitan monolaurate)

4034-01	Glass S/S	500 mL	rnc	72.20	

Meets NF Requirements

Acid Value ..... max. 2.2
Heavy Metals (as Pb) ..... max. 0.001%
Hydroxyl Value 96-108
Identification A ..... Passes Test
Identification B ..... Passes Test
Residue on Ignition ..... max. 0.25%
Saponification Value 40-50
Water (H_2O) ..... max. 3.0%

CAS: 9005-64-5 DENSITY: 1 L = 1.11 kg FLASH POINT: 148°C

Polysorbate 20, NF

cGMP

Multi-Compendial
(polyoxyethylene (20) sorbitan monolaurate)
CRILLET 1 HP

4116-02	Glass	20 mL	spr	55.15	
4116-04	Glass	200 mL	spr	75.75	
4116-06	Glass	1 L	spr	224.40	
4116-12	Septum-Seal Cap	1 L	spr	258.90	
4116-03	Glass	4 L	spr	729.75	
4116-07	Lined Steel Dr	19 L	bks	Inquire	

Vegetable Based
This product utilizes ingredients of non-animal origin and non-peanut origin.

Meets NF Requirements

Acid Value ..... max. 2.2
Appearance (lemon to amber liquid that may contain white particular matter-Sodium Laurate-due to the anhydrous nature and the preparation of this product) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Hydroxyl Value 96-108
Identification A ..... Passes Test
Identification B ..... Passes Test
Residue on Ignition ..... max. 0.25%
Saponification Value 40-50
Water (H_2O) ..... max. 3.0%

Meets BP/Ph.Eur. Chemical Specifications

Acid Value ..... max. 2.0
Total Ash ..... max. 0.25%

Composition of Fatty Acids

Caproic Acid ..... max. 1.0%
Caprylic Acid ..... max. 10.0%
Capric Acid ..... max. 10.0%
Lauric Acid 40.0-60.0%
Myristic Acid 14.0-25.0%
Palmitic Acid 7.0-15.0%
Stearic Acid ..... max. 7.0%
Oleic Acid ..... max. 11.0%
Linoleic Acid ..... max. 3.0%

Heavy Metals (as Pb) ..... max. 10 ppm
Hydroxyl Value 96-108
Identification A ..... Passes Test
Identification D ..... Passes Test
Peroxide Value ..... max. 10.0
Saponification Value 40-50
Water (H_2O) ..... max. 3.0%
Ethylene Oxide ..... max. 1 ppm
Dioxan ..... max. 10 ppm
Appearance ..... Passes Test
pH of 5% Solution at 25°C 5.0-7.0
Arsenic (As) ..... max. 1 ppm
Peroxide Value ..... max. 2.0
Endotoxin Concentration (EU/mL) ..... max. 10

Microbiological:

Total Plate Count (opg) ..... max. 100
Escherichia Coli ..... Passes Test
Pseudomonas aeruginosa ..... Passes Test
Salmonella ..... Passes Test
Staphylococcus aureus ..... Passes Test
Yeast and Mold (opg) ..... max. 50

Water (H_2O) ..... max. 0.2%

Meets JPE Specifications

Identification 1 ..... Passes Test
Identification 2 ..... Passes Test
Identification 3 ..... Passes Test
Moisture Content ..... max. 3.00%
Acid Value ..... max. 4.00
Saponification Value (mg KOH/g) 43.00-55.00
pH 4.0-7.0
Residue on Ignition ..... max. 0.25%
Specific Gravity at 20°C 1.090-1.130
Viscosity (mm^2/S) 350.0-550.0
Purity 1 ..... max. 20 ppm
Purity 2 ..... max. 2 ppm

Store in airtight container, protected from light

CAS: 9005-64-5 DENSITY: 1 L = 1.11 kg FLASH POINT: 148°C

Polysorbate 20

See also Polyoxyethylene (20) Sorbitan Monolaurate

Polysorbate 80

cGMP

NF
(polyoxyethylene (20) sorbitan monooleate)

2903-01	Glass	500 mL	rnc	61.45	

Meets NF Requirements

Acid Value ..... max. 2.2
Heavy Metals (as Pb) ..... max. 0.001%
Hydroxyl Value 65-80
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Residue on Ignition ..... max. 0.25%
Saponification Value 45-55
Specific Gravity at 25°/25°C 1.06-1.09
Viscosity at 25.0°C, cSt 300-500
Water (H_2O) ..... max. 3.0%

CAS: 9005-65-6 DENSITY: 1 L = 1.08 kg MERCK INDEX: 14,7582
FLASH POINT: 148°C

Polysorbate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Polysorbate 80, NF

cGMP

Multi-Compendial
(polyoxyethylene (20) sorbitan monooleate)
CRILLET 4 HP

4117-02	Glass	20 mL	spr	57.95	
4117-04	Glass	200 mL	spr	83.05	
4117-06	Glass	1 L	spr	241.80	
4117-12	Septum-Seal Cap	1 L	spr	273.95	
4117-03	Glass	4 L	spr	805.10	
4117-07	Lined Steel Dr	19 L	bks	Inquire	

Vegetable Based

Meets NF Requirements

Acid Value ..... max. 2.2
Heavy Metals (as Pb) ..... max. 0.001%
Hydroxyl Value 65-80
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Residue on Ignition ..... max. 0.25%
Saponification Value 45-55
Specific Gravity at 25°/25°C 1.06-1.09
Viscosity at 25.0°C, cSt 300-500
Water (H_2O) ..... max. 3.0%

Meets Ph.Eur. Chemical Specifications

Acid Value ..... max. 2.0
Total Ash ..... max. 0.25%
Heavy Metals (as Pb) ..... max. 10 ppm
Hydroxyl Value 65-80
Identification A ..... Passes Test
Identification D ..... Passes Test
Peroxides, meq/1000g ..... max. 10.0
Ethylene Oxide ..... max. 1 ppm
Dioxan ..... max. 10 ppm
Saponification Value 45-55
Water (H_2O) ..... max. 3.0%

Composition of Fatty Acids

Myristic Acid ..... max. 5.0%
Palmitic Acid ..... max. 16.0%
Palmitoleic Acid ..... max. 8.0%
Stearic Acid ..... max. 6.0%
Oleic Acid ..... min. 58.0%
Linoleic Acid ..... max. 18.0%
Linolenic Acid ..... max. 4.0%

Meets JP Chemical Specifications

Appearance ..... Passes Test
pH of 5% Aqueous Solution 5.5-7.5
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Viscosity at 25.0°C, $(mm/S)^2$ 345-445
Specific Gravity at 20°/20°C 1.065-1.095
Acid Value ..... max. 2.0
Saponification Value 45-55
Iodine Value 19-24
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Water (H_2O) ..... max. 3.0%
Residue on Ignition ..... max. 0.1%

Additional Tests:

Color (Gardner) ..... max. 7
Odor (Faint) ..... Passes Test
Water (H_2O) ..... max. 0.2%
Peroxides, meq/1000g ..... max. 2.0
Endotoxin Concentration (EU/mL) ..... max. 10

Organic Volatile Impurities:

Free Ethylene Oxide ..... max. 1 ppm
1,4-Dioxane ..... max. 5 ppm

Microbiological:

Total Plate Count (opg) ..... max. 100
Escherichia Coli ..... Passes Test
Pseudomonas aeruginosa ..... Passes Test
Salmonella ..... Passes Test
Staphylococcus aureus ..... Passes Test
Yeast and Mold (opg) ..... max. 50

CAS: 9005-65-6 DENSITY: 1 L = 1.08 kg MERCK INDEX: 14,7582
FLASH POINT: 148°C

Polysorbate 80, Vegetable NF Super Refined

cGMP

Multi-Compendial
(polyoxyethylene (20) sorbitan monooleate)

4500-04	Glass	200 mL	spr	Inquire	
4500-06	Glass	1 L	spr	Inquire	
4500-03	Glass	4 L	spr	Inquire	

Vegetable Based

Meets NF Requirements

Acid Value ..... max. 2.2
Heavy Metals (as Pb) ..... max. 0.001%
Hydroxyl Value 65-80
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Residue on Ignition ..... max. 0.25%
Saponification Value 45-55
Specific Gravity at 25°/25°C 1.06-1.09
Viscosity at 25.0°C, cSt 300-500
Water (H_2O) ..... max. 3.0%

Meets EP Chemical Specifications

Acid Value ..... max. 2.0
Total Ash ..... max. 0.25%
Heavy Metals (as Pb) ..... max. 10 ppm
Hydroxyl Value 65-80
Identification A ..... Passes Test
Identification D ..... Passes Test
Peroxide Value ..... max. 10.0
Ethylene Oxide ..... max. 1 ppm
Dioxan ..... max. 10 ppm
Saponification Value 45-55
Water (H_2O) ..... max. 3.0%

Composition of Fatty Acids

Myristic Acid ..... max. 5.0%
Palmitic Acid ..... max. 16.0%
Palmitoleic Acid ..... max. 8.0%
Stearic Acid ..... max. 6.0%
Oleic Acid ..... min. 58.0%
Linoleic Acid ..... max. 18.0%
Linolenic Acid ..... max. 4.0%

Meets JP Chemical Specifications

Appearance ..... Passes Test
pH of 5% Aqueous Solution 5.5-7.5
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Viscosity at 25.0°C, $(mm/S)^2$ 345-445
Specific Gravity at 20°/20°C 1.065-1.095

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acid Value ..... max. 2.0
Saponification Value 45-55
Iodine Value 19-24
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Water (H_2O) ..... max. 3.0%
Residue on Ignition ..... max. 0.1%
Additional Tests:
Color (APHA) ..... max. 150
Odor ..... Passes Test
Water (H_2O) ..... max. 0.2%
Peroxide Value (meq/kg) ..... max. 2.0
Endotoxin Concentration (EU/mL) ..... max. 2
Microbiological:
Total Plate Count (opg) ..... max. 100
Escherichia coli ..... Passes Test
Pseudomonas aeruginosa ..... Passes Test
Salmonella ..... Passes Test
Staphylococcus aureus ..... Passes Test
Yeast and Mold (opg) ..... max. 50
1,4-Dioxane ..... max. 5 ppm
Formaldehyde ..... max. 10 ppm
Sodium (Na) ..... max. 5 ppm
Potassium (K) ..... max. 5 ppm

CAS: 9005-65-6 DENSITY: 1 L = 1.08 kg MERCK INDEX: 14,7582
FLASH POINT: 148°C

Polysorbate 80

See also Polyoxyethylene (20) Sorbitan Monooleate

Polyvinyl Alcohol, 99.0-99.8% Fully Hydrolyzed

BAKER
Molecular Weight 77,000-79,000

U228-08	Glass	1 kg	non	90.70	

Viscosity of 4% Aqueous Solution at 20°C (cps) 27-33
Identification (by IR) ..... Passes Test
Product Information (not specifications):
pH of 4% Aqueous Solution 5-7
Volatile Matter 4%-6%
Ash (as Na_2O, corrected volatiles) 0.5%-1.5%

CAS: 9002-89-5 MERCK INDEX: 14,7585 FLASH POINT: 79°C

Polyvinyl Alcohol, 99.3+% Super Hydrolyzed

BAKER
Molecular Weight 106,000-110,000

U227-08	Glass	1 kg	non	126.05	

Viscosity of 4% Aqueous Solution at 20°C (cps) 62-72
Identification (by IR) ..... Passes Test
Product Information (not specifications):
pH of 4% Aqueous Solution 5.5-7.5
Volatile Matter 4%-6%
Ash (as Na_2O, corrected volatiles) 0.5%-1.5%

CAS: 9002-89-5 MERCK INDEX: 14,7585 FLASH POINT: 79°C

Polyvinyl Alcohol, 98.0-98.8% Fully Hydrolyzed

BAKER
Molecular Weight 11,000-31,000

U229-08	Poly	1 kg	non	150.25	

Viscosity of 4% Aqueous Solution at 20°C (cps) 5-7
Identification (by IR) ..... Passes Test
Product Information (not specifications):
pH of 4% Aqueous Solution 5-7
Volatile Matter 4%-6%
Ash (as Na_2O, corrected volatiles) 0.5%-1.5%

CAS: 9002-89-5 MERCK INDEX: 14,7585 FLASH POINT: 79°C

Polyvinyl Alcohol, 87.0-89.0% Partially Hydrolyzed

BAKER
Molecular Weight 11,000-31,000

U232-08	Glass	1 kg	non	125.55	

Viscosity of 4% Aqueous Solution at 20°C (cps) 4-7
Identification (by IR) ..... Passes Test
pH of 4% Aqueous Solution 4.5-6.5
Loss on Drying at 110°C ..... max. 5%
Residue after Ignition ..... max. 0.75%

CAS: 9002-89-5 MERCK INDEX: 14,7585 FLASH POINT: 79°C

Ponceau B (BS or 3RB)

See Biebrich Scarlet

Positive Displacement SPE Processor

See Analytical Chromatography Section, p. 22-45

Potassium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Potassium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(potassium nitrate in 5% HNO_3)
Plasma Standard

5741-04		100 mL	spr	114.60	

K AW: 39.10

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Potassium

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Potassium Nitrate in 5% HNO_3)
Plasma Standard

5774-04		100 mL	spr	72.00	

K AW: 39.10

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Potassium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(potassium nitrate in 5% HNO_3)

6464-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

K AW: 39.10

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Potassium Acetate, Crystal
BAKER ANALYZED ACS Reagent

2912-01	Poly	500 g	csa	105.70	
		4 x 500 g	csa	70.45	281.80
2912-05	Poly	2.5 kg	csa	491.85	
		4 x 2.5 kg	csa	327.90	1311.60
2912-R	Poly Drum	175 lb	bul	Inquire	

CH_3COOK FW: 98.14

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (CH_3COOK) (by non-aqueous titration) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 6.5-9.0
Chloride (Cl) ..... max. 0.003%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.002%
Sodium (Na) ..... max. 0.03%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 127-08-2 MERCK INDEX: 14,7605

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Acetate, Crystal
ULTRAPURE BIOREAGENT

2915-01	Poly	500 g	upr	60.25	
2915-07	Poly Pail	12 kg	bks	Inquire	

CH_3COOK FW: 98.14

Assay (CH_3COOK) (by non-aqueous titration) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 6.5-9.0
Chloride (Cl) ..... max. 0.003%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Sodium (Na) ..... max. 0.03%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Trace Impurities (in ppm):
Calcium (Ca) ..... max. 5
Copper (Cu) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
Magnesium (Mg) ..... max. 5
Manganese (Mn) ..... max. 5

CAS: 127-08-2 MERCK INDEX: 14,7605

Potassium Acetate, Granular
USP

cGMP

2914-01	Poly	500 g	rss	127.95	
		4 x 500 g	rss	85.30	341.20
2914-05	Poly	2.5 kg	rnc	359.80	
2914-R	Poly Drum	175 lb	bul	Inquire	

CH_3COOK FW: 98.14

Meets USP Requirements
Assay (CH_3COOK) (dried basis) 99.0-100.5%
Heavy Metals (as Pb) ..... max. 0.002%
Identification ..... Passes Test
Loss on Drying ..... max. 1.0%
pH (1 in 20) 7.5-8.5
Residual Acetic Acid ..... Actual Value Reported
Sodium (Na) ..... max. 0.03%

CAS: 127-08-2 MERCK INDEX: 14,7605

Potassium Acetate, Granular, USP
Multi-Compendial
Endotoxin Tested

cGMP

2917-05	Poly	2.5 kg	rss	417.70	
		4 x 2.5 kg	rss	278.45	1113.80
2917-07	Poly Pail	12 kg	bks	Inquire	
2917-R	Poly Drum	175 lb	bul	Inquire	

CH_3COOK FW: 98.14

Meets USP Requirements
Assay (CH_3COOK) (dried basis) 99.0-100.5%
Endotoxin Concentration (2.5 EU/g max.) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Identification ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Loss on Drying ..... max. 1.0%
pH (1 in 20) 7.5-8.5
Residual Acetic Acid ..... Actual Value Reported
Sodium (Na) ..... max. 0.03%

Meets BP/Ph.Eur. Chemical Specifications

Assay (CH_3COOK) (dried basis) 99.0-101.0%
Aluminum (Al) ..... max. 1 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
pH (1 in 20) 7.5-9.0
Reducing Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 200 ppm
Iron (Fe) ..... max. 20 ppm
Heavy Metals (as Pb) ..... max. 4 ppm
Sodium (Na) ..... max. 0.50%
Loss on Drying ..... max. 3.0%

Additional Analytical Control(s):

Arsenic (As) ..... max. 8 ppm

CAS: 127-08-2 MERCK INDEX: 14,7605

Potassium Acid Carbonate

See Potassium Bicarbonate

Potassium Acid Phosphate

See Potassium Phosphate, Monobasic

Potassium Acid Phthalate

See Potassium Biphthalate

Potassium Acid Sulfate

See Potassium Bisulfate

Potassium Alum

See Aluminum Potassium Sulfate

Potassium Aluminum Sulfate

See Aluminum Potassium Sulfate

Potassium Antimony Tartrate

See Antimony Potassium Tartrate, Trihydrate, Powder

Potassium Bicarbonate, Granular

BAKER ANALYZED ACS Reagent
(potassium hydrogen carbonate)

2940-01	Poly	500 g	csa	63.10	
		4 x 500 g	csa	42.05	168.20

$KHCO_3$ FW: 100.12

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Assay ($KHCO_3$) (dried basis) 99.7-100.5%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.001%
Sulfur Compounds (as SO_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.002%
Sodium (Na) ..... max. 0.03%

Trace Impurities (in ppm):

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phosphate (PO_4) ..... max. 5
Ammonium (NH_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 298-14-6 MERCK INDEX: 14,7609

Potassium Bichromate

See Potassium Dichromate

Potassium Biphosphate

See under Potassium Phosphate, Monobasic

Potassium Biphthalate

ULTREX Ultrapure Reagent
(potassium hydrogen phthalate)
For Primary Standard and Research Applications

4889-03	Glass	25 g	spr	418.85	

1-$KOCOC_6H_4$-2-COOH FW: 204.22

Certificate Provided Reports Actual Lot Analysis

Analysis of Actual Lot (not specifications)

Assay (1-$KOCOC_6H_4$-2-COOH) (dried basis) 100.01%
Identification (by IR) ..... Passes Test
Particulate Matter 0.006%
pH of 0.05M Solution at 25°C 4.01

Non-Metallic Impurities (in ppm)(µg/g):

Chlorine Compounds (as Cl) 30
Silicon (Si) ..... < 0.1
Sulfur Compounds (as S) ..... < 20

Metallic Impurities (in ppm)(µg/g):

Aluminum (Al) 0.2
Barium (Ba) ..... < 0.1
Bismuth (Bi) ..... < 0.1
Cadmium (Cd) ..... < 0.1
Calcium (Ca) ..... < 0.1
Chromium (Cr) ..... < 0.1
Cobalt (Co) 0.3
Copper (Cu) 0.2
Iron (Fe) ..... < 0.1
Lead (Pb) 7.3
Magnesium (Mg) 2.3
Manganese (Mn) ..... < 0.1
Mercury (Hg) 3.8
Molybdenum (Mo) ..... < 0.1
Nickel (Ni) 0.3
Niobium (Nb) ..... < 0.1
Silver (Ag) 0.1
Sodium (Na) 3.4
Strontium (Sr) ..... < 0.1
Tin (Sn) ..... < 0.1
Titanium (Ti) ..... < 0.1
Vanadium (V) ..... < 0.1
Zinc (Zn) 0.1
Zirconium (Zr) ..... < 0.1

CAS: 877-24-7 MERCK INDEX: 14,7612

Potassium Biphthalate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Biphthalate, Crystal

BAKER ANALYZED ACS Reagent
(potassium hydrogen phthalate)
Acidimetric Standard

2958-00	Poly	100 g	non	91.50	
2958-01	Poly	500 g	non	189.10	
2958-05	Poly	2.5 kg	non	284.20	
2958-07	Poly Pail	12 kg	bks	Inquire	

1-$KOCOC_6H_4$-2-COOH FW: 204.22

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (1-$KOCOC_6H_4$-2-COOH) (dried basis) 99.95-100.05%
Insoluble Matter ..... max. 0.005%
pH of 0.05M Solution at 25°C 4.00-4.02
Chlorinated Compounds (as Cl) ..... max. 0.003%
Sulfur Compounds (as S) ..... max. 0.002%
Sodium (Na) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 877-24-7 MERCK INDEX: 14,7612

Potassium Bisulfate, Crystal

BAKER ANALYZED Reagent
(potassium hydrogen sulfate)

2960-01	Poly	500 g	csa	130.65	
		4 x 500 g	csa	87.10	348.40
2960-05	Glass	2.5 kg	csa	473.20	
		4 x 2.5 kg	csa	315.45	1261.80

$KHSO_4$ FW: 136.17

Acidity (as H_2SO_4) 35.0-37.0%
Insoluble Matter and NH_4OH Precipitate ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Calcium and Magnesium (as Ca) (by EDTA titration) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%

CAS: 7646-93-7 MERCK INDEX: 14,7613 IMO: 8:2509

Potassium Bisulfate, Fused

See Potassium Pyrosulfate

Potassium meta-Bisulfite, Crystal

BAKER ANALYZED Reagent
(potassium pyrosulfite)

2976-01	Poly	500 g	csa	143.80	
		4 x 500 g	csa	95.85	383.40
2976-05	Poly	2.5 kg	non	345.60	

$K_2S_2O_5$ FW: 222.33

Assay ($K_2S_2O_5$) (by iodometry) ..... min. 95.0%
Insoluble Matter ..... Actual Value Reported
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1

CAS: 16731-55-8 MERCK INDEX: 14,7645

Potassium Bromate, 0.1N Volumetric Solution

BAKER ANALYZED Reagent

5629-02	Poly	1 L	sol	55.10	
		6 x 1 L	sol	45.90	275.40

$KBrO_3$ FW: 167.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.0995-0.1005

CAS: 7758-01-2

Potassium Bromate

BAKER ANALYZED ACS Reagent

2992-01	Glass	500 g	non	97.20	

$KBrO_3$ FW: 167.00

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($KBrO_3$) (by iodometry) ..... min. 99.8%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 5.0-9.0
Bromide (Br) ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%
Iron (Fe) ..... max. 0.002%
Sodium (Na) ..... max. 0.01%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5

CAS: 7758-01-2 MERCK INDEX: 14,7617 IMO: 5.1:1484

Potassium Bromide
BAKER INSTRA-ANALYZED Reagent
For Infrared Analysis

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2961-03	Glass	25 g	spr	153.40	
2961-05	Glass	100 g	spr	507.30	

KBr FW: 118.99

Assay (KBr) (by Ag titrn) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Loss on Drying at 105°C .....max. 0.05%
pH of 5% Solution at 25°C 5.0-7.5
Nitrogen Compounds (as N) .....max. 0.0005%
Sulfate (SO_4) .....max. 0.002%
Suitability for Infrared Analysis .....Passes Test

CAS: 7758-02-3 MERCK INDEX: 14,7618

Potassium Bromide, Crystal
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2998-01	Poly	500 g	csa	135.75	
		4 x 500 g	csa	90.50	362.00
2998-05	Poly	2.5 kg	csa	538.90	
		4 x 2.5 kg	csa	359.25	1437.00
2998-07	Poly Pail	12 kg	bks	Inquire	

KBr FW: 118.99

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KBr) (by Ag titrn) .....min. 99.0%
Insoluble Matter .....max. 0.005%
pH of 5% Solution at 25°C 5.0-8.8
Bromate (BrO_3) .....max. 0.001%
Iodate (IO_3) .....max. 0.001%
Chloride (Cl) .....max. 0.2%
Iodide (I) .....max. 0.001%
Nitrogen Compounds (as N) .....max. 0.005%
Sulfate (SO_4) .....max. 0.005%
Barium (Ba) .....max. 0.002%
Calcium (Ca) .....max. 0.002%
Magnesium (Mg) .....max. 0.001%
Sodium (Na)(by FES) .....max. 0.02%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 7758-02-3 MERCK INDEX: 14,7618

For more information about products for use in Academic institutions, see pages 91-93.

Potassium Carbonate, 1.5-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3010-01	Poly	500 g	csa	92.95	
		4 x 500 g	csa	61.95	247.80
3010-05	Poly	2.5 kg	csa	321.90	
		4 x 2.5 kg	csa	214.60	858.40
3010-R	Poly Drum	250 lb	bul	Inquire	

$K_2CO_3 \cdot 1.5H_2O$ FW: 165.24

Meets ACS Specifications
Assay ($K_2CO_3 \cdot 1.5H_2O$) 98.5-101.0%
Insoluble Matter .....max. 0.01%
Loss on Heating at 285°C 14.0-16.5%
Calcium (Ca) .....max. 0.005%
Chloride (Cl) .....max. 0.003%
Magnesium (Mg) .....max. 0.002%
Nitrogen Compounds (as N) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Silica (SiO_2) .....max. 0.005%
Sulfur Compounds (as SO_4) .....max. 0.004%
Ammonium Hydroxide Precipitate .....max. 0.01%
Sodium (Na) .....max. 0.02%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 6381-79-9 MERCK INDEX: 14,7619

Potassium Carbonate, Anhydrous, Granular
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3012-01	Glass	500 g	csa	99.10	
		4 x 500 g	csa	66.05	264.20
3012-05	Glass	2.5 kg	csa	372.25	
		4 x 2.5 kg	csa	248.15	992.60
3012-07	Poly Pail	12 kg	bks	Inquire	
3012-09	Lined Fiber Dr	100 lb	bul	Inquire	
3012-R	Poly Drum	225 lb	bul	Inquire	

K_2CO_3 FW: 138.21

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (K_2CO_3) (by acid-base titration) .....min. 99.0%
Insoluble Matter .....max. 0.01%
Calcium (Ca) .....max. 0.002%
Chloride (Cl) .....max. 0.003%
Magnesium (Mg) .....max. 0.002%
Phosphate (PO_4) .....max. 0.001%
Silica (SiO_2) .....max. 0.005%
Sulfur Compounds (as SO_4) .....max. 0.004%
Sodium (Na) .....max. 0.02%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 584-08-7 MERCK INDEX: 14,7619

Potassium Carbonate

Potassium Carbonate, Anhydrous, Granular
FCC

FOOD GRADE cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3014-05	Poly	2.5 kg	csa	382.95	
		4 x 2.5 kg	csa	255.30	1021.20
3014-08	Poly Drum	220 lb	bul	Inquire	

K_2CO_3 FW: 138.21

Meets FCC Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Assay (K_2CO_3) (dried basis) 99.0-100.5%
Loss on Drying ..... max. 1%
Insoluble Substances ..... Passes Test
Lead (Pb) ..... max 2 mg/kg

CAS: 584-08-7 MERCK INDEX: 14,7619

Potassium Chlorate, Crystal
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3024-01	Glass	500 g	csa	130.45	
		4 x 500 g	csa	86.95	347.80
3024-07	Poly Pail	12 kg	bks	Inquire	

$KClO_3$ FW: 122.55

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($KClO_3$) (by $KMnO_4$ titrn) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 5.0-6.5
Bromate (BrO_3) ..... max. 0.01%
Calcium (Ca) ..... max. 0.002%
Chloride (Cl) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.002%
Sulfate (SO_4) ..... Passes Test
Sodium (Na) ..... max. 0.01%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 2

CAS: 3811-04-9 MERCK INDEX: 14,7620 IMO: 5.1:1485

Potassium Chloride, Crystal
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3040-01	Poly	500 g	csa	58.20	
		4 x 500 g	csa	38.80	155.20
3040-19	Poly	1 kg	csa	90.60	
		4 x 1 kg	csa	60.40	241.60
3040-05	Poly	2.5 kg	csa	163.65	
		4 x 2.5 kg	csa	109.10	436.40
3040-07	Flowmor	12 kg	bks	Inquire	
3040-09	Poly Drum	100 lb	bul	Inquire	
3040-R		250 lb	bul	Inquire	

KCl FW: 74.55

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (KCl) (by Ag titrn) 99.0-100.5%
Loss on Drying at 105°C ..... max. 1.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 5.4-8.6
Iodide (I) ..... max. 0.002%
Bromide (Br) ..... max. 0.01%
Calcium (Ca) ..... max. 0.002%
Chlorate and Nitrate (as NO_3) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.001%
Barium (Ba) ..... Passes Test
Sodium (Na)(by FES) ..... max. 0.005%
Trace Impurities (in ppm):
Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Arsenic (As) ..... max. 1
Iron (Fe) ..... max. 2
Nickel (Ni) ..... max. 1

CAS: 7447-40-7 MERCK INDEX: 14,7621

Potassium Chloride, Crystal
ULTRAPURE BIOREAGENT

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4001-01	Poly	500 g	upr	31.30	
4001-05	Poly	2.5 kg	upr	95.00	

KCl FW: 74.55

Assay (KCl) (by Ag titrn) 99.0-100.5%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Loss on Drying at 105°C ..... max. 1.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 5.4-8.6
Iodide (I) ..... max. 0.002%
Bromide (Br) ..... max. 0.1%
Barium (Ba) ..... max. 0.001%
Calcium, Magnesium, and R_2O_3 Precipitate ..... max. 0.005%
Sodium (Na) ..... max. 0.005%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Arsenic (As) ..... max. 1
Iron (Fe) ..... max. 2
Nickel (Ni) ..... max. 1

CAS: 7447-40-7 MERCK INDEX: 14,7621

Potassium Chloride, Crystal
USP, FCC cGMP

3046-01	Poly	500 g	rss	76.30	
		4 x 500 g	rss	50.85	203.40
3046-05	Poly	2.5 kg	rss	215.10	
		4 x 2.5 kg	rss	143.40	573.60
3046-07	Poly Pail	12 kg	bks	Inquire	
3046-R	Lined Fiber Dr	250 lb	bul	Inquire	

KCl FW: 74.55

Meets USP & FCC Requirements
Assay (KCl) (dried basis) 99.0-100.5%
Appearance (White crystals) ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Calcium and Magnesium ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Bromide (Br) ..... max. 0.1%
Iodides (I) ..... max. 0.005%
Iodide and/or Bromide ..... Passes Test
Loss on Drying ..... max. 1.0%
Sodium (Na) ..... Passes Test

CAS: 7447-40-7 MERCK INDEX: 14,7621

Potassium Chloride, Crystal, USP
Multi-Compendial cGMP

3045-01	Poly	500 g	rss	91.80	
		4 x 500 g	rss	61.20	244.80
3045-05	Poly	2.5 kg	rss	260.50	
		4 x 2.5 kg	rss	173.65	694.60
3045-07	Poly Pail	12 kg	bks	Inquire	
3045-09	Poly Drum	100 lb	bul	Inquire	

KCl FW: 74.55

Meets USP Requirements
Assay (KCl) (dried basis) 99.0-100.5%
Acidity or Alkalinity ..... Passes Test
Bromide (Br) ..... max. 0.1%
Calcium and Magnesium ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 2.5
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Iodides (I) ..... max. 0.005%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Loss on Drying ..... max. 1.0%
Sodium (Na) ..... Passes Test
Solution Test ..... Passes Test

Meets BP/Ph.Eur. Chemical Specifications
Assay (KCl) (dried basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Bromide (Br) ..... max. 0.1%
Iodide (I) ..... Passes Test
Sulfate (SO_4) ..... max. 300 ppm
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 20 ppm
Magnesium and Alkaline Earth Metals ..... max. 200 ppm
Loss on Drying at 105°C ..... max. 1.0%

Meets JP Chemical Specifications
Assay (KCl) (dried basis) 99-101%
Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Bromide (Br) ..... Passes Test
Iodide (I) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Calcium and Magnesium ..... Passes Test
Sodium (Na) ..... Passes Test
Arsenic (As) ..... max. 2 ppm
Loss on Drying ..... max. 0.5%
Preserve in well-closed containers.

CAS: 7447-40-7 MERCK INDEX: 14,7621

Potassium Chloride, Powder
USP, FCC cGMP

3052-01	Poly	500 g	rnc	70.65	
3052-05	Poly	2.5 kg	rnc	221.15	

KCl FW: 74.55

Meets USP & FCC Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Bromide (USP) ..... max. 0.1%
Loss on Drying ..... max. 1.0%
Iodide (USP) ..... max. 0.005%
Iodide or Bromide (FCC) ..... Passes Test
Calcium and Magnesium ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Sodium (Na) ..... Passes Test
Assay (KCl) (dried basis) 99.0-100.5%
Mesh:
Thru U.S. No. 50 Sieve ..... min. 96%

CAS: 7447-40-7 MERCK INDEX: 14,7621

Potassium Chromate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Chromate, Crystal
BAKER ANALYZED ACS Reagent

3058-04	Poly	125 g	csa	73.60	
		4 x 125 g	csa	49.05	196.20
3058-01	Poly	500 g	csa	118.50	
		4 x 500 g	csa	79.00	316.00
3058-05	Poly	2.5 kg	csa	481.05	
		4 x 2.5 kg	csa	320.70	1282.80
3058-07	Poly Pail	12 kg	bks	Inquire	

K_2CrO_4 FW: 194.19

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (K_2CrO_4) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 8.6-9.8
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.03%
Calcium (Ca) ..... max. 0.005%
Sodium (Na)(by FES) ..... max. 0.02%

CAS: 7789-00-6 MERCK INDEX: 14,7622 IMO: 5.1:3085

Potassium Citrate, Monohydrate, Granular
BAKER ANALYZED Reagent

3066-01	Poly	500 g	csa	72.25	
		4 x 500 g	csa	48.15	192.60

$HOC(COOK)(CH_2COOK)_2{\cdot}H_2O$ FW: 324.42

Assay ($HOC(COOK)(CH_2COOK)_2{\cdot}H_2O$) 99.0-101.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 7.0-9.0
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Sodium (Na) ..... max. 0.2%
Trace Impurities (in ppm):
Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5

CAS: 6100-05-6 MERCK INDEX: 14,7623

Potassium Citrate, Monohydrate, Granular
USP, FCC

cGMP

3068-01	Glass	500 g	rnc	72.65	
3068-05	Glass	2.5 kg	rss	227.70	
		4 x 2.5 kg	rss	151.80	607.20

$HOC(COOK)(CH_2COOK)_2{\cdot}H_2O$ FW: 324.42

Meets USP & FCC Requirements
Identification ..... Passes Test
Alkalinity ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Loss on Drying 3.0-6.0%
Tartrate ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Assay ($C_6H_5K_3O_7$) (dried basis) 99.0-100.5%

CAS: 6100-05-6 MERCK INDEX: 14,7623

Potassium Cyanide, Granular
BAKER ANALYZED ACS Reagent

3080-04	125 g	non	54.15	
3080-01	500 g	non	97.00	
3080-05	2.5 kg	non	328.10	
3080-07	12 kg	bks	Inquire	

KCN FW: 65.12

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KCN) (by Ag titrn) ..... min. 96.0%
Chloride (Cl) ..... max. 0.5%
Phosphate (PO_4) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.04%
Sulfide (S) ..... max. 0.003%
Thiocyanate (SCN) ..... Passes Test
Iron (Fe) ..... max. 0.03%
Sodium (Na) ..... max. 0.5%
Trace Impurities (in ppm):
Lead (Pb) ..... max. 2

CAS: 151-50-8 MERCK INDEX: 14,7626 IMO: 6.1:1680

Potassium Dichromate, Crystal
BAKER ANALYZED ACS Reagent
Primary Standard

3093-01	Glass	500 g	csa	222.55	
		4 x 500 g	csa	148.35	593.40

$K_2Cr_2O_7$ FW: 294.19

Exceeds ACS Specifications
Assay ($K_2Cr_2O_7$) (dried basis) 99.95-100.05%
Insoluble Matter ..... max. 0.005%
Loss on Drying at 105°C ..... max. 0.02%
pH of 5% Solution at 25°C 3.5-4.0
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Calcium (Ca) ..... max. 0.001%
Sodium (Na) ..... max. 0.01%

CAS: 7778-50-9 MERCK INDEX: 14,7627 IMO: 6.1:3086

Potassium Dichromate, Crystal
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3090-04	Poly	125 g	csa	84.55	
		4 x 125 g	csa	56.35	225.40
3090-01	Poly	500 g	csa	165.10	
		4 x 500 g	csa	110.05	440.20
3090-05	Poly	2.5 kg	csa	787.75	
		4 x 2.5 kg	csa	525.15	2100.60

$K_2Cr_2O_7$ FW: 294.19

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($K_2Cr_2O_7$) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.001%
Loss on Drying at 105°C .....max. 0.05%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.005%
Calcium (Ca) .....max. 0.002%
Sodium (Na)(by FES) .....max. 0.02%

CAS: 7778-50-9 MERCK INDEX: 14,7627 IMO: 6.1:3086

Potassium Dichromate, Granular
Technical

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3094-01	Poly	500 g	csa	123.75	
		4 x 500 g	csa	82.50	330.00
3094-05	Poly	2.5 kg	csa	642.85	
		4 x 2.5 kg	csa	428.55	1714.20

$K_2Cr_2O_7$ FW: 294.19

Assay ($K_2Cr_2O_7$) .....min. 98.0%
Insoluble Matter and NH_4OH Precipitate .....max. 0.03%
pH of 5% Solution at 25°C 3.5-4.5

CAS: 7778-50-9 MERCK INDEX: 14,7627 IMO: 6.1:3086

Potassium Dichromate, DILUT-IT Analytical Concentrate, 0.1N
(1/10 equiv. = 4.903 g $K_2Cr_2O_7$)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4671-01	Ampoule	1 pk	spr	53.60	
		6 x 1 pk	spr	44.65	267.90

Normality (by titrimetry) .....Passes Test
(Makes 0.1N solution after dilution to 1000 mL)

CAS: 7778-50-9 DENSITY: 1 L = 1.04 kg

Potassium Dihydrogen Phosphate
See under Potassium Phosphate, Monobasic

Potassium Disulfate
See Potassium meta-Bisulfite

Potassium Ferricyanide, Crystal
BAKER ANALYZED ACS Reagent
(potassium hexacyanoferrate(III))

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3104-01	Glass	500 g	csa	242.50	
		4 x 500 g	csa	161.65	646.60
3104-05	Glass	2.5 kg	csa	898.50	
		4 x 2.5 kg	csa	599.00	2396.00
3104-07	Poly Pail	12 kg	bks	Inquire	
3104-R	Lined Fiber Dr	110 lb	bul	Inquire	

$K_3Fe(CN)_6$ FW: 329.26

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance .....Passes Test
Assay ($K_3Fe(CN)_6$) (by iodometry) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.01%
Sulfate (SO_4) .....max. 0.01%
Ferro Compounds (as $[Fe(CN)_6]^{4-}$) .....max. 0.05%

CAS: 13746-66-2 MERCK INDEX: 14,7630

Potassium Ferrocyanide, Trihydrate, Crystal
BAKER ANALYZED ACS Reagent
(potassium hexacyanoferrate(II), trihydrate)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3114-01	Poly	500 g	non	133.00	
3114-05	Poly	2.5 kg	csa	486.85	
		4 x 2.5 kg	csa	324.55	1298.20

$K_4Fe(CN)_6 \cdot 3H_2O$ FW: 422.41

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($K_4Fe(CN)_6 \cdot 3H_2O$) 98.5-102.0%
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.01%
Sulfate (SO_4) .....Passes Test

CAS: 14459-95-1 MERCK INDEX: 14,7631

Potassium Fluoride, Anhydrous
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3123-04	Poly	125 g	non	92.70	
3123-01	Poly	500 g	csa	163.80	
		4 x 500 g	csa	109.20	436.80
3123-05	Poly	2.5 kg	csa	585.90	
		4 x 2.5 kg	csa	390.60	1562.40
3123-07	Poly Pail	12 kg	bks	Inquire	

KF FW: 58.10

Exceeds ACS Specifications

Assay (KF) .....min. 99.0%
pH of 5% Solution at 25°C 7.0-9.0
Insoluble Matter .....max. 0.01%
Loss on Ignition at 450°C .....Actual Value Reported
Chloride (Cl) .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.03
Titrable Base (meq/g) .....max. 0.01
Potassium Fluosilicate (K_2SiF_6) .....max. 0.05%

Potassium Hexacyanoferrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfate (SO_4) ..... max. 0.005%
Sulfite (SO_3) ..... max. 0.005%
Carbon (C) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Silicon (Si) ..... max. 0.005%
Sodium (Na) ..... max. 0.2%

CAS: 7789-23-3 MERCK INDEX: 14,7632 IMO: 6.1:1812

Potassium Hexacyanoferrate(II), Trihydrate
See Potassium Ferrocyanide, Trihydrate

Potassium Hexacyanoferrate(III)
See Potassium Ferricyanide

Potassium Hydrogen Carbonate
See Potassium Bicarbonate

Potassium Hydrogen Phthalate
See Potassium Biphthalate

Potassium Hydrogen Sulfate
See Potassium Bisulfate

Potassium Hydrogen Sulfate, Fused
See under Potassium Pyrosulfate

Potassium Hydroxide, Flake
Technical

3150-05	Poly	2.5 kg	csa	89.70	
		4 x 2.5 kg	csa	59.80	239.20
3150-07	Poly Pail	12 kg	bks	Inquire	

KOH FW: 56.11

Assay (KOH) ..... min. 85.0%
Potassium Carbonate (K_2CO_3) ..... max. 2.0%
Insoluble Matter ..... max. 0.010%
Nitrogen Compounds (as N) ..... max. 0.005%
Heavy Metals (as Ag) ..... max. 0.002%

CAS: 1310-58-3 MERCK INDEX: 14,7640 IMO: 8:1813

Caustic Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Hydroxide, Pellets
BAKER ANALYZED ACS Reagent
Low in Chloride

3140-04	Poly	125 g	non	37.40	
3140-01	Poly	500 g	csa	68.80	
		4 x 500 g	csa	45.85	183.40
3140-19	Poly	1 kg	csa	105.90	
		4 x 1 kg	csa	70.60	282.40
3140-05	Poly	2.5 kg	csa	168.10	
		4 x 2.5 kg	csa	112.05	448.20
3140-07	Poly Pail	12 kg	bks	Inquire	
3140-28		25 kg	bul	Inquire	
3140-R	Lined Fiber Dr	110 lb	bul	Inquire	

KOH FW: 56.11

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KOH) ..... min. 86.0%
Potassium Carbonate (K_2CO_3) ..... max. 0.5%
Insoluble Matter ..... max. 30 ppm
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Ag) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.002%
Sodium (Na) ..... max. 0.05%
Trace Impurities (in ppm):
Nitrogen Compounds (as N) ..... max. 3
Phosphate (PO_4) ..... max. 2
Sulfate (SO_4) ..... max. 5
Iron (Fe) ..... max. 3
Mercury (Hg) ..... max. 0.1
Nickel (Ni) ..... max. 2

CAS: 1310-58-3 MERCK INDEX: 14,7640 IMO: 8:1813

Caustic Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, Pellets
NF, FCC

cGMP

3146-04	Poly	125 g	rnc	49.15	
3146-01	Poly	500 g	rss	95.20	
		4 x 500 g	rss	63.45	253.80
3146-05	Poly	2.5 kg	rss	234.15	
		4 x 2.5 kg	rss	156.10	624.40
3146-07	Poly Pail	12 kg	bks	Inquire	
3146-28	Plastic Drum	25 kg	bul	Inquire	
3146-R	Lined Fiber Dr	110 lb	bul	Inquire	

KOH FW: 56.11

Meets NF & FCC Requirements
Assay ..... min. 85.0%
Identification ..... Passes Test
Insoluble Substances ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Carbonate (as K_2CO_3) ..... max. 3.5%
Lead (Pb) ..... max 2 mg/kg

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mercury (Hg) ..... max. 0.1 ppm

STORAGE: Preserve in tight containers.

CAS: 1310-58-3 MERCK INDEX: 14,7640 IMO: 8:1813

Caustic Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, Pellets, NF

cGMP

Multi-Compendial

3152-01	Poly	500 g	rss	104.25	
		4 x 500 g	rss	69.50	278.00
3152-05	Poly	2.5 kg	rss	256.20	
		4 x 2.5 kg	rss	170.80	683.20

KOH FW: 56.11

Meets NF Requirements

Identification ..... Passes Test
Insoluble Substances ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%
Assay ..... min. 85.0%
Carbonate (as K_2CO_3) ..... max. 3.5%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Carbonate (as K_2CO_3) ..... max. 2.0%
Chloride (Cl) ..... max. 50 ppm
Phosphate (PO_4) ..... max. 20 ppm
Sulfate (SO_4) ..... max. 50 ppm
Iron (Fe) ..... max. 10 ppm
Sodium (Na) ..... max. 1.0%
Heavy Metals (as Pb) ..... max. 10 ppm
Assay 85.0-100.5%

Meets JP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.050%
Heavy Metals (as Pb) ..... max. 30 ppm
Sodium (Na) ..... Passes Test
Potassium Carbonate (K_2CO_3) ..... max. 2.0%
Assay (KOH) ..... min. 85.0%

CAS: 1310-58-3 MERCK INDEX: 14,7640 IMO: 8:1813

Caustic Spill Cleanup Products available. See pp. 378.

Information on the J.T.Baker multicompendial-tested product line begins on page 64.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Hydroxide, 45%(w/w) Solution

BAKER ANALYZED Reagent

3143-01	Poly	500 mL	cso	56.55	
		12 x 500 mL	cso	37.70	452.40
3143-18	Poly	6 x 2.5 L	spr	125.25	751.50
3143-03	Poly	4 L	cso	233.25	
		4 x 4 L	cso	155.50	622.00
3143-07	Poly Pail	19 L	sbk	563.85	
3143-R	Poly Drum	600 lb	bul	Inquire	

KOH FW: 56.11

Assay (KOH) 45.0-46.5%
Potassium Carbonate (K_2CO_3) ..... max. 0.2%
Chloride (Cl) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.001%
Ammonium Hydroxide Precipitate ..... max. 0.005%
Sodium (Na) ..... max. 0.02%

Trace Impurities (in ppm):

Nitrogen Compounds (as N) ..... max. 5
Phosphate (PO_4) ..... max. 2
Heavy Metals (as Ag) ..... max. 5
Copper (Cu) ..... max. 0.05
Iron (Fe) ..... max. 2
Nickel (Ni) ..... max. 5

CAS: 1310-58-3 IMO: 8:1814

Caustic Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, 1N Volumetric Solution

BAKER ANALYZED Reagent

5602-02	Poly	1 L	sol	44.35	
		6 x 1 L	sol	36.95	221.70
5602-03	Cubitainer	4 L	sol	86.90	
		4 x 4 L	sol	72.40	289.60

KOH FW: 56.11

Standardization at 25°C traceable to NIST Standard Reference Material.

SRM No ..... Reported on Label
Normality 0.995-1.005

Trace Impurities (in ppm):

Chloride (Cl) ..... max. 10
Nitrogen Compounds (as N) ..... max. 1
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Appearance ..... Passes Test

CAS: 1310-58-3 DENSITY: 1 L = 1.05 kg IMO: 8:1814

Caustic Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Hydroxide, 0.5N in Ethanol Volumetric Solution
BAKER ANALYZED Reagent

5644-02	Poly	1 L	sol	76.20	
		6 x 1 L	sol	63.50	381.00

KOH FW: 56.11

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.495-0.505
Appearance .....Passes Test

CAS: 1310-58-3 DENSITY: 1 L = 0.79 kg IMO: 3:2924
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, 0.5N in Methanol Volumetric Solution
BAKER ANALYZED Reagent

5631-02	Poly	1 L	sol	64.10	
		6 x 1 L	sol	53.40	320.40

KOH FW: 56.11

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.497-0.503
Trace Impurities (in ppm):
Chloride (Cl) .....max. 10
Nitrogen Compounds (as N) .....max. 1
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5

CAS: 1310-58-3 DENSITY: 1 L = 0.8 kg IMO: 3:3286
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, 0.1N in Ethanol Volumetric Solution
BAKER ANALYZED Reagent

5645-02	Poly	1 L	sol	78.85	
		6 x 1 L	sol	65.70	394.20

KOH FW: 56.11

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0995-0.1005
Appearance .....Passes Test

CAS: 1310-58-3 DENSITY: 1 L = 0.79 kg IMO: 3:2924
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, 0.1N in Methanol Volumetric Solution
BAKER ANALYZED Reagent

5650-02	Poly	1 L	sol	53.10	
		6 x 1 L	sol	44.25	265.50
5650-03	Cubitainer	4 L	sol	113.40	
		4 x 4 L	sol	94.50	378.00

KOH FW: 56.11

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0995-0.1005
Trace Impurities (in ppm):
Chloride (Cl) .....max. 10
Nitrogen Compounds (as N) .....max. 1
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5
Appearance .....Passes Test

CAS: 1310-58-3 DENSITY: 1 L = 0.8 kg IMO: 3:3286
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5603-02	Poly	1 L	sol	57.30	
		6 x 1 L	sol	47.75	286.50
5603-03	Cubitainer	4 L	sol	86.90	
		4 x 4 L	sol	72.40	289.60

KOH FW: 56.11

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0995-0.1005
Trace Impurities (in ppm):
Chloride (Cl) .....max. 10
Nitrogen Compounds (as N) .....max. 1
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5
Appearance .....Passes Test

CAS: 1310-58-3 DENSITY: 1 L = 1.05 kg IMO: 8:1814

Caustic Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, DILUT-IT Analytical Concentrate, 1N
(1 equiv. = 56.11 g KOH)

4674-01	Ampoule	1 pk	spr	41.00	
		6 x 1 pk	spr	34.15	204.90

(Makes 1N solution after dilution to 1000 mL)
Low in Carbonate
Normality (by titrimetry) .....Passes Test

CAS: 1310-58-3 DENSITY: 1 L = 1.05 kg IMO: 8:1814

Caustic Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Hydroxide, DILUT-IT Analytical Concentrate, 0.1N

(1/10 equiv. = 5.611 g KOH)

4673-01	Ampoule	1 pk	spr	36.35	
		6 x 1 pk	spr	30.30	181.80

(Makes 0.1N solution after dilution to 1000 mL)
Low in Carbonate
Normality (by titrimetry) ..... Passes Test
CAS: 1310-58-3 IMO: 8:1814

Caustic Spill Cleanup Products available. See pp. 378.

Potassium Iodate

BAKER ANALYZED ACS Reagent

3156-04	Poly	125 g	non	94.60	
3156-01	Glass	500 g	csa	354.75	
		4 x 500 g	csa	236.50	946.00
3156-05	Poly	2.5 kg	csa	1534.50	
		4 x 2.5 kg	csa	1023.00	4092.00

KIO_3 FW: 214.00

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KIO_3) 99.4-100.4%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 5.0-8.0
Chloride and Bromide (as Cl) ..... max. 0.01%
Iodide (I) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Sodium (Na) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
CAS: 7758-05-6 MERCK INDEX: 14,7642 IMO: 5.1:1479

Potassium Iodate, DILUT-IT Analytical Concentrate, 0.1N

(1/10 equiv. = 3.5667g KIO_3)

4676-01	Ampoule	1 pk	spr	45.00	
		6 x 1 pk	spr	37.50	225.00

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test
CAS: 7758-05-6

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Iodide, Granular

BAKER ANALYZED ACS Reagent

3162-01	Glass	500 g	csa	256.50	
		4 x 500 g	csa	171.00	684.00
3162-05	Glass	2.5 kg	csa	983.05	
		4 x 2.5 kg	csa	655.35	2621.40
3162-07	Flowmor	12 kg	bks	Inquire	
3162-09		100 lb	bul	Inquire	

KI FW: 166.00

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KI) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
Loss on Drying at 150°C ..... max. 0.2%
pH of 5% Solution at 25°C 6.0-9.2
Chloride and Bromide (as Cl) ..... max. 0.01%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.002%
Calcium (Ca) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.001%
Sodium (Na) ..... max. 0.005%
Iodate (IO_3) ..... max. 3
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 2
CAS: 7681-11-0 MERCK INDEX: 14,7643

Potassium Iodide, Granular

cGMP

USP, FCC

3168-04	Glass	125 g	rnc	76.25	
3168-01	Glass	500 g	rss	332.55	
		4 x 500 g	rss	221.70	886.80
3168-05	Glass	2.5 kg	rss	1273.90	
		4 x 2.5 kg	rss	849.25	3397.00
3168-07	Poly Pail	12 kg	bks	Inquire	

KI FW: 166.00

Meets USP & FCC Requirements
Assay (KI) (dried basis) 99.0-101.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Alkalinity ..... Passes Test
Lead (Pb) ..... max 4 mg/kg
Loss on Drying ..... max. 1.0%
Iodate (IO_3) ..... max. 4 ppm
Nitrate, Nitrite, and Ammonia ..... Passes Test
Thiosulfate and Barium ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
CAS: 7681-11-0 MERCK INDEX: 14,7643

Potassium Iodide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Iodide, T.S.
BAKER ANALYZED Reagent

5931-04	Glass	100 mL	sol	34.10	

Assay (KI), w/v 16.3-16.7%
Product Information (not specifications):
Appearance (Clear, colorless to slightly yellow solution)

Potassium Metabisulfite
See Potassium meta-Bisulfite

Potassium Metaperiodate
See Potassium meta-Periodate

Potassium Monohydrogen Phosphate
See under Potassium Phosphate, Dibasic

Potassium Nitrate, Crystal
BAKER ANALYZED ACS Reagent

3190-01	Glass	500 g	csa	115.15	
		4 x 500 g	csa	76.75	307.00
3190-05	Poly	2.5 kg	csa	379.15	
		4 x 2.5 kg	csa	252.75	1011.00
3190-07	Flowmor	12 kg	bks	Inquire	
3190-80	Flowmor	20 kg	bul	Inquire	

KNO_3 FW: 101.09

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KNO_3) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 4.5-8.5
Chloride (Cl) ..... max. 0.002%
Nitrite (NO_2) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.002%
Sodium (Na) ..... max. 0.005%
Trace Impurities (in ppm):
Iodate (IO_3) ..... max. 5
Phosphate (PO_4) ..... max. 3
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 2

CAS: 7757-79-1 MERCK INDEX: 14,7648 IMO: 5.1:1486

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Nitrite, Crystal
BAKER ANALYZED ACS Reagent

3202-01	Glass	500 g	csa	313.60	
		4 x 500 g	csa	209.05	836.20

KNO_2 FW: 85.11

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KNO_2) (by $KMnO_4$ titrn) ..... min. 96.0%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 7.0-10.0
Chloride (Cl) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Sodium (Na) ..... max. 0.5%
Magnesium (Mg) ..... max. 0.002%

CAS: 7758-09-0 MERCK INDEX: 14,7649 IMO: 5.1:1488

Potassium Oxalate, Monohydrate, Crystal
BAKER ANALYZED ACS Reagent

3212-01	Poly	500 g	csa	142.00	
		4 x 500 g	csa	94.65	378.60
3212-05	Glass	2.5 kg	csa	505.95	
		4 x 2.5 kg	csa	337.30	1349.20
3212-R	Lined Fiber Dr	300 lb	bul	Inquire	

KOCOCOOK·H_2O FW: 184.23

Meets ACS Specifications
Assay ($K_2C_2O_4·H_2O$) 98.5-101.0%
Insoluble Matter ..... max. 0.01%
Neutrality ..... Passes Test
pH of 5% Solution at 25°C 7.0-8.5
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.01%
Ammonium (NH_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Sodium (Na) ..... max. 0.02%
Substances Darkened by Hot H_2SO_4 ..... Passes Test

CAS: 6487-48-5 MERCK INDEX: 14,7651 IMO: 6.1:2928

Potassium Perchlorate, Crystal
BAKER ANALYZED ACS Reagent

3220-01	Glass	500 g	non	118.60	
3220-05	Poly	2.5 kg	non	439.50	

$KClO_4$ FW: 138.55

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($KClO_4$) 99.0-100.5%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.003%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfate (SO_4) ..... max. 0.001%
Calcium (Ca) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 7778-74-7 MERCK INDEX: 14,7653 IMO: 5.1:1489

Potassium meta-Periodate, Crystal
BAKER ANALYZED ACS Reagent

3224-04	Poly	125 g	non	137.60	
3224-01	Glass	500 g	csa	521.95	
		4 x 500 g	csa	347.95	1391.80

KIO_4 FW: 230.00

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KIO_4) 99.8-100.3%
Insoluble Matter ..... max. 0.01%
Other Halogens (as Cl) ..... max. 0.01%
Trace Impurities (in ppm):
Manganese (Mn) ..... max. 0.5

CAS: 7790-21-8 MERCK INDEX: 14,7654 IMO: 5.1:1479

Potassium Permanganate
BAKER ANALYZED ACS Reagent
Suitable for Mercury Determination

3227-01	Glass	500 g	spr	96.00	
		4 x 500 g	spr	64.00	256.00
3227-05	Poly	2.5 kg	spr	300.40	
		4 x 2.5 kg	spr	200.25	801.00

$KMnO_4$ FW: 158.03

Meets ACS Specifications
Assay ($KMnO_4$) ..... min. 99.0%
Insoluble Matter ..... max. 0.2%
Chloride and Chlorate (as Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.02%
Trace Impurities (in ppm):
Mercury (Hg) ..... max. 0.05

CAS: 7722-64-7 MERCK INDEX: 14,7655 IMO: 5.1:1490

Potassium Permanganate, Crystal
BAKER ANALYZED ACS Reagent

3228-07	Poly Pail	12 kg	bks	Inquire	

$KMnO_4$ FW: 158.03

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($KMnO_4$) ..... min. 99.0%
Insoluble Matter ..... max. 0.2%
Chloride and Chlorate (as Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.02%

CAS: 7722-64-7 MERCK INDEX: 14,7655 IMO: 5.1:1490

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Permanganate, Crystal
USP cGMP

3232-01	Glass	500 g	rnc	83.40	
3232-05	Poly	2.5 kg	rnc	269.25	

$KMnO_4$ FW: 158.03

Meets USP Requirements
Identification ..... Passes Test
Loss on Drying ..... max. 0.5%
Insoluble Substances ..... max. 0.2%
Assay ($KMnO_4$) (dried basis) 99.0-100.5%

CAS: 7722-64-7 MERCK INDEX: 14,7655 IMO: 5.1:1490

Potassium Permanganate, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5651-02	Glass	1 L	sol	46.40	
		6 x 1 L	sol	38.65	231.90
5651-03	Glass	2.5 L	sol	65.20	
		4 x 2.5 L	sol	54.35	217.40

$KMnO_4$ FW: 158.03

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.0995-0.1005
Trace Impurities (in ppm):
Chloride and Chlorate (as Cl) ..... max. 10
Sulfate (SO_4) ..... max. 20

CAS: 7722-64-7 DENSITY: 1 L = 1.0-1.6 kg

Potassium Permanganate, DILUT-IT Analytical Concentrate, 0.1 N
(1/10 equiv. = 3.161 g $KMnO_4$)

4677-01	Ampoule	1 pk	spr	37.90	
		6 x 1 pk	spr	31.60	189.60

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7722-64-7 DENSITY: 1 L = 1.0-1.6 kg

Potassium Peroxydisulfate
See Potassium Persulfate

Potassium Persulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Persulfate
BAKER ANALYZED Reagent
(potassium peroxydisulfate)

3238-01	Glass	500 g	csa	87.55	
		4 x 500 g	csa	58.35	233.40
3238-05	Poly	2.5 kg	csa	348.00	
		4 x 2.5 kg	csa	232.00	928.00
3238-08	Lined Fiber Dr	220 lb	bul	Inquire	

$K_2S_2O_8$ FW: 270.32

Assay ($K_2S_2O_8$) (by gravimetry) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Iron (Fe) .....max. 0.001%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Manganese (Mn) .....max. 2

CAS: 7727-21-1 MERCK INDEX: 14,7656 IMO: 5.1:1492

Potassium Persulfate
BAKER INSTRA-ANALYZED Reagent
(potassium peroxydisulfate)
Suitable for Phosphate and Mercury Determinations

3239-01	Glass	500 g	spr	152.25	
		4 x 500 g	spr	101.50	406.00
3239-05	Poly	2.5 kg	spr	443.70	

$K_2S_2O_8$ FW: 270.32

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($K_2S_2O_8$) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Chlorine Compounds (as Cl) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.001%
Trace Impurities (in ppm):
Iron (Fe) .....max. 5
Manganese (Mn) .....max. 2
Mercury (Hg) .....Actual Value Reported
Phosphate (PO_4) .....max. 2.5

CAS: 7727-21-1 MERCK INDEX: 14,7656 IMO: 5.1:1492

Potassium Phosphate, Monobasic
ULTREX Ultrapure Reagent
(potassium dihydrogen phosphate)

4921-04	Glass	100 g	spr	264.45	
4921-07	Glass	1 kg	spr	1048.85	

KH_2PO_4 FW: 136.09

Analysis of Actual Lot (not specifications)
Certificate Provided Reports Actual Lot Analysis
Assay (KH_2PO_4) (dried basis) 99.2%
Loss on Drying at 105°C .....< 0.002%
Particulate Matter .....< 0.001%
pH of 5% Solution at 25°C 4.3
Non-Metallic Impurities (in ppm)(µg/g):
Arsenic (As) .....< 3
Fluoride (F) .....< 2
Halide (as Cl) .....< 2
Nitrogen Compounds (as N) .....< 15
Silicon (Si) 2.7
Sulfate (SO_4) .....< 25
Metallic Impurities (in ppm)(µg/g):
Aluminum (Al) 0.1
Barium (Ba) 0.1
Bismuth (Bi) 0.6
Cadmium (Cd) .....< 0.1
Calcium (Ca) .....< 0.1
Chromium (Cr) 0.8
Cobalt (Co) 0.2
Copper (Cu) 0.3
Iron (Fe) 1.5
Lead (Pb) 0.4
Magnesium (Mg) 0.6
Manganese (Mn) 0.2
Mercury (Hg) .....< 0.1
Molybdenum (Mo) 0.2
Nickel (Ni) 0.3
Niobium (Nb) 0.2
Silver (Ag) 0.7
Sodium (Na) 2.2
Strontium (Sr) 0.3
Tin (Sn) 0.09
Titanium (Ti) 0.4
Vanadium (V) 0.1
Zinc (Zn) 0.7
Zirconium (Zr) 0.02
UV Absorbance (1 M Aqueous Solution) (1.00-cm cell vs. water):
400 nm .....< 0.002
280 nm 0.04
254 nm 0.04
220 nm 0.06
215 nm 0.07

CAS: 7778-77-0 MERCK INDEX: 14,7659

Potassium Phosphate, Monobasic, Crystal
BAKER ANALYZED ACS Reagent
(potassium dihydrogen phosphate)

3246-01	Poly	500 g	csa	90.70	
		4 x 500 g	csa	60.45	241.80
3246-05	Poly	2.5 kg	csa	292.80	
		4 x 2.5 kg	csa	195.20	780.80
3246-07	Poly Pail	12 kg	bks	Inquire	

KH_2PO_4 FW: 136.09

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (KH_2PO_4) (by acidimetry) .....min. 99.0%
Insoluble Matter .....max. 0.01%
Loss on Drying at 105°C .....max. 0.2%
pH of 5% Solution at 25°C 4.1-4.5
Chloride (Cl) .....max. 0.001%
Fluoride (F) .....max. 0.001%
Nitrogen Compounds (as N) .....max. 0.001%
Sulfate (SO_4) .....max. 0.003%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.002%
Lead (Pb) .....max. 0.001%
Sodium (Na) .....max. 0.005%
Trace Impurities (in ppm):
Arsenic (As) .....max. 3

CAS: 7778-77-0 MERCK INDEX: 14,7659

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Phosphate, Monobasic, Crystal
ULTRAPURE BIOREAGENT
(potassium dihydrogen phosphate)
For Liquid Chromatography and Molecular Biology applications

4008-01	Glass	500 g	upr	64.75	
4008-05	Glass	2.5 kg	upr	223.55	

KH_2PO_4 FW: 136.09

Assay (KH_2PO_4) ..... min. 99.0%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
pH of 5% Solution at 25°C 4.1-4.5
Insoluble Matter, Calcium and NH_4OH Precipitate ..... max. 0.01%
Loss on Drying at 105°C ..... max. 0.2%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 3

CAS: 7778-77-0 MERCK INDEX: 14,7659

Potassium Phosphate, Monobasic, Crystal
NF, FCC

3247-05	Glass	2.5 kg	rss	337.50	
		4 x 2.5 kg	rss	225.00	900.00
3247-07	Poly Pail	12 kg	bks	Inquire	

KH_2PO_4 FW: 136.09

Meets NF & FCC Requirements

Assay (KH_2PO_4) (dried basis) 98.0-100.5%
Arsenic (As) ..... max. 3 ppm
Fluoride (F) ..... max 10 mg/kg
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Substances ..... max. 0.2%
Lead (Pb) ..... max 2 mg/kg
Loss on Drying at 105°C ..... max. 1.0%

CAS: 7778-77-0 MERCK INDEX: 14,7659

Potassium Phosphate, Monobasic, Crystal, NF
Multi-Compendial
Endotoxin Tested

3248-01	Glass	500 g	rss	120.90	
		4 x 500 g	rss	80.60	322.40
3248-05	Glass	2.5 kg	rss	389.35	
		4 x 2.5 kg	rss	259.55	1038.20
3248-15	Poly	2.5 kg	rss	331.05	
		4 x 2.5 kg	rss	220.70	882.80
3248-07	Poly Pail	12 kg	bks	Inquire	

KH_2PO_{4F} FW: 136.09

Meets NF Requirements

Assay (KH_2PO_4) (dried basis) 98.0-100.5%
Arsenic (As) ..... max. 3 ppm
Endotoxin Concentration (2.5 EU/g max.) ..... Passes Test
Fluoride (F) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.002%
Identification ..... Passes Test
Insoluble Substances ..... max. 0.2%
Lead (Pb) ..... max. 2 ppm
Loss on Drying at 105°C ..... max. 1.0%

Meets BP/Ph.Eur. Chemical Specifications

Assay (KH_2PO_4) (dried basis) 98.0-100.5%
Appearance of Solution ..... Passes Test
Arsenic (As) ..... max. 2 ppm
Chloride (Cl) ..... max. 200 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Iron (Fe) ..... max. 10 ppm
Loss on Drying at 125 -130°C ..... max. 2.0%
Reducing Substances ..... Passes Test
pH 4.2-4.5
Sulfate (SO_4) ..... max. 300 ppm
Preserve in Tight Containers

CAS: 7778-77-0 MERCK INDEX: 14,7659

Potassium Phosphate, Dibasic
USP

3251-07	Poly Pail	12 kg	bks	Inquire	

K_2HPO_4 FW: 174.18

Meets USP Requirements

Assay (K_2HPO_4) (dried basis) 98.0-100.5%
Arsenic (As) ..... max. 3 ppm
Carbonate (CO_3) ..... Passes Test
Chloride (Cl) ..... max. 0.03%
Fluoride (F) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Identification ..... Passes Test
Insoluble Substances ..... max. 0.2%
Iron (Fe) ..... max. 0.003%
Loss on Drying ..... max. 1.0%
Mono-or Tri-Basic Salt ..... Passes Test
pH (1 in 20) 8.5-9.6
Sodium (Na) ..... Passes Test
Sulfate (SO_4) ..... max. 0.1%

CAS: 7758-11-4 MERCK INDEX: 14,7658

Potassium Phosphate, Dibasic
FCC

3254-01	Glass	500 g	csa	175.90	
		4 x 500 g	csa	117.25	469.00
3254-05	Poly	2.5 kg	csa	504.70	
		4 x 2.5 kg	csa	336.45	1345.80

K_2HPO_4 FW: 174.18

Meets FCC Requirements

Identification ..... Passes Test
Assay (K_2HPO_4) (dried basis) ..... min. 98.0%
Insoluble Substances ..... max. 0.2%
Loss on Drying ..... max. 2.0%
Arsenic (As) ..... max. 3 ppm
Fluoride (F) ..... max. 10 ppm
Lead (Pb) ..... max. 2 ppm

CAS: 7758-11-4 MERCK INDEX: 14,7658

Potassium Phosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Phosphate, Dibasic, Powder
BAKER ANALYZED ACS Reagent
(dipotassium hydrogen phosphate)

3252-01	Poly	500 g	csa	170.65	
		4 x 500 g	csa	113.75	455.00
3252-05	Poly	2.5 kg	csa	484.75	
		4 x 2.5 kg	csa	323.15	1292.60
3252-07	Poly Pail	12 kg	bks	Inquire	

K_2HPO_4 FW: 174.18

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (K_2HPO_4) (by acidimetry) ..... min. 99.0%
Insoluble Matter ..... max. 0.01%
Loss on Drying at 105°C ..... max. 1.0%
pH of 5% Solution at 25°C 8.5-9.6
Chloride (Cl) ..... max. 0.003%
Fluoride (F) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Sodium (Na) ..... max. 0.05%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1
Heavy Metals (as Pb) ..... max. 5
Lead (Pb) ..... max. 5

CAS: 7758-11-4 MERCK INDEX: 14,7658

Potassium Phosphate, Dibasic, Powder
ULTRAPURE BIOREAGENT
For Liquid Chromatography and Molecular Biology Applications

4012-01	Poly	500 g	upr	135.55	
4012-05	Poly	2.5 kg	upr	461.40	

K_2HPO_4 FW: 174.18

Assay (K_2HPO_4) ..... min. 99.0%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
pH of 5% Solution at 25°C 8.5-9.6
Chloride (Cl) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Loss on Drying at 105°C ..... max. 1.0%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5

CAS: 7758-11-4 MERCK INDEX: 14,7658

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Phosphate, Dibasic, USP
Multi-Compendial
Endotoxin Tested

cGMP

3250-01	Poly	500 g	rss	221.25	
		4 x 500 g	rss	147.50	590.00
3250-05	Poly	2.5 kg	rss	611.35	
		4 x 2.5 kg	rss	407.55	1630.20
3250-06	Poly Pail	5 kg	rnc	915.65	
3250-07	Poly Pail	12 kg	bks	Inquire	

K_2HPO_4 FW: 174.18

Meets USP Requirements

Assay (K_2HPO_4) (dried basis) 98.0-100.5%
Arsenic (As) ..... max. 3 ppm
Carbonate (CO_3) ..... Passes Test
Chloride (Cl) ..... max. 0.03%
Endotoxin Concentration (5 EU/g max.) ..... Passes Test
Fluoride (F) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A (USP) ..... Passes Test
Identification B (USP) ..... Passes Test
Insoluble Substances ..... max. 0.2%
Iron (Fe) ..... max. 0.003%
Loss on Drying ..... max. 1.0%
Mono-or Tri-Basic Salt ..... Passes Test
pH (1 in 20) 8.5-9.6
Sodium (Na) ..... Passes Test
Sulfate (SO_4) ..... max. 0.1%

Meets BP/Ph.Eur. Chemical Specifications

Appearance of Solution ..... Passes Test
Assay (K_2HPO_4) (dried basis) 98.0-101.0%
Arsenic (As) ..... max. 2 ppm
Chloride (Cl) ..... max. 200 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Iron (Fe) ..... max. 10 ppm
Loss on Drying ..... max. 2.0%
Monopotassium phosphate ..... max. 0.025
Reducing Substances ..... Passes Test
Sodium (Na) ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.1%

CAS: 7758-11-4 MERCK INDEX: 14,7658

Potassium Phosphate, Tribasic, n-Hydrate, Powder
BAKER ANALYZED Reagent
(tripotassium phosphate)

3256-01	Poly	500 g	csa	179.10	
		4 x 500 g	csa	119.40	477.60
3256-05	Poly	2.5 kg	non	459.60	

$K_3PO_4 \cdot nH_2O$

Dibasic Salt (as K_2HPO_4) ..... max. 1.5%
Excess Alkali (as KOH) ..... max. 0.5%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Nitrogen Compounds (as N) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.005%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Heavy Metals (as Pb)				.max. 0.001%	
Iron (Fe)				.max. 0.001%	
Trace Impurities (in ppm):					
Arsenic (As)				.max. 1	
CAS: 7778-53-2	MERCK INDEX: 14,7660				

Potassium Prussiate, Red

See Potassium Ferricyanide

Potassium Prussiate, Yellow

See Potassium Ferrocyanide, Trihydrate

Potassium Pyrosulfate
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2964-01	Glass	500 g	csa	198.30	
		4 x 500 g	csa	132.20	528.80
2964-05	Poly	2.5 kg	csa	760.95	
		4 x 2.5 kg	csa	507.30	2029.20
2964-R	Lined Fiber Dr	110 lb	bul	Inquire	

Acidity (as H_2SO_4)	.35.0-38.6%
Water (H_2O)	.max. 5.0%
Insoluble Matter and NH_4OH Precipitate	.max. 0.02%
Chloride (Cl)	.max. 0.002%
Phosphate (PO_4)	.max. 0.001%
Calcium and Magnesium Precipitate	.max. 0.005%
Heavy Metals (as Pb)	.max. 0.001%
Iron (Fe)	.max. 0.002%
Sodium (Na)	.max. 0.01%
Trace Impurities (in ppm):	
Arsenic (As)	.max. 5

CAS: 7790-62-7 MERCK INDEX: 14,7664 IMO: 8:3260

Potassium Pyrosulfite

See Potassium meta-Bisulfite

Potassium Sodium Tartrate, 4-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3262-01	Poly	500 g	csa	172.75	
		4 x 500 g	csa	115.15	460.60
3262-19	Poly	1 kg	csa	247.45	
		4 x 1 kg	csa	164.95	659.80
3262-05	Poly	2.5 kg	csa	554.25	
		4 x 2.5 kg	csa	369.50	1478.00
3262-07	Poly Pail	12 kg	bks	Inquire	
3262-R	Lined Fiber Dr	250 lb	bul	Inquire	

$KOCO(CHOH)_2COONa{\cdot}4H_2O$ FW: 282.22

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($KOCO(CHOH)_2COONa{\cdot}4H_2O$)	.99.0-102.0%
Insoluble Matter	.max. 0.005%
pH of 5% Solution at 25°C	.6.0-8.5
Chloride (Cl)	.max. 0.001%
Phosphate (PO_4)	.max. 0.002%
Sulfate (SO_4)	.max. 0.005%
Ammonium (NH_4)	.max. 0.002%
Calcium (Ca)	.max. 0.005%
Iron (Fe)	.max. 0.001%
Trace Impurities (in ppm):	
Heavy Metals (as Pb)	.max. 5

CAS: 6381-59-5 MERCK INDEX: 14,7670

Potassium Sorbate
NF, FCC

cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3273-01	Poly	500 g	rnc	88.45	

$CH_3CH{:}CHCH{:}CHCOOK$ FW: 150.22

Meets NF & FCC Requirements

Identification A	.Passes Test
Identification B	.Passes Test
Assay ($C_6H_7KO_2$) (dried basis)	.98.0-101.0%
Acidity (as sorbic acid)	.Passes Test
Alkalinity (as K_2CO_3)	.Passes Test
Lead (Pb)	.max 2 mg/kg
Heavy Metals (as Pb)	.max. 10 ppm
Loss on Drying	.max. 1.0%

CAS: 24634-61-5 MERCK INDEX: 14,7671

Potassium Sulfate, Fine Crystal
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3278-01	Poly	500 g	csa	68.55	
		4 x 500 g	csa	45.70	182.80
3278-05	Poly	2.5 kg	csa	235.45	
		4 x 2.5 kg	csa	156.95	627.80
3278-07	Poly Pail	12 kg	bks	Inquire	
3278-R	Lined Fiber Dr	250 lb	bul	Inquire	

K_2SO_4 FW: 174.27

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (K_2SO_4)	.min. 99.0%
Insoluble Matter	.max. 0.01%
pH of 5% Solution at 25°C	.5.5-8.5
Chloride (Cl)	.max. 0.001%
Calcium (Ca)	.max. 0.01%
Magnesium (Mg)	.max. 0.005%
Sodium (Na)	.max. 0.02%
Trace Impurities (in ppm):	
Nitrogen Compounds (as N)	.max. 5
Heavy Metals (as Pb)	.max. 5
Iron (Fe)	.max. 5

CAS: 7778-80-5 MERCK INDEX: 14,7674

Potassium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Sulfate, Powder
BAKER ANALYZED ACS Reagent

3282-01	Poly	500 g	csa	133.95	
		4 x 500 g	csa	89.30	357.20
3282-05	Poly	2.5 kg	csa	561.10	
		4 x 2.5 kg	csa	374.05	1496.20
3282-07	Poly Pail	12 kg	bks	Inquire	
3282-R	Poly Drum	250 lb	bul	Inquire	

K_2SO_4 FW: 174.27

Meets ACS Specifications

Assay (K_2SO_4) .....min. 99.0%
Insoluble Matter .....max. 0.01%
pH of 5% Solution at 25°C 5.5-8.5
Chloride (Cl) .....max. 0.001%
Calcium (Ca) .....max. 0.01%
Magnesium (Mg) .....max. 0.005%
Sodium (Na) .....max. 0.02%
Trace Impurities (in ppm):
Nitrogen Compounds (as N) .....max. 5
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 7778-80-5 MERCK INDEX: 14,7674

Potassium Sulfocyanate
See Potassium Thiocyanate

Potassium Tetroxalate
BAKER

U270-05	Glass	100 g	non	254.45	

$KOCOCOOH{\cdot}HOCOCOOH{\cdot}2H_2O$ FW: 254.20

Assay ($KH_3(C_2O_4)_2{\cdot}2H_2O$) .....min. 98.5%

CAS: 6100-20-5 MERCK INDEX: 14,7689

Potassium Thiocyanate, Crystal
BAKER ANALYZED ACS Reagent

3326-01	Poly	500 g	csa	197.70	
		4 x 500 g	csa	131.80	527.20
3326-05	Poly	2.5 kg	csa	786.10	
		4 x 2.5 kg	csa	524.05	2096.20
3326-07	Poly Pail	12 kg	bks	Inquire	
3326-R	Poly Drum	225 lb	bul	Inquire	

KSCN FW: 97.18

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance .....Passes Test
Assay (KSCN) (by Ag titrn) .....min. 98.5%
Insoluble in H_2O .....max. 0.005%
pH of 5% Solution at 25°C 5.3-8.7
Chloride (Cl) .....max. 0.005%
Sulfate (SO_4) .....max. 0.005%
Ammonium (NH_4) .....max. 0.003%
Sodium (Na) .....max. 0.005%
Iodine Consuming Substances (meq/g) .....max. 0.004
Use Test .....Passes Test
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2

CAS: 333-20-0 MERCK INDEX: 14,7691

Precipitated Sulfur, Powder, USP
See Sulfur, Precipitated, Powder, USP

Precipitation Naphtha
See Petroleum Ether

Preparative Chromatography
See Drug Development and Manufacturing Section, p. 64-86

L-Proline, USP
cGMP
Multi-Compendial

2087-06	Poly	1 kg	bio	914.30	

$C_5H_9NO_2$ FW: 115.13

Meets USP Requirements

Assay ($C_5H_9NO_2$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Specific Rotation $[\alpha]_D^{25}$ .....-86.3 to -84.3 °
Loss on Drying at 105°C .....max. 0.4%
Residue on Ignition .....max. 0.4%
Chloride (Cl) .....max. 0.05%
Sulfate (SO_4) .....max. 0.03%
Iron (Fe) .....max. 0.003%
Chromatographic Purity:
Individual Impurities .....max. 0.5%
Total Impurities .....max. 2.0%
Heavy Metals (as Pb) .....max. 0.0015%

Meets FCC Requirements

Assay ($C_5H_9NO_2$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Lead (Pb) .....max 5 mg/kg
Loss on Drying .....max. 0.3%
Residue on Ignition .....max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ .....-86.3 to -84.0 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_5H_9NO_2$) (dried basis) 98.5-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Appearance of Solution .....Passes Test
Specific Rotation $[\alpha]_D^{20}$ .....-86.0 to -84.0 °
Ninhydrin-Positive Substances .....Passes Test
Chloride (Cl) .....max. 200 ppm
Sulfate (SO_4) .....max. 300 ppm
Ammonium (NH_4) .....max. 200 ppm
Iron (Fe) .....max. 10 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Loss on Drying .....max. 0.5%
Ash (sulfated) .....max. 0.1%
Endotoxin Concentration, IU/mg .....Actual Value Reported
Preserve in well-closed containers.
Store protected from light.

CAS: 147-85-3 MERCK INDEX: 14,7780

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Propanal
See Propionaldehyde

Propanedioic Acid
See Malonic Acid

1,2-Propanediol
See Propylene Glycol

1,2,3-Propanetriol
See under Glycerin and Glycerol

Propanoic Acid
See Propionic Acid

1-Propanol
BAKER ANALYZED Reagent

9086-01	Glass	500 mL	cso	40.30	
		12 x 500 mL	cso	26.85	322.20
9086-03	Glass	4 L	cso	186.15	
		4 x 4 L	cso	124.10	496.40
9086-05	Poly	4 L	cso	194.25	
		4 x 4 L	cso	129.50	518.00
9086-33	Poly Coated	4 L	cso	199.35	
		4 x 4 L	cso	132.90	531.60
9086-07	Steel Pail	20 L	sbk	419.75	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$CH_3CH_2CH_2OH$ FW: 60.10

Assay ($CH_3CH_2CH_2OH$) (by GC, corrected for water) .....min. 99.0%
Residue after Evaporation .....max. 0.01%
Product Information (not specifications):
Boiling Point (typical) .....97.2°C.
Density (g/mL) at 25°C (typical) 0.802

CAS: 71-23-8 MERCK INDEX: 14,7842 IMO: 3:1274
FLASH POINT: 23°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2-Propanol
BAKER ANALYZED ACS Reagent (isopropyl alcohol)

9084-01	Glass	500 mL	cso	39.00	
		12 x 500 mL	cso	26.00	312.00
9084-06	Poly	500 mL	cso	39.75	
		12 x 500 mL	cso	26.50	318.00
9084-22	AI SAFETAINER	1 L	cso	96.70	
		6 x 1 L	cso	64.45	386.70
9084-03	Glass	4 L	cso	171.70	
		4 x 4 L	cso	114.45	457.80
9084-05	AI SAFETAINER	4 L	cso	191.65	
		4 x 4 L	cso	127.75	511.00
9084-33	Poly Coated	4 L	cso	182.25	
		4 x 4 L	cso	121.50	486.00
9084-07	Steel Pail	20 L	sbk	318.80	
9084-R	Steel Drum	355 lb	bul	Inquire	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$CH_3CHOHCH_3$ FW: 60.10

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($CH_3CHOHCH_3$) .....min. 99.5%
Carbonyl Compounds:
Acetone .....max. 0.002%
Propionaldehyde .....max. 0.002%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Solubility in H_2O .....Passes Test
Titrable Acid or Base (meq/g) .....max. 0.0001
Water (by KF, coulometric) .....max. 0.2%
Trace Impurities (in ppm):
Copper (Cu) .....max. 0.1
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.1
Nickel (Ni) .....max. 0.1

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,5208
IMO: 3:1219 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Propanol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2-Propanol
HPLC
For Use in Liquid Chromatography

9095-02	Glass	1 L	chp	75.40	
		6 x 1 L	chp	50.25	301.50
9095-03	Glass	4 L	chp	134.35	
		4 x 4 L	chp	89.55	358.20
9095-33	Poly Coated	4 L	chp	153.15	
		4 x 4 L	chp	102.10	408.40

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$CH_3CHOHCH_3$ FW: 60.10

Ultraviolet Absorbance (1.00-cm cell vs. water):
- 350 nm .....max. 0.01
- 280 nm .....max. 0.01
- 254 nm .....max. 0.020
- 225 nm .....max. 0.16

UV Cut-off, nm .....max. 205
Assay ($CH_3CHOHCH_3$) .....min. 99.7%
Residue after Evaporation .....max. 2 ppm
Water (by KF, coulometric) .....max. 0.03%

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,5208
IMO: 3:1219 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Propanol
ULTRA RESI-ANALYZED
(iso-propyl alcohol)
For Organic Residue Analysis

9334-03	Glass	4 L	chp	138.70	
		4 x 4 L	chp	92.45	369.80

$CH_3CHOHCH_3$ FW: 60.10

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
- Single Impurity Peak (ng/mL) .....max. 5

ECD-Sensitive Impurities (as Heptachlor Epoxide)
- Single Impurity Peak (pg/mL) .....max. 10

Assay ($CH_3CHOHCH_3$) (by GC, corrected for water) .....min. 99.7%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Water (by KF, coulometric) .....max. 0.1%

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,5208
IMO: 3:1219 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Propanol
PHOTREX Reagent
(iso-propyl alcohol)
For UV Spectrophotometry

9083-01	Glass	500 mL	cso	53.50	
		12 x 500 mL	cso	35.65	427.80
9083-03	Glass	4 L	cso	218.80	
		4 x 4 L	cso	145.85	583.40

$CH_3CHOHCH_3$ FW: 60.10

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($CH_3CHOHCH_3$) .....min. 99.5%
Carbonyl Compounds:
- Acetone .....max. 0.002%
- Propionaldehyde .....max. 0.002%

Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0005%
Solubility in H_2O .....Passes Test
Titrable Acid or Base (µeq/g) .....max. 0.1
Water (by KF, coulometric) .....max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
- 400-330 nm .....max. 0.01
- 300 nm .....max. 0.02
- 275 nm .....max. 0.03
- 260 nm .....max. 0.04
- 245 nm .....max. 0.08
- 230 nm .....max. 0.20
- 220 nm .....max. 0.40
- 210 nm .....max. 1.00

Product Information (not specifications):
Boiling Point (typical) .....82.3°C.
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:
2.5-2.8 4.1-5.6 5.8-6.4

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,5208
IMO: 3:1219 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Propanol
BAKER ANALYZED LC/MS Reagent

9827-02	Glass	1 L	cbs	76.95	
		6 x 1 L	cbs	51.30	307.80
9827-03	Glass	4 L	cbs	137.50	
		4 x 4 L	cbs	91.65	366.60

$CH_3CHOH\ CH_3$ FW: 60.10

UV Absorbance:
- 260 -400 nm .....max. 0.01
- 230 nm .....max. 0.15
- 220 nm .....max. 0.30

Assay ($CH_3CHOH\ CH_3$) .....min. 99.8%
Residue after Evaporation .....max. 1 ppm
Water (H_2O) .....max. 0.06%
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....max. 50
* Calcium (Ca) .....max. 50
Iron (Fe) .....max. 50
Magnesium (Mg) .....max. 50

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium (K) .....max. 50
* Sodium (Na) .....max. 50
* May change over time due to extraction from glass container.

DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,5208 IMO: 3:1219
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Propanol USP or 2-Propanol for Histological Use

See under Isopropyl Alcohol

2-Propanone

See under Acetone

Propionaldehyde
BAKER

U307-07	Glass	500 mL	non	94.35	

CH_3CH_2CHO FW: 58.08

Assay (CH_3CH_2CHO) (by GC) .....min. 99%

CAS: 123-38-6 DENSITY: 1 L = 0.807 kg MERCK INDEX: 14,7823
IMO: 3:1275 FLASH POINT: -27°C

Solvent Spill Cleanup Products available. See pp. 378.

Propionic Acid
BAKER

U330-07	Glass S/S	500 mL	non	42.55	
U330-09	Glass	4 L	non	126.35	

CH_3CH_2COOH FW: 74.08

Assay (CH_3CH_2COOH) (by GC) .....min. 99%

CAS: 79-09-4 DENSITY: 1 L = 0.99 kg MERCK INDEX: 14,7825
IMO: 8:3463 FLASH POINT: 52°C

Acid Spill Cleanup Products available. See pp. 378.

Propionic Acid, Sodium Salt
Practical

U335-02	Poly Pail	2 kg	non	211.10	

CH_3CH_2COONa FW: 96.06

Assay (CH_3CH_2COONa) .....min. 99%
Identification (by IR) .....Passes Test

CAS: 137-40-6 MERCK INDEX: 14,7825

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Proprietary Solvent III-1, Anhydrous
BAKER ANALYZED Reagent
(Made from Specially Denatured Alcohol 1-1)

9287-03	Glass	4 L	cso	159.25	
		4 x 4 L	cso	106.15	424.60
9287-33	Poly Coated	4 L	cso	177.60	
		4 x 4 L	cso	118.40	473.60
9287-07	Steel Pail	20 L	sbk	320.00	

Appearance .....Passes Test
Color (APHA) .....max. 15
Residue after Evaporation .....max. 0.003%
Specific Gravity at 60°/60°F 0.717-0.875
Water (H_2O)(by Karl Fischer titrn) .....max. 0.3%
Specially Denatured Alcohol Formula 1-1
(200 Proof)(v/v)(parts by vol.) 100
Ethyl Acetate (v/v)(parts by vol) 0.87
Methyl Isobutyl Ketone (v/v)(parts by vol) 1
Rubber Hydrocarbon Solvent (v/v)(parts by vol) 1
SDA Formula 1-1 consists of 4 volumes of methanol, 1/8 oz of denatonium benzoate, and 100 volumes of 200 proof ethanol.

DENSITY: 1 L = 0.79 kg IMO: 3:1170 FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

iso-Propyl Acetate
BAKER ANALYZED Reagent

U385-03	Glass	4 L	cso	520.30	
		4 x 4 L	cso	346.85	1387.40
U385-07	Steel Pail	20 L	sbk	1139.80	

$CH_3COOCH(CH_3)_2$ FW: 102.13

Assay (by GC) .....min. 99.0%
Density (g/mL) at 25°C 0.860-0.866
Boiling Range: .....85.0-90.0 °C.
Residue after Evaporation .....max. 0.005%
Acidity (as CH_3COOH) .....max. 0.01%
Water (H_2O) .....max. 0.1%

CAS: 108-21-4 MERCK INDEX: 14,7841 IMO: 3:1220
FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

n-Propyl Alcohol

See 1-Propanol

Propylene Carbonate
Practical

U497-09	Glass	4 L	non	154.70	

$C_4H_6O_3$ FW: 102.09

Identification (by IR) .....Passes Test

CAS: 108-32-7 DENSITY: 1 L = 1.20 kg FLASH POINT: 135°C

Propylene Glycol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Propylene Glycol
BAKER ANALYZED ACS Reagent

U510-07	Glass S/S	500 mL	non	138.55	
U510-09	Glass	4 L	non	360.60	
U510-01	Poly Pail	19 L	sbo	890.50	

$CH_3CHOHCH_2OH$ FW: 76.10

Meets ACS Specifications

Assay ($CH_3CHOHCH_2OH$) (corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Ignition .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.0005
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1 ppm

CAS: 57-55-6 DENSITY: 1 L = 1.0361 kg MERCK INDEX: 14,7855
FLASH POINT: 99°C

Propylene Glycol
USP, FCC cGMP

9402-01	Glass	500 mL	rss	207.55	
		12 x 500 mL	rss	138.35	1660.20
9402-03	Glass	4 L	rss	436.05	
		4 x 4 L	rss	290.70	1162.80
9402-07	Poly Pail	19 L	bks	Inquire	
9402-R	Poly Drum	480 lb	bul	Inquire	

$CH_3CHOHCH_2OH$ FW: 76.10

Meets USP & FCC Requirements

Specific Gravity at 25°/25°C 1.035-1.037
Distilling Range: .....185-189 °C.
Acidity .....Passes Test
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Identification .....Passes Test
Lead (Pb) .....max 1 mg/kg
Residue on Ignition .....max. 0.007%
Chloride (Cl) .....max. 0.007%
Sulfate (SO_4) .....max. 0.006%
Heavy Metals (as Pb) .....max. 5 ppm
Assay ($CH_3CHOHCH_2OH$) .....min. 99.5%

CAS: 57-55-6 DENSITY: 1 L = 1.0361 kg MERCK INDEX: 14,7855
FLASH POINT: 99°C

Propylene Glycol, USP
Multi-Compendial cGMP

9403-01	Glass	500 mL	rss	257.35	
		12 x 500 mL	rss	171.55	2058.60
9403-03	Glass	4 L	rss	523.00	
		4 x 4 L	rss	348.65	1394.60
9403-07	Poly Pail	19 L	bks	Inquire	
9403-24		480 lb	bul	Inquire	

$CH_3CHOHCH_2OH$ FW: 76.10

Meets USP Requirements

Specific Gravity at 25°/25°C 1.035-1.037
Acidity .....Passes Test
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Identification .....Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Residue on Ignition .....max. 0.007%
Chloride (Cl) .....max. 0.007%
Sulfate (SO_4) .....max. 0.006%
Heavy Metals (as Pb) .....max. 5 ppm
Assay ($CH_3CHOHCH_2OH$) .....min. 99.5%
Endotoxin Concentration (EU/g) .....max. 2.5

Meets BP/Ph.Eur. Chemical Specifications

Relative Density (d^{20}_{20}) 1.035-1.040
Refractive Index at 20°C 1.431-1.433
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Identification D .....Passes Test
Appearance .....Passes Test
Acidity .....Passes Test
Oxidizing Substances .....Passes Test
Reducing Substances .....Passes Test
Heavy Metals (as Pb) .....max. 5 ppm
Water (H_2O) .....max. 0.2%
Ash (sulfated) .....max. 0.01%

Meets JP Chemical Specifications

Identification A .....Passes Test
Identification B .....Passes Test
Specific Gravity at 20°/20°C 1.035-1.040
Acidity .....Passes Test
Chloride (Cl) .....max. 0.007%
Sulfate (SO_4) .....max. 0.002%
Heavy Metals (as Pb) .....max. 5 ppm
Arsenic (As) .....max. 2 ppm
Glycerin .....Passes Test
Water (H_2O) .....max. 0.5%
Residue on Ignition .....max. 0.005%
Distilling Range: .....184-189 °C.

CAS: 57-55-6 DENSITY: 1 L = 1.0361 kg MERCK INDEX: 14,7855
FLASH POINT: 99°C

iso-Propyl Ether
BAKER ANALYZED ACS Reagent

9243-22	AI SAFETAINER	1 L	cso	188.20	
		6 x 1 L	cso	125.45	752.70
9243-03	AI SAFETAINER	4 L	cso	527.25	
		4 x 4 L	cso	351.50	1406.00

$(CH_3)_2CHOCH(CH_3)_2$ FW: 102.18

Meets ACS Specifications

Stabilized with approximately 0.01% Butylated Hydroxytoluene
Assay ($((CH_3)_2CHOCH(CH_3)_2$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 25
Residue after Evaporation .....max. 0.01%
Titrable Acid (meq/g) .....max. 0.0007
Peroxide (as $C_6H_{14}O_2$) .....max. 0.05%
Product Information (not specifications):
Density (g/mL) at 25°C (typical) 0.718

CAS: 108-20-3 MERCK INDEX: 14,5212 IMO: 3:1159
FLASH POINT: -27.8°C

Solvent Spill Cleanup Products available. See pp. 378.

Protein Sorbent Selection Kit
See Analytical Chromatography Section, p. 39

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Cleaning with Compliance for Critical Environments

Avantor offers the Protocol C³ line of sterile cleansers. These innovative products are suitable for use as surface cleansers throughout your facility and are used extensively in laboratories and aseptic manufacturing areas.

Protocol C³ solutions are produced under cGMP, are fully traceable, and meet all USP specifications including assay, bacteriostasis, fungistasis, lot sterility, and endotoxin testing, where appropriate. Class 100 packaging areas are monitored for microbials and particulates. Utilizing Class 100 certified bags, the product is packaged into double bags for use in your cleanrooms or other critical environments.

Ethanol 70% Solution Denatured, Sterile

cGMP

BAKER

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
P004-03	Poly	4 x 1 gl	spr	124.60	498.40

Appearance (Clear, colorless liquid) ..... Passes Test
Specific Gravity 0.882-0.896
Nonvolatile Residue ..... Passes Test
Assay 68.0-72.0%

Product Irradiation Details
Specified Dose Range (K Gy) 25.0-50.0
Minimum Delivered Dose (K Gy) 25.0-50.0
Maximum Delivered Dose (K Gy) 25.0-50.0

DENSITY: 1 L = 0.882 kg IMO: 3:1993 FLASH POINT: 25°C

Solvent Spill Cleanup Products available. See pp. 378.

Hydrogen Peroxide 3% Solution, Sterile

cGMP

BAKER

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
P006-02	Trigger Spray	12 x 16 oz	spr	39.80	477.60
P006-03	Poly	4 x 1 gl	spr	101.50	406.00

H_2O_2 FW: 34.01

Meets USP Requirements
Identification ..... Passes Test
Acidity ..... Passes Test
Nonvolatile Residue (USP),mg. ..... max. 30
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Limit of Preservative ..... max. 50
Assay (g/100ml) 2.5-3.5

CAS: 7722-84-1 DENSITY: 1 L = 1.01 kg MERCK INDEX: 14,4798

Isopropyl Alcohol 70% Solution, Sterile

cGMP

BAKER

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
P001-01	Aerosol Mist	24 x 11 oz	spr	21.70	520.80

$CH_3CHOHCH_3$ FW: 60.10

Meets USP Requirements
Appearance ..... Passes Test
Acidity (mL) ..... max. 1.0
Specific Gravity at 20°/20°C 0.872-0.883
Nonvolatile Residue (mg) ..... max. 5.0
Assay 68.0-72.0%

Product Irradiation Details
Specified Dose Range (K Gy) 25.0-50.0
Minimum Delivered Dose (K Gy) 25.0-50.0
Maximum Delivered Dose (K Gy) 25.0-50.0

CAS: 67-63-0 DENSITY: 1 L = 0.849 kg IMO: 2:1950
FLASH POINT: 18.3°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Alcohol 70% Solution, Sterile

cGMP

BAKER

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
P002-03	Poly	4 x 1 gl	spr	122.85	491.40

$CH_3CHOHCH_3$ FW: 60.10

Meets USP Requirements
Specific Gravity at 20°/20°C 0.872-0.883
Appearance ..... Passes Test
Acidity (mL) ..... max. 1.0
Nonvolatile Residue (mg) ..... max. 5.0
Assay 68.0-72.0%

Product Irradiation Details
Specified Dose Range (K Gy) 25.0-50.0
Minimum Delivered Dose (K Gy) 25.0-50.0
Maximum Delivered Dose (K Gy) 25.0-50.0

CAS: 67-63-0 DENSITY: 1 L = 0.849 kg IMO: 3:1219
FLASH POINT: 18.3°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Alcohol 70% Solution, Sterile

cGMP

BAKER

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
P007-02	Trigger Spray	12 x 16 oz	spr	25.83	309.96

$CH_3CHOHCH_3$ FW: 60.10

Meets USP Requirements
Specific Gravity at 20°/20°C 0.872-0.883
Appearance ..... Passes Test
Acidity (mL) ..... max. 1.0
Nonvolatile Residue (mg) ..... max. 5.0
Assay 68.0-72.0%

Product Irradiation Details
Specified Dose Range (K Gy) 25.0-50.0
Minimum Delivered Dose (K Gy) 25.0-50.0
Maximum Delivered Dose (K Gy) 25.0-50.0

CAS: 67-63-0 DENSITY: 1 L = 0.849 kg IMO: 3:1219
FLASH POINT: 18.3°C

Solvent Spill Cleanup Products available. See pp. 378.

Sodium Hypochlorite 5% Solution, Sterile

cGMP

BAKER

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
P005-03	Poly	4 x 1 gl	spr	104.25	417.00

NaClO FW: 74.44

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Assay (NaClO) 4.0-6.0%
Mercury (Hg) ..... max. 5 ppb

CAS: 7681-52-9 DENSITY: 1 L = 1.07 kg

Pyridine

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Pyridine					
BAKER ANALYZED ACS Reagent					
3348-01	Glass	500 mL	cso	193.95	
		12 x 500 mL	cso	129.30	1551.60
3348-22	Al SAFETAINER	1 L	cso	365.55	
		6 x 1 L	cso	243.70	1462.20
3348-03	Glass	4 L	cso	1265.25	
		4 x 4 L	cso	843.50	3374.00
3348-33	Poly Coated	4 L	cso	1362.45	
		4 x 4 L	cso	908.30	3633.20
3348-07	Steel Pail	20 L	sbo	3892.75	
3348-R		441 lb	bul	Inquire	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

C_5H_5N FW: 79.10

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (C_5H_5N) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 20
Solubility in H_2O .....Passes Test
Residue after Evaporation .....max. 0.002%
Water (by KF, volumetric) .....max. 0.1%
Sulfate (SO_4) .....max. 0.001%
Ammonia (as NH_3) .....max. 0.002%
Reducing Substances .....Passes Test
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Copper (Cu) .....max. 5
Product Information (not specifications):
Boiling Point (typical) .....115.3°C.

CAS: 110-86-1 DENSITY: 1 L = 0.98 kg MERCK INDEX: 14,7970
IMO: 3:1282 FLASH POINT: 20°C

Solvent Spill Cleanup Products available. See pp. 378.

Pyridine, Low Water

HPLC
For Use in Liquid Chromatography and Spectrophotometry

9393-02	Glass	1 L	chp	315.40	
		6 x 1 L	chp	210.25	1261.50
9393-03	Glass	4 L	chp	760.50	
		4 x 4 L	chp	507.00	2028.00

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

C_5H_5N FW: 79.10

Assay (by GC, corrected for water) .....min. 99.0%
Ammonia (as NH_3) .....max. 0.002%
Color (APHA) .....max. 10
Reducing Substances .....Passes Test
Residue after Evaporation .....max. 5 ppm
Solubility in H_2O .....Passes Test
Sulfate (SO_4) .....max. 0.001%
Ultraviolet Absorbance (1.00-cm cell vs. water):
400 nm .....max. 0.005
375 nm .....max. 0.01
350 nm .....max. 0.01
340 nm .....max. 0.10
330 nm .....max. 1.00
Water (by KF, volumetric) .....max. 0.01%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Copper (Cu) .....max. 5

CAS: 110-86-1 DENSITY: 1 L = 0.98 kg MERCK INDEX: 14,7970
IMO: 3:1282 FLASH POINT: 20°C

Solvent Spill Cleanup Products available. See pp. 378.

3-Pyridinecarboxylic Acid

See under Niacin and Nicotinic Acid

Pyridoxine Hydrochloride

cGMP

USP, FCC
(vitamin B_6 hydrochloride)

3343-01	Glass	5 g	rnc	68.75
3343-05	Glass	100 g	rnc	701.75

$C_8H_{11}NO_3$·HCl FW: 205.64

Meets USP & FCC Requirements

Assay ($C_8H_{11}NO_3$·HCl) (dried basis) (FCC) 98.0-100.5%
Assay ($C_8H_{11}NO_3$·HCl) (USP) (dried basis) 98.0-102.0%
Identification A (FCC) .....Passes Test
Identification B (FCC) .....Passes Test
Identification C (FCC) .....Passes Test
Identification A (USP) .....Passes Test
Identification B (USP) .....Passes Test
Lead (Pb) .....max 2 mg/kg
Residue on Ignition (FCC) .....max. 0.1%
Residue on Ignition (USP) .....max. 0.1%
Heavy Metals (as Pb) .....max. 0.002%
Loss on Drying .....max. 0.5%
Chloride Content (calc. on dried basis) 16.9-17.6%
Preserve in tight, light-resistant containers.

CAS: 58-56-0 MERCK INDEX: 14,7982

1-(2-Pyridylazo)-2-naphthol

See PAN

Pyrocatechol

BAKER

U672-07	Glass	500 g	non	100.40	

$1,2\text{-}(HO)_2C_6H_4$ FW: 110.11

Melting Point .....102-106 °C.

CAS: 120-80-9 MERCK INDEX: 14,7999 IMO: 6.1:2928
FLASH POINT: 127.2°C

Pyrochatechol-3,5-disulfonic Acid

See Tiron

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Pyrogallic Acid
BAKER ANALYZED ACS Reagent

0288-04	Glass	125 g	non	203.30	
0288-01	Glass	500 g	non	395.95	

$1,2,3\text{-}(HO)_3C_6H_3$ FW: 126.11

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Melting Point .....131.0-135.0 °C.
Residue after Ignition .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.005%
Iron (Fe) .....max. 0.001%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5

CAS: 87-66-1 MERCK INDEX: 14,8000 IMO: 6.1:2811

Pyruvic Acid, Sodium Salt
See Sodium Pyruvate

Quillaja Extract
See Saponin

Quinhydrone
BAKER

U755-07	Glass	500 g	non	1078.90	

$1\text{-}O\text{:}C_6H_4\text{-}4\text{-}\text{:}O\text{-}C_6H_4\text{-}1,4\text{-}(OH)_2$ FW: 218.21

Identification (by IR) .....Passes Test

CAS: 106-34-3 MERCK INDEX: 14,8058 IMO: 6.1:2811

8-Quinolinol
BAKER ANALYZED ACS Reagent
(8-hydroxyquinoline)

2198-04	Glass	125 g	non	120.90	
2198-01	Glass	500 g	non	353.95	

C_9H_7NO FW: 145.16

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Melting Point .....72.5-74.0 °C.
Insoluble in Alcohol .....max. 0.01%
Residue after Ignition .....max. 0.02%
Sulfate (SO_4) .....max. 0.005%
Suitability for Magnesium Determination .....Passes Test

CAS: 148-24-3 MERCK INDEX: 14,4843

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Raffinose, 5-Hydrate
BAKER ANALYZED Biochemical Reagent

U826-05	Poly	100 g	bio	220.40	
U826-07	Poly	500 g	bio	986.20	

$C_{18}H_{32}O_{16}\cdot 5H_2O$ FW: 594.52

Specific Rotation, $[\alpha]_D^{20}$(dried basis, c = 4 in H_2O, calc. as pentahydrate) .....+103 - +108 °
Homogeneity by TLC .....No Extraneous Spots
Ash (sulfated) .....max. 0.05%
Arsenic (As) .....max. 0.00005%
Heavy Metals (as Cu) .....max. 0.001%
Iron (Fe) .....max. 0.0005%

CAS: 17629-30-0 MERCK INDEX: 14,8096

Resorcinol, Powder
USP

cGMP

3366-04	Glass	125 g	rnc	111.20	

$1,3\text{-}(HO)_2C_6H_4$ FW: 110.11

Meets USP Requirements

Assay ($C_6H_6O_2$) (USP) (dried basis) 99.0-100.5%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Melting Range .....109-111 °C.
Loss on Drying .....max. 1.0%
Residue on Ignition .....max. 0.05%
Ordinary Impurities .....max. 1.0%
Phenol (C_6H_5OH) .....Passes Test
Catechol .....Passes Test
Preserve in tight, light-resistant containers.

CAS: 108-46-3 MERCK INDEX: 14,8155 IMO: 6.1:2876
FLASH POINT: 127°C

Returnable Containers
See Solvent and Reagent Delivery Systems Section, p. 99-105

Reversed Phase TLC/HPLC
See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

Rhodamine B (or O)
BAKER
(C.I. 45170)

U872-03	Glass	25 g	bio	104.70	

$C_{28}H_{31}ClN_2O_3$ FW: 479.02

Sensitivity for Antimony .....Passes Test

CAS: 81-88-9 MERCK INDEX: 14,8183

Rosolic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Rosolic Acid
BAKER
(4-[bis-(p-hydroxyphenyl)methylene]-2,5-cyclo-hexadien-1-one)
(C.I. 43800)

U919-05	Glass	100 g	non	218.95	

$(HOC_6H_4)_2C{:}C_6H_4{:}O$ FW: 290.32

Visual Transition Interval:
pH .....(Yellow) 5.0
pH .....(Red) 8.0

CAS: 603-45-2 MERCK INDEX: 14,881

Saccharin Sodium
USP, FCC

3875-01	Glass	500 g	rnc	689.80	

$C_7H_4NNaO_3S{\cdot}2H_2O$ FW: 241.20

Meets USP & FCC Requirements
Clarity of Solution .....Passes Test
Color of Solution .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Acidity or Alkalinity .....Passes Test
Toluenesulfonamides .....max. 25 ppm
Lead (Pb) .....max 2 mg/kg
Heavy Metals (as Pb) .....max. 10 ppm
Water (H_2O) .....max. 15.0%
Benzoate and Salicylate .....Passes Test
Selenium (Se) .....max. 0.003%
Readily Carbonizable Substances .....Passes Test
Assay ($C_7H_4NNaO_3S$) (anhydrous basis) 99.0-101.0%
Preserve in well-closed containers.

CAS: 128-44-9 MERCK INDEX: 14,8311

Saccharose
See Sucrose

Safety Products
See under Spill Cleanup Products

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Safranine O
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Histology, Cytology and Bacteriology (Staining)
(C.I. 50240)

U926-03	Glass	25 g	non	93.00	
U926-05	Glass	100 g	non	175.95	

$C_{20}H_{19}ClN_4$ FW: 350.85

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum (0.6 mg/200 mL in 50% C_2H_5OH, 1-cm path) .....Actual Value Reported
Biological Test .....Passes Test

CAS: 477-73-6

SAF-T-DATA Label
See pages 603-605

Salicylaldehyde
BAKER

U935-07	Glass	500 mL	non	236.20	

$2\text{-}HOC_6H_4CHO$ FW: 122.12

Assay ($2\text{-}HOC_6H_4CHO$) (by GC) .....min. 98%

CAS: 90-02-8 DENSITY: 1 L = 1.17 kg MERCK INDEX: 14,8326
FLASH POINT: 78°C

Salicylic Acid, Crystal
BAKER ANALYZED ACS Reagent
(2-hydroxybenzoic acid)

0300-01	Glass	500 g	csa	100.05	
		4 x 500 g	csa	66.70	266.80
0300-05	Glass	1 kg	csa	157.50	
		4 x 1 kg	csa	105.00	420.00
0300-09	Lined Fiber Dr	100 lb	bul	Inquire	

$C_7H_6O_3$ FW: 138.12

Exceeds ACS Specifications
Assay ($C_7H_6O_3$) .....min. 99.0%
Melting Point .....158.0-161.0 °C.
Residue after Ignition .....max. 0.01%
Substances Darkened by H_2SO_4 .....Passes Test
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.002%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 2

CAS: 69-72-7 MERCK INDEX: 14,8332 FLASH POINT: 157°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Salicylic Acid, Powder
cGMP
USP
(o-hydroxybenzoic acid)

0303-04	Glass	125 g	rnc	45.10	
0303-01	Glass	500 g	rss	132.25	
		4 x 500 g	rss	88.15	352.60

$2\text{-}HOC_6H_4COOH$ FW: 138.12

Meets USP Requirements

Identification ..... Passes Test
Melting Range ..... 158-161 °C.
Loss on Drying ..... max. 0.5%
Residue on Ignition ..... max. 0.05%
Chloride (Cl) ..... max. 0.014%
Sulfate (SO_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 20 ppm
Assay ($C_7H_6O_3$) (dried basis) 99.5-101.0%
Related Compounds:
4-Hydroxybenzoic Acid ..... max. 0.1%
4-Hydroxyisophthalic Acid ..... max. 0.05%
Phenol (C_6H_5OH) ..... max. 0.02%
Other Impurities ..... max. 0.05%
Total Impurities ..... max. 0.2%

CAS: 69-72-7 MERCK INDEX: 14,8332 FLASH POINT: 157°C

Sample Preparation by Solid Phase Extraction
See Analytical Chromatography Section, p. 22-45 and Drug Development and Manufacturing Section, p. 64-86

Sand
Purified
Washed and Ignited

3382-01	Poly	500 g	csa	55.05	
		4 x 500 g	csa	36.70	146.80
3382-05	Glass	2.5 kg	csa	193.05	
		4 x 2.5 kg	csa	128.70	514.80

Meets Reagent Specifications for testing USP/NF monographs

Substances Soluble in HCl ..... max. 0.16%

CAS: 14808-60-7 MERCK INDEX: 14,8493

Saponin
BAKER ANALYZED Reagent
(quillaja extract)

3388-04	Poly	125 g	non	258.10	

Appearance ..... Passes Test
Identification ..... Passes Test
Clarity of 10% Solution ..... Passes Test
Loss on Drying at 105°C ..... max. 10%
Residue after Ignition ..... max. 10%
pH of (20% saturated solution, water) at 25°C 4.2-5.2

CAS: 8047-15-2 MERCK INDEX: 14,8365

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Scandium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Scandium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(scandium trioxide in 5% HNO_3)
Plasma Standard

5742-04		100 mL	spr	438.70	

Sc AW: 44.96

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Scandium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Scandium Trioxide in 5% HNO_3)
Plasma Standard

5776-04		100 mL	spr	145.95	

Sc AW: 44.96

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Scarlet B
See Biebrich Scarlet

Schiff Reagent, Hotchkiss and McManus
BAKER
(4.54 g/L Basic Fuchsin (95%), 7.5 mL/L HCl, 4.543 g/L sodium bisulfite in H_2O)
For Periodic Acid-Schiff Reaction

U973-01	Glass	500 mL	non	109.20	

pH at 25°C 1.1-1.5
Absorbance at 545 nm (10-mm path vs water) ..... max. 0.02
Sensitivity for Aldehyde ..... Passes Test
Suitability for Periodic Acid-Schiff Staining ..... Passes Test

DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,8394 IMO: 8:3264

SDS
See under Sodium Dodecyl Sulfate

Seignette Salt
See Potassium Sodium Tartrate

Selenium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Selenium

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Selenium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Se metal in 5% HNO_3)
Plasma Standard

5743-04		100 mL	spr	112.60	

Se AW: 78.96

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Selenium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Se metal in 5% HNO_3)
Plasma Standard

5777-04		100 mL	spr	72.00	

Se AW: 78.96

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Selenium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Se metal in 5% HNO_3)

6465-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Se AW: 78.96

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Selenium Dioxide (99%)

BAKER
(selenium(IV) oxide)

U995-05	Poison Pack	100 g	non	266.75	

CAS: 7446-08-4 MERCK INDEX: 14,8434 IMO: 6.1:3283

Selenium(IV) Oxide

See Selenium Dioxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

L-Serine, USP

cGMP

Multi-Compendial

2088-06	Poly	1 kg	bio	871.00	
2088-07	Poly Pail	12 kg	bks	Inquire	

$C_3H_7NO_3$ FW: 105.09

Meets USP Requirements

Assay ($C_3H_7NO_3$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +14.0 - +15.6 °
Loss on Drying at 105°C ..... max. 0.2%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%
Heavy Metals (as Pb) ..... max. 0.0015%

Meets FCC Requirements

Assay ($C_3H_7NO_3$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying ..... max. 0.3%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... +13.6 - +16.0 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_3H_7NO_3$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +14.0 - +16.0 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

Preserve in well-closed containers.
Store protected from light.

CAS: 56-45-1 MERCK INDEX: 14,8460

Sieves

See under Molecular Sieve

Silica Gel, for Flash Chromatography

See Analytical Chromatography Section, p. 22-45

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silica Gel (60-200 Mesh)

BAKER ANALYZED Reagent
Suitable For Column Chromatography

3405-01	Glass	500 g	spr	247.45	
		4 x 500 g	spr	164.95	659.80
3405-05	Poly Pail	2.5 kg	spr	581.35	
3405-25		25 kg	bbp	3637.10	

Toluene Absorption .....Passes Test
Loss on Ignition .....max. 10.0%
Alcohol-Ether Soluble Substances .....max. 0.10%
Bulk Density (g/cc) .....Actual Value Reported
Mesh:
On U.S. No. 60 Sieve .....max. 15%
Thru U.S. No. 200 Sieve .....max. 15%
Physical Data (not specifications):
pH 7
Mean Pore Diameter, Å 150
Average Particle Diameter, µm (APD) 63-200

CAS: 63231-67-4 MERCK INDEX: 14,8490

Silica Gel (40-140 Mesh)

BAKER ANALYZED Reagent
Suitable for Column Chromatography and the Scale-up of TLC Procedures

3404-01	Glass	500 g	spr	151.50	
		4 x 500 g	spr	101.00	404.00

Loss on Ignition .....max. 13%
Alcohol-Ether Soluble Substances .....max. 0.05%
Flow Rate, mL/min. .....min. 0.5
Mesh:
Thru U.S. No. 40 Sieve .....min. 99.5%
Thru U.S. No. 140 Sieve .....max. 10%
Physical Data (not specifications):
pH 7
Mean Pore Diameter, Å 60
Average Particle Diameter, µm (APD) 100-425
Bulk Density (g/cc) 0.5

CAS: 63231-67-4 MERCK INDEX: 14,8490

Silica Gel Desiccant, Indicating (4-10 Mesh)

BAKER ANALYZED Reagent

3402-01	Glass	500 g	spr	105.90	
		4 x 500 g	spr	70.60	282.40
3402-05	Poly	2.5 kg	spr	297.00	

Loss on Heating at 200°C .....max. 6.0%
Suitability for Moisture Absorption at 90% Relative Humidity . .min. 30%
Suitability for Moisture Absorption at 50% Relative Humidity . .min. 20%
Suitability as Indicating Desiccant .....Passes Test
Mesh:
Thru U.S. No. 10 Sieve .....max. 5.0%
Physical Data (not specifications):
Color Change:
Blue .....Activated
Violet .....10% Moisture Absorbed
Pink .....19% Moisture Absorbed
Pale Pink .....28% Moisture Absorbed

CAS: 1343-98-2 MERCK INDEX: 14,8490

Silica Gel Desiccant, Indicating (6-18 Mesh)

BAKER ANALYZED ACS Reagent

3401-01	Glass	500 g	spr	97.95	
		4 x 500 g	spr	65.30	261.20
3401-05	Poly	2.5 kg	spr	317.90	

Exceeds ACS Specifications

Loss on Heating at 200°C .....max. 6.0%
Suitability for Moisture Absorption .....min. 27%
Suitability as Indicating Desiccant .....Passes Test
Mesh:
Thru U.S. No. 6 Sieve .....min. 90%
Thru U.S. No. 18 Sieve .....max. 10%
Physical Data (not specifications):
Color Change:
Blue .....Activated
Violet .....10% Moisture Absorbed
Pink .....19% Moisture Absorbed
Pale Pink .....28% Moisture Absorbed

CAS: 1343-98-2 MERCK INDEX: 14,8490

Silicic Acid, n-Hydrate, Powder

BAKER ANALYZED Reagent

0324-01	Poly	500 g	csa	307.20	
		4 x 500 g	csa	204.80	819.20
0324-05	Poly Pail	2.5 kg	non	827.35	

$SiO_2 \cdot nH_2O$

Assay (as SiO_2) .....min. 84%
Nonvolatile with HF .....max. 0.2%
Chloride (Cl) .....max. 0.01%
Sulfate (SO_4) .....max. 0.02%
Heavy Metals (as Pb) .....max. 0.002%
Iron (Fe) .....max. 0.007%
Loss on Ignition (as H_2O) .....max. 16%

CAS: 63231-67-4

Silicon, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Silicon

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silicon, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Si metal in 5% HNO_3 and a trace of HF)
Plasma Standard

5744-04		100 mL	spr	108.95	
5744-01		500 mL	spr	218.15	

Si AW: 28.09

Silicon (Si)

IMO: 8:2922

Silicon, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Si metal in 5% HNO_3 and a trace of HF)
Plasma Standard

5778-04		100 mL	spr	72.00	

Si AW: 28.09

IMO: 8:2922

Silicon, 1,000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(ammonium hexafluorosilicate in H_2O)

6466-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Si AW: 28.09

DENSITY: 1 L = 1 kg

Silver, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Silver, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ag metal in 5% HNO_3)
Plasma Standard

5745-04		100 mL	spr	112.60	

Ag AW: 107.87

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Silver, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ag metal in 5% HNO_3)
Plasma Standard

5779-04		100 mL	spr	72.00	

Ag AW: 107.87

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Silver, 1,000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ag metal in 5% HNO_3)

6467-04	Glass	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Ag AW: 107.87

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Silver Diethyldithiocarbamate

BAKER ANALYZED ACS Reagent

H739-02	Glass	10 g	spr	349.15	
		4 x 10 g	spr	232.75	931.00
H739-03	Glass	25 g	spr	627.90	
		4 x 25 g	spr	418.60	1674.40

$(C_2H_5)_2NCSSAg$ FW: 256.14

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance ..... Passes Test
Solubility in Pyridine ..... Passes Test
Suitability for Arsenic Determination ..... Passes Test

Protect material from exposure to light
Keep material refrigerated between 2-8°C (36-46°F).

CAS: 1470-61-7

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silver Nitrate, Crystal
BAKER ANALYZED ACS Reagent

3426-00	Glass	30 g	spr	261.15	
		4 x 30 g	spr	174.10	696.40
3426-04	Glass	125 g	spr	596.95	
		4 x 125 g	spr	397.95	1591.80
3426-01	Glass	500 g	spr	2477.70	
		4 x 500 g	spr	1651.80	6607.20

$AgNO_3$ FW: 169.87

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($AgNO_3$) .....min. 99.7%
Clarity of Solution .....Passes Test
Free Acid .....Passes Test
Substances Not Precipitated by HCl .....max. 0.01%
Sulfate (SO_4) .....max. 0.002%
Lead (Pb) .....max. 0.001%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Copper (Cu) .....max. 2
Iron (Fe) .....max. 2
CAS: 7761-88-8 MERCK INDEX: 14,8518 IMO: 5.1:1493

Silver Nitrate Standard Solution (1 mL = 1 mg Chloride)
BAKER ANALYZED Reagent

5652-02	Glass	1 L	sol	75.60	
		6 x 1 L	sol	63.00	378.00
5652-03	Glass	4 L	sol	175.75	
		4 x 4 L	sol	146.45	585.80

$AgNO_3$ FW: 169.87

Each lot of this product is standardized at 25°C against ULTREX Sodium Chloride, which is traceable to NIST Standard Reference Materials, with potassium chromate indication.
SRM No .....Reported on Label
The titer found falls within the range 0.995-1.005 mg Cl/mL.
Titer, mg/mL .....Actual Value Reported
pH at 25°C 3.0-3.5
Trace Impurities (in ppm):
Sulfate (SO_4) .....max. 1
CAS: 7761-88-8 DENSITY: 1 L = 1.0 kg

Silver Nitrate, 0.1 N Volumetric Solution
BAKER ANALYZED Reagent

5630-02	Glass	1 L	sol	146.90	
		6 x 1 L	sol	122.40	734.40
5630-03	Glass	4 L	sol	433.25	
		4 x 4 L	sol	361.05	1444.20

$AgNO_3$ FW: 169.87

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.095-0.105
pH at 25°C 3.0-6.0
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Sulfate (SO_4) .....max. 1
Appearance .....Passes Test
CAS: 7761-88-8 DENSITY: 1 L = 1.00 kg

Silver Nitrate, DILUT-IT Analytical Concentrate, 0.1N
(1/10 equiv. = 16.99 g $AgNO_3$)

4681-01	Ampoule	1 pk	spr	149.05	
		6 x 1 pk	spr	124.20	745.20

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) .....Passes Test
CAS: 7761-88-8

Silver Sulfate, Powder
BAKER ANALYZED ACS Reagent

3436-04	Glass	125 g	spr	700.65	
		4 x 125 g	spr	467.10	1868.40

Ag_2SO_4 FW: 311.80

Meets ACS Specifications
Assay (Ag_2SO_4) .....min. 98.0%
Insoluble Matter and Silver Chloride .....max. 0.02%
Nitrate (NO_3) .....max. 0.001%
Substances Not Precipitated by HCl .....max. 0.03%
Iron (Fe) .....max. 0.001%
CAS: 10294-26-5 MERCK INDEX: 14,8529

Soda Lime, Indicating Type (4-8 Mesh)
BAKER ANALYZED ACS Reagent

3448-01	Poly	500 g	non	68.85	
3448-05	Poly	2.5 kg	csa	233.95	
		4 x 2.5 kg	csa	155.95	623.80

Meets ACS Specifications
Loss on Drying at 200°C .....max. 7%
Carbon Dioxide Absorption Capacity .....min. 19%
Presence of Indicator .....Passes Test
Fines .....max. 1%
Mesh:
On U.S. No. 4 Sieve .....max. 10%
Thru U.S. No. 8 Sieve .....max. 25%
Product contains ethyl violet indicator that changes color from white to purple as its powers of absorption are exhausted. Not suitable for use in medical equipment used in conjunction with anesthesia, oxygen therapy, pulmonary function, and basal metabolism.
IMPORTANT: Product contains moisture. Store at room temperature.
CAS: 8006-28-8 MERCK INDEX: 14,8569 IMO: 8:1907

Sodium

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Sodium, Lump					
BAKER ANALYZED ACS Reagent					
9410-04	Metal Can	4 oz	csa	156.15	
		4 x 4 oz	csa	104.10	416.40
9410-01	Metal Can	1 lb	non	167.70	

Na AW: 22.99

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Chloride (Cl) ..... max. 0.002%
Nitrate (NO_3) ..... max. 0.003%
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 0.001%

CAS: 7440-23-5 MERCK INDEX: 14,8570 IMO: 4.3:1428

Sodium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Sodium, 10,000 µg/mL (1.00% w/v)					
BAKER INSTRA-ANALYZED Reagent (sodium carbonate in 5% HNO_3) Plasma Standard					
5746-04		100 mL	spr	112.60	
5746-01		500 mL	spr	218.15	

Na AW: 22.99

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Sodium, 1000 µg/mL (0.10% w/v)					
BAKER INSTRA-ANALYZED Reagent (sodium carbonate in 5% HNO_3) Plasma Standard					
5780-04		100 mL	spr	72.00	
5780-01		500 mL	spr	124.10	

Na AW: 22.99

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Sodium, 1,000 µg/mL (0.10% w/v)					
BAKER INSTRA-ANALYZED Reagent (sodium carbonate in 5% HNO_3)					
6468-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Na AW: 22.99

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Sodium Acetate, Anhydrous					
BAKER ANALYZED ACS Reagent					
3470-01	Poly	500 g	csa	112.80	
		4 x 500 g	csa	75.20	300.80
3470-05	Poly	2.5 kg	csa	443.20	
		4 x 2.5 kg	csa	295.45	1181.80
3470-07	Poly Pail	12 kg	bks	Inquire	
3470-08	Lined Fiber Dr	35 lb	bul	Inquire	
3470-R	Poly Drum	200 lb	bul	Inquire	

CH_3COONa FW: 82.03

Meets ACS Specifications

Assay (CH_3COONa) ..... min. 99.0%
Insoluble Matter ..... max. 0.01%
Loss on Drying at 120°C ..... max. 1.0%
pH of 5% Solution at 25°C 7.0-9.2
Chloride (Cl) ..... max. 0.002%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.002%

CAS: 127-09-3 MERCK INDEX: 14,8571

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Sodium Acetate, Anhydrous					
Purified					
3472-01	Poly	500 g	csa	107.05	
		4 x 500 g	csa	71.35	285.40
3472-05	Poly	2 kg	csa	315.90	
		4 x 2 kg	csa	210.60	842.40

CH_3COONa FW: 82.03

Assay (CH_3COONa) ..... min. 99.0%
Insoluble Matter ..... max. 0.01%
pH of 5% Solution at 25°C 7.0-9.2
Heavy Metals (as Pb) ..... max. 0.002%
Loss on Drying at 120°C ..... max. 1.0%

CAS: 127-09-3 MERCK INDEX: 14,8571

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Acetate, Anhydrous
USP, FCC

cGMP

3473-05	Poly Pail	2.5 kg	rnc	352.35	
3473-R	Poly Drum	200 lb	bul	Inquire	

CH_3COONa FW: 82.03

Meets USP & FCC Requirements

Assay (CH_3COONa) (dried basis) 99.0-101.0%
Alkalinity ..... max. 0.2%
Calcium and Magnesium ..... Passes Test
Chloride (Cl) ..... max. 0.035%
Heavy Metals (as Pb) ..... max. 10 ppm
Identification ..... Passes Test
Insoluble Matter ..... max. 0.05%
Lead (Pb) ..... max 2 mg/kg
Loss on Drying at 120°C ..... max. 1.0%
pH of 3% Solution at 25°C 7.5-9.2
Potassium Compounds ..... Passes Test
Residual Acetic Acid ..... Actual Value Reported
Sulfate (SO_4) ..... max. 0.005%

CAS: 127-09-3 MERCK INDEX: 14,8571

Sodium Acetate, Anhydrous
USP, FCC
Endotoxin Tested

cGMP

3474-07	Poly Pail	12 kg	bks	Inquire	

CH_3COONa FW: 82.03

Meets USP & FCC Requirements

Assay (CH_3COONa) (dried basis) 99.0-101.0%
Alkalinity ..... max. 0.2%
Calcium and Magnesium ..... Passes Test
Chloride (Cl) ..... max. 0.035%
Endotoxin Concentration (2.5 EU/g max.) ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Identification ..... Passes Test
Insoluble Matter ..... max. 0.05%
Lead (Pb) ..... max 2 mg/kg
Loss on Drying at 120°C ..... max. 1.0%
pH of 3% Solution at 25°C 7.5-9.2
Potassium Compounds ..... Passes Test
Residual Acetic Acid ..... Actual Value Reported
Sulfate (SO_4) ..... max. 0.005%

CAS: 127-09-3 MERCK INDEX: 14,8571

See Drug Development and Manufacturing section for more information about scale-up and process chromatography products, starting on page 64.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Acetate, Trihydrate, Crystal
BAKER ANALYZED ACS Reagent

3460-01	Poly	500 g	csa	64.45	
		4 x 500 g	csa	42.95	171.80
3460-05	Poly	2.5 kg	csa	214.20	
		4 x 2.5 kg	csa	142.80	571.20
3460-07	Poly Pail	12 kg	bks	Inquire	
3460-R	Poly Drum	275 lb	bul	Inquire	

$CH_3COONa·3H_2O$ FW: 136.08

Meets ACS Requirements
Meets Reagent Specifications for testing USP/NF monographs

Assay ($CH_3COONa·3H_2O$) 99.0-101.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 7.5-9.2
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.002%
Substances Reducing Permanganate ..... Passes Test
Potassium (K) ..... max. 0.005%
Trace Impurities (in ppm):
Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 6131-90-4 MERCK INDEX: 14,8571

Sodium Acetate, Trihydrate, Crystal
ULTRAPURE BIOREAGENT
For Liquid Chromatography and Molecular Biology Applications

4009-04	Poly	1 kg	upr	70.75	
4009-06	Poly Pail	5 kg	upr	232.10	

$CH_3COONa·3H_2O$ FW: 136.08

Assay ($CH_3COONa·3H_2O$) 99.0-101.0%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
pH of 5% Solution at 25°C 7.5-9.2
Absorbance of a 1M Solution:
254 nm ..... max. 0.02
280 nm ..... max. 0.01
350 nm ..... max. 0.01
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 0.002%
Calcium, Magnesium, and R_2O_3 Precipitate ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Trace Impurities (in ppm):
Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 6131-90-4 MERCK INDEX: 14,8571

Sodium Acetate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Acetate, Trihydrate, Crystal
USP, FCC cGMP

3462-01	Poly	500 g	rnc	54.95	
3462-05	Poly	2.5 kg	rss	274.00	
		4 x 2.5 kg	rss	182.65	730.60
3462-07	Poly Pail	12 kg	bks	Inquire	
3462-09	Lined Fiber Dr	100 lb	bul	Inquire	
3462-R	Poly Drum	275 lb	bul	Inquire	

$CH_3COONa \cdot 3H_2O$ FW: 136.08

Meets USP & FCC Requirements

Assay (CH_3COONa) (dried basis) 99.0-101.0%
Alkalinity ..... max. 0.05%
Calcium and Magnesium ..... Passes Test
Chloride (Cl) ..... max. 0.035%
Heavy Metals (as Pb) ..... max. 10 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Matter ..... max. 0.05%
Lead (Pb) ..... max 2 mg/kg
Loss on Drying 38.0-41.0%
pH 7.5-9.2
Potassium Compounds ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%

CAS: 6131-90-4 MERCK INDEX: 14,8571

Sodium Acetate, Trihydrate, Crystal, USP
Multi-Compendial cGMP

3461-01	Poly	500 g	rnc	65.95	
3461-05	Poly	2.5 kg	rss	328.75	
		4 x 2.5 kg	rss	219.15	876.60
3461-07	Poly Pail	12 kg	bks	Inquire	
3461-08	Poly Drum	85 lb	bul	Inquire	
3461-19	Poly Drum	275 lb	bul	Inquire	

$CH_3COONa \cdot 3H_2O$ FW: 136.08

Meets USP Requirements

Assay (CH_3COONa) (dried basis) 99.0-101.0%
Calcium and Magnesium ..... Passes Test
Chloride (Cl) ..... max. 0.035%
Endotoxin Concentration (EU/g) ..... max. 2.5
Identification ..... Passes Test
Insoluble Matter ..... max. 0.05%
Loss on Drying 38.0-41.0%
pH of 5% Solution at 25°C 7.5-9.2
Potassium (K) ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%

Meets BP/Ph.Eur. Chemical Specifications

Assay (CH_3COONa) 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
pH (1 in 20) 7.5-9.0
Reducing Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 200 ppm
Arsenic (As) ..... max. 2 ppm

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium and Magnesium ..... max. 50 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Loss on Drying 39.0-40.5%

Meets JP Chemical Specifications

Assay (CH_3COONa) 99.5-101.0%
Identification ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Chloride (Cl) ..... max. 0.011%
Sulfate (SO_4) ..... max. 0.017%
Heavy Metals (as Pb) ..... max. 10 ppm
Calcium and Magnesium ..... Passes Test
Arsenic (As) ..... max. 2 ppm
Substances Reducing Permanganate ..... Passes Test
Loss on Drying 39.0-40.5%

CAS: 6131-90-4 MERCK INDEX: 14,8571

Sodium Acid Carbonate
See Sodium Bicarbonate

Sodium Acid Phosphate
See Sodium Phosphate, Monobasic

Sodium Acid Sulfate
See Sodium Bisulfate

Sodium Ammonium Phosphate, 4-Hydrate, Crystal
BAKER ANALYZED Reagent
(ammonium sodium hydrogen phosphate, tetrahydrate)

3478-01	Poly	500 g	non	80.90
3478-07	Poly Pail	12 kg	bks	Inquire

$NaNH_4HPO_4 \cdot 4H_2O$ FW: 209.07

Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 7.5-8.5
Nitrate (NO_3) ..... max. 0.001%
Sulfur Compounds (as SO_4) ..... max. 0.005%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Arsenic (As) ..... max. 1
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 7783-13-3

Sodium meta-Arsenite
BAKER ANALYZED Reagent

3487-04	Glass	125 g	non	139.55
3487-01	Glass	500 g	non	588.15

$NaAsO_2$ FW: 129.91

Assay ($NaAsO_2$) ..... min. 98.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.01%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfate (SO_4) ..... max. 0.02%
Iron (Fe) ..... max. 0.002%
Other Heavy Metals (as Pb) ..... max. 0.005%
CAS: 7784-46-5 MERCK INDEX: 14,8580 IMO: 6.1:2027

Sodium Azide
Practical

V015-05	Glass	100 g	bio	74.00	
V015-07	Poly	500 g	bio	168.80	

NaN_3 FW: 65.01

Appearance (White crystals or granules) ..... Passes Test
Assay (NaN_3) ..... min. 95%
CAS: 26628-22-8 MERCK INDEX: 14,8581 IMO: 6.1:1687

Sodium Benzoate
NF, FCC cGMP

3500-01	Glass	500 g	rss	97.30	
		4 x 500 g	rss	64.85	259.40
3500-05	Poly	2.5 kg	rnc	294.45	

C_6H_5COONa FW: 144.11

Meets NF & FCC Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Alkalinity ..... max. 0.04%
Lead (Pb) ..... max 2 mg/kg
Water (H_2O) ..... max. 1.5%
Heavy Metals (as Pb) ..... max. 10 ppm
Assay (C_6H_5COONa) (anhydrous basis) 99.0-100.5%
CAS: 532-32-1 MERCK INDEX: 14,8582

Sodium Benzoate, NF
Multi-Compendial cGMP

3501-01	Glass	500 g	rss	107.10	
		4 x 500 g	rss	71.40	285.60
3501-05	Poly	2.5 kg	rnc	323.90	

C_6H_5COONa FW: 144.11

Meets NF Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Alkalinity ..... max. 0.04%
Water (H_2O) ..... max. 1.5%
Heavy Metals (as Pb) ..... max. 10 ppm
Assay (C_6H_5COONa) (anhydrous basis) 99.0-100.5%
Meets BP/Ph.Eur. Chemical Specifications
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Halogenated Compounds (as Cl):
Ionized Chlorine ..... max. 200 ppm
Total Chlorine ..... max. 300 ppm
Heavy Metals (as Pb) ..... max. 10 ppm

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Loss on Drying ..... max. 2.0%
Assay (C_6H_5COONa) (anhydrous basis) 99.0-100.5%
CAS: 532-32-1 MERCK INDEX: 14,8582

Sodium Bicarbonate, Powder
BAKER ANALYZED ACS Reagent
(sodium hydrogen carbonate)

3506-01	Poly	500 g	csa	42.60	
		4 x 500 g	csa	28.40	113.60
3506-05	Poly	2.5 kg	csa	99.00	
		4 x 2.5 kg	csa	66.00	264.00
3506-07	Poly Pail	12 kg	bks	Inquire	
3506-09	Poly Drum	225 lb	bul	Inquire	

$NaHCO_3$ FW: 84.01

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($NaHCO_3$) (dried basis) 99.7-100.3%
Insoluble Matter ..... max. 0.015%
Chloride (Cl) ..... max. 0.003%
Phosphate (PO_4) ..... max. 0.001%
Sulfur Compounds (as SO_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.02%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
CAS: 144-55-8 MERCK INDEX: 14,8583

Sodium Bicarbonate, Powder
HPLC
(sodium hydrogen carbonate)
For Use in High Performance Liquid Chromatography

3508-05	Poly	2.5 kg	spr	153.60	

$NaHCO_3$ FW: 84.01

Assay ($NaHCO_3$) (by acidimetry) 99.7-100.3%
Insoluble Matter ..... max. 0.015%
Chloride (Cl) ..... max. 0.003%
Phosphate (PO_4) ..... max. 0.001%
Sulfur Compounds (as SO_4) ..... max. 0.003%
Calcium, Magnesium, and R_2O_3 Precipitate ..... max. 0.02%
Iron (Fe) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
UV Absorbance (1 M Aqueous Solution) (1.00-cm cell vs. water):
254 nm ..... max. 0.05
280 nm ..... max. 0.02
350 nm ..... max. 0.01
CAS: 144-55-8 MERCK INDEX: 14,8583

Sodium Bicarbonate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Bicarbonate, Powder

cGMP

USP, FCC
(sodium hydrogen carbonate)

3509-01	Glass	500 g	rnc	40.40	
3509-05	Glass	2.5 kg	rss	113.70	
		4 x 2.5 kg	rss	75.80	303.20
3509-07	Poly Pail	12 kg	bks	Inquire	
3509-09	Poly Drum	100 lb	bul	Inquire	

$NaHCO_3$ FW: 84.01

Meets USP & FCC Requirements

Appearance (White powder) ..... Passes Test
Identification ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Limit of Sulfur Compounds ..... max. 0.015%
Loss on Drying ..... max. 0.25%
Insoluble Substances ..... Passes Test
Normal Carbonate ..... Passes Test
Limit of Ammonia (NH_3) ..... Passes Test
Chloride (Cl) ..... max. 0.015%
Arsenic (As) ..... max. 2 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Assay ($NaHCO_3$) (dried basis) 99.0-100.5%

This product is not intended for use in hemodialysis.

CAS: 144-55-8 MERCK INDEX: 14,8583

Sodium Bicarbonate, Powder, USP

cGMP

Multi-Compendial

3510-05	Glass	2.5 kg	rss	141.10	
		4 x 2.5 kg	rss	94.05	376.20
3510-07	Poly Pail	12 kg	bks	Inquire	
3510-09	Poly Drum	100 lb	bul	Inquire	

$NaHCO_3$ FW: 84.01

Meets USP Requirements

Identification ..... Passes Test
Limit of Sulfur Compounds ..... max. 0.015%
Loss on Drying ..... max. 0.25%
Insoluble Matter ..... Passes Test
Normal Carbonate ..... Passes Test
Limit of Ammonia (NH_3) ..... Passes Test
Chloride (Cl) ..... max. 0.015%
Arsenic (As) ..... max. 2 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Assay ($NaHCO_3$) (dried basis) 99.0-100.5%
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets BP/Ph.Eur. Chemical Specifications

Assay ($NaHCO_3$) 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Carbonate (CO_3) ..... Passes Test
Chloride (Cl) ..... max. 150 ppm
Sulfate (SO_4) ..... max. 150 ppm
Ammonium (NH_4) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Calcium (Ca) ..... max. 100 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 20 ppm

Meets JP Chemical Specifications

Assay ($NaHCO_3$) 99.0-101.0%
Identification ..... Passes Test
pH (1 in 20) 7.9-8.4
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.040%
Carbonate (CO_3) ..... Passes Test
Ammonium (NH_4) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Arsenic (As) ..... max. 2 ppm

CAS: 144-55-8 MERCK INDEX: 14,8583

Sodium Bichromate

See Sodium Dichromate

Sodium Biphosphate

See Sodium Phosphate, Monobasic

Sodium Bisulfate, Monohydrate, Crystal

BAKER ANALYZED Reagent
(sodium hydrogen sulfate, monohydrate)

3534-01	Poly	500 g	csa	114.90	
		4 x 500 g	csa	76.60	306.40
3534-05	Poly	2.5 kg	csa	402.15	
		4 x 2.5 kg	csa	268.10	1072.40

$NaHSO_4 \cdot H_2O$ FW: 138.07

Assay (H_2SO_4) (by acidimetry) 35.0-36.5%
Insoluble Matter and NH_4OH Precipitate ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Calcium and Magnesium (as Ca) (by EDTA titration) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%

Trace Impurities (in ppm):

Arsenic (As) ..... max. 1
Heavy Metals (as Pb) ..... max. 5

CAS: 7681-38-1 MERCK INDEX: 14,8586 IMO: 8:3260

Sodium Bisulfite, Dried

Purified

3557-01	Poly	500 g	non	40.00	

Appearance ..... Passes Test
Identification ..... Passes Test
Solubility in H_2O ..... Passes Test
Thiosulfate (S_2O_3) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%

CAS: 7631-90-5 MERCK INDEX: 14,8588

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Bisulfite, Granular
BAKER ANALYZED ACS Reagent

3556-01	Poly	500 g	csa	49.00	
		4 x 500 g	csa	32.65	130.60
3556-05	Poly	2.5 kg	csa	174.10	
		4 x 2.5 kg	csa	116.05	464.20
3556-20	Poly Drum	200 lb	bul	Inquire	

Meets ACS Specifications

Assay (as SO_2) (by iodometry) ..... min. 58.5%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.02%
Thiosulfate (S_2O_3) ..... Actual Value Reported
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%

This product is usually a mixture of Sodium Bisulfite, $NaHSO_3$ and Sodium Metabisulfite, $Na_2S_2O_5$.

CAS: 7631-90-5 MERCK INDEX: 14,8588

Sodium meta-Bisulfite, Granular
BAKER ANALYZED ACS Reagent
(sodium pyrosulfite)

3552-01	Poly	500 g	csa	40.90	
		4 x 500 g	csa	27.25	109.00
3552-05	Glass	2.5 kg	csa	147.10	
		4 x 2.5 kg	csa	98.05	392.20
3552-07	Poly Pail	12 kg	bks	Inquire	
3552-20	Lined Fiber Dr	200 lb	bul	Inquire	

$Na_2S_2O_5$ FW: 190.11

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Na_2S_2O_5$) ..... min. 97.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.05%
Thiosulfate (S_2O_3) ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%

CAS: 7681-57-4 MERCK INDEX: 14,8588

Sodium meta-Bisulfite
NF cGMP

3550-05	Poly	2.5 kg	rss	232.50	
		4 x 2.5 kg	rss	155.00	620.00

$Na_2S_2O_5$ FW: 190.11

Meets NF Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Limit of Chloride ..... max. 0.05%
Iron (Fe) ..... max. 0.002%
Limit of Thiosulfate ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.002%
Assay (SO_2) 65.0-67.4%

CAS: 7681-57-4

Sodium meta-Bisulfite, NF
Multi-Compendial cGMP

3551-05	Poly	2.5 kg	rss	170.55	
		4 x 2.5 kg	rss	113.70	454.80

$Na_2S_2O_5$ FW: 190.11

Meets NF Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Limit of Chloride ..... max. 0.05%
Iron (Fe) ..... max. 0.002%
Limit of Thiosulfate ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.002%
Assay (SO_2) 65.0-67.4%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Thiosulfate ..... Passes Test
Arsenic (As) ..... max. 5 ppm
Iron (Fe) ..... max. 20 ppm
Heavy Metals (as Pb) ..... max. 20 ppm
Assay ($Na_2S_2O_5$) 95.0-100.5%
pH 3.5-5.0

Meets JP Chemical Specifications

Assay ($Na_2S_2O_5$) 95.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Thiosulfate ..... Passes Test
Heavy Metals (as Pb) ..... Passes Test
Iron (Fe) ..... max. 20 ppm
Arsenic (As) ..... max. 4 ppm

CAS: 7681-57-4

Sodium Borate, 10-Hydrate
NF cGMP

3574-01	Poly	500 g	rnc	64.75	
3574-05	Poly	2.5 kg	rss	259.45	
		4 x 2.5 kg	rss	172.95	691.80
3574-07	Poly Pail	12 kg	bks	Inquire	

$Na_2B_4O_7 \cdot 10H_2O$ FW: 381.37

Meets NF Requirements

Assay 99.0-105.0%
Identification ..... Passes Test
Carbonate and Bicarbonate ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%

CAS: 1303-96-4 MERCK INDEX: 14,8590

Sodium Borate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Borate, 10-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
(sodium tetraborate, decahydrate)

3568-01	Poly	500 g	csa	54.45	
		4 x 500 g	csa	36.30	145.20
3568-05	Poly	2.5 kg	csa	200.80	
		4 x 2.5 kg	csa	133.85	535.40
3568-07	Poly Pail	12 kg	bks	Inquire	

$Na_2B_4O_7 \cdot 10H_2O$ FW: 381.37

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.5-105.0%
Insoluble Matter .....max. 0.005%
pH of 0.01M Solution at 25°C 9.15-9.20
Chloride (Cl) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Sulfate (SO_4) .....max. 0.005%
Calcium (Ca) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.001%
Trace Impurities (in ppm):
Iron (Fe) .....max. 5

CAS: 1303-96-4 MERCK INDEX: 14,8590

Sodium Borate, 10-Hydrate, Powder
BAKER ANALYZED ACS Reagent
(sodium tetraborate, decahydrate)

3570-01	Poly	500 g	csa	58.95	
		4 x 500 g	csa	39.30	157.20
3570-05	Poly	2.5 kg	csa	210.90	
		4 x 2.5 kg	csa	140.60	562.40

$Na_2B_4O_7 \cdot 10H_2O$ FW: 381.37

Meets ACS Specifications
Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.5-105.0%
Insoluble Matter .....max. 0.005%
pH of 0.01M Solution at 25°C 9.15-9.20
Chloride (Cl) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Sulfate (SO_4) .....max. 0.005%
Calcium (Ca) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.001%
Trace Impurities (in ppm):
Iron (Fe) .....max. 5

CAS: 1303-96-4 MERCK INDEX: 14,8590

Sodium Borate, 10-Hydrate, NF
cGMP
Multi-Compendial
(Borax)

3575-07	Poly Pail	12 kg	bks	Inquire	

$Na_2B_4O_7 \cdot 10H_2O$ FW: 381.37

Meets NF Requirements
Assay 99.0-105.0%
Identification .....Passes Test
Carbonate and Bicarbonate .....Passes Test
Heavy Metals (as Pb) .....max. 0.002%
Endotoxin Concentration (EU/g) .....max. 2.5
Meets BP/Ph.Eur. Chemical Specifications
Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.0-103.0%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Appearance of Solution .....Passes Test
pH of 4% Solution at 25°C 9.0-9.6
Sulfate (SO_4) .....max. 50 ppm
Ammonium (NH_4) .....max. 10 ppm
Arsenic (As) .....max. 5 ppm
Calcium (Ca) .....max. 100 ppm
Heavy Metals (as Pb) .....max. 25 ppm
Meets JP Chemical Specifications
Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.0-103.0%
Identification .....Passes Test
pH (1 in 20) 9.1-9.6
Clarity and Color of Solution .....Passes Test
Carbonate and Bicarbonate .....Passes Test
Heavy Metals (as Pb) .....max. 20 ppm
Arsenic (As) .....max. 5 ppm

CAS: 1303-96-4 MERCK INDEX: 14,8590

Sodium Borohydride (98%)
BAKER

V023-03	Poly	25 g	non	95.35	
V023-05	Poly	100 g	non	226.30	

$NaBH_4$ FW: 37.83

Meets Reagent Specifications for testing USP/NF monographs
Assay ($NaBH_4$) .....min. 98%

CAS: 16940-66-2 MERCK INDEX: 14,8592 IMO: 4.3:1426

Sodium Bromide, Crystal
BAKER ANALYZED ACS Reagent

3588-01	Poly	500 g	csa	90.10	
		4 x 500 g	csa	60.05	240.20
3588-05	Poly	2.5 kg	csa	335.40	
		4 x 2.5 kg	csa	223.60	894.40
3588-07	Poly Pail	12 kg	bks	Inquire	

NaBr FW: 102.89

Meets ACS Specifications
Assay (NaBr) .....min. 99.0%
Insoluble Matter .....max. 0.005%
Alkalinity (as Na_2CO_3) .....max. 0.015%
pH of 5% Solution at 25°C 5.0-8.8
Bromate (BrO_3) .....max. 0.001%
Calcium (Ca) .....max. 0.002%
Chloride (Cl) .....max. 0.2%
Sulfate (SO_4) .....max. 0.002%
Barium (Ba) .....max. 0.002%
Magnesium (Mg) .....max. 0.001%
Potassium (K) .....max. 0.1%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 7647-15-6 MERCK INDEX: 14,8594

Sodium Butyrate
See Butyric Acid

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Cacodylate

See Cacodylic Acid, Sodium Salt, Trihydrate

Sodium Calcium Hydrate

See Soda Lime

Sodium Carbonate, Anhydrous

ULTREX Ultrapure Reagent

4923-03	Glass	25 g	spr	232.35	
4923-04	Glass	100 g	spr	568.90	

Na_2CO_3 FW: 105.99

Analysis of Actual Lot (not specifications)
Certificate Provided Reports Actual Lot Analysis

Assay (Na_2CO_3) (dried basis) 100.0%
Ammonium Hydroxide Precipitate .....< 0.001%
Loss on Drying at 285°C .....< 0.002%
Particulate Matter .....< 0.001%

Non-Metallic Impurities (in ppm)(µg/g):

Arsenic (As) .....< 0.1
Halide (as Cl) .....< 1
Nitrogen Compounds (as N) .....< 1
Phosphate (PO_4) .....< 1
Silicon (Si) 0.3
Sulfur Compounds (as SO_4) .....< 0.1

Metallic Impurities (in ppm)(µg/g):

Aluminum (Al) .....< 0.1
Barium (Ba) .....< 0.1
Bismuth (Bi) 2.0
Cadmium (Cd) .....< 0.1
Calcium (Ca) 2.0
Chromium (Cr) .....< 0.1
Cobalt (Co) .....< 0.1
Copper (Cu) .....< 0.1
Iron (Fe) .....< 0.1
Lead (Pb) .....< 0.1
Lithium (Li) 0.3
Magnesium (Mg) .....< 0.1
Manganese (Mn) .....< 0.1
Mercury (Hg) .....< 0.1
Molybdenum (Mo) .....< 0.1
Nickel (Ni) 0.2
Niobium (Nb) .....< 0.1
Potassium (K) 2.7
Silver (Ag) .....< 0.1
Strontium (Sr) .....< 0.1
Tin (Sn) .....< 0.1
Titanium (Ti) .....< 0.1
Vanadium (V) .....< 0.1
Zinc (Zn) .....< 0.1
Zirconium (Zr) .....< 0.1

CAS: 497-19-8 MERCK INDEX: 14,8596

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Carbonate, Anhydrous, Granular

BAKER ANALYZED ACS Reagent

3604-01	Glass	500 g	csa	84.75	
		4 x 500 g	csa	56.50	226.00
3604-05	Glass	2.5 kg	csa	253.20	
		4 x 2.5 kg	csa	168.80	675.20
3604-07	Poly Pail	12 kg	bks	Inquire	
3604-R	Poly Drum	200 lb	bul	Inquire	

Na_2CO_3 FW: 105.99

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (Na_2CO_3) (dried basis)(by acidimetry) .....min. 99.5%
Insoluble Matter .....max. 0.01%
Loss on Heating at 285°C .....max. 1.0%
Chloride (Cl) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Silica (SiO_2) .....max. 0.005%
Sulfur Compounds (as SO_4) .....max. 0.003%
Calcium (Ca) .....max. 0.03%
Magnesium (Mg) .....max. 0.005%
Potassium (K) .....max. 0.005%

Trace Impurities (in ppm):

Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 497-19-8 MERCK INDEX: 14,8596

Sodium Carbonate, Anhydrous, Granular

cGMP

NF, FCC

3605-01	Glass	500 g	rnc	82.50	
3605-06	Poly Pail	3 kg	rnc	310.55	
3605-09	Poly Drum	100 lb	bul	Inquire	
3605-R	Poly Drum	200 lb	bul	Inquire	

Na_2CO_3 FW: 105.99

Meets NF & FCC Requirements

Identification A .....Passes Test
Identification B .....Passes Test
Water (H_2O) .....max. 0.5%
Loss on Drying .....max. 1%
Heavy Metals (as Pb) .....max. 10 ppm
Assay (Na_2CO_3) (anhydrous basis) 99.5-100.5%
Lead (Pb) .....max 4 mg/kg

CAS: 497-19-8 MERCK INDEX: 14,8596

Sodium Carbonate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Carbonate, Anhydrous, NF

cGMP

Multi-Compendial

3606-01	Glass	500 g	rnc	91.05	
3606-05	Poly Pail	2.5 kg	rnc	343.30	
3606-07	Poly Pail	12 kg	bks	Inquire	
3606-09	Poly Drum	100 lb	bul	Inquire	
3606-R	Poly Drum	200 lb	bul	Inquire	

Na_2CO_3 FW: 105.99

Meets NF Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Water (H_2O) ..... max. 0.5%
Heavy Metals (as Pb) ..... max. 0.001%
Assay (Na_2CO_3) (anhydrous basis) 99.5-100.5%

Meets BP/Ph.Eur. Chemical Specifications

Assay (Na_2CO_3) (dried basis) 99.5-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Appearance of Solution ..... Passes Test
Alkali Hydroxides and Bicarbonates ..... Passes Test
Chloride (Cl) ..... max. 125 ppm
Sulfate (SO_4) ..... max. 250 ppm
Arsenic (As) ..... max. 5 ppm
Iron (Fe) ..... max. 50 ppm
Heavy Metals (as Pb) ..... max. 50 ppm
Loss on Drying ..... max. 1.0%

Meets JP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.071%
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 3.1 ppm
Loss on Drying ..... max. 2.0%
Assay (Na_2CO_3) (dried basis) 99.0-101.0%

CAS: 497-19-8 MERCK INDEX: 14,8596

Sodium Carbonate, Anhydrous, Powder

BAKER ANALYZED ACS Reagent

3602-01	Glass	500 g	csa	93.00	
		4 x 500 g	csa	62.00	248.00
3602-05	Poly Coated	2.5 kg	csa	278.10	
		4 x 2.5 kg	csa	185.40	741.60
3602-07	Poly Pail	12 kg	bks	Inquire	
3602-R	Poly Drum	200 lb	bul	Inquire	

Na_2CO_3 FW: 105.99

Meets ACS Specifications

Meets Reagent Specifications for testing USP/NF monographs

Assay (Na_2CO_3) (dried basis)(by acidimetry) ..... min. 99.5%
Insoluble Matter ..... max. 0.01%
Loss on Heating at 285°C ..... max. 1.0%
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Silica (SiO_2) ..... max. 0.005%
Sulfur Compounds (as SO_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.03%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 497-19-8 MERCK INDEX: 14,8596

Sodium Carbonate, Monohydrate, Crystal

BAKER ANALYZED ACS Reagent

3598-01	Poly	500 g	csa	76.65	
		4 x 500 g	csa	51.10	204.40
3598-05	Poly	2.5 kg	csa	194.20	
		4 x 2.5 kg	csa	129.45	517.80
3598-07	Poly Pail	12 kg	bks	Inquire	
3598-09	Lined Fiber Dr	100 lb	bul	Inquire	

$Na_2CO_3 \cdot H_2O$ FW: 124.00

Meets ACS Specifications

Assay ($Na_2CO_3 \cdot H_2O$) ..... min. 99.5%
Insoluble Matter ..... max. 0.01%
Loss on Drying at 150°C 13.0-15.0%
Chloride (Cl) ..... max. 0.001%
Calcium (Ca) ..... max. 0.03%
Silica (SiO_2) ..... max. 0.005%
Sulfur Compounds (as SO_4) ..... max. 0.004%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Trace Impurities (in ppm):
Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 05968-11-6 MERCK INDEX: 14,8596

Sodium Carbonate, Monohydrate, Crystal

cGMP

NF, FCC

3600-01	Poly	500 g	rnc	59.85	
3600-05	Poly	2.5 kg	rnc	217.20	
3600-09	Poly Drum	100 lb	bul	Inquire	

$Na_2CO_3 \cdot H_2O$ FW: 124.00

Meets NF & FCC Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Water (H_2O) 12.0-15.0%
Lead (Pb) ..... max 4 mg/kg
Loss on Drying 12.0-15.0%
Heavy Metals (as Pb) ..... max. 10 ppm
Assay (Na_2CO_3) (anhydrous basis) 99.5-100.5%

CAS: 5968-11-6 MERCK INDEX: 14,8596

Sodium Carbonate, Monohydrate, Crystal, NF

cGMP

Multi-Compendial

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3603-05	Poly	2.5 kg	rnc	227.70	
3603-07	Poly Pail	12 kg	bks	Inquire	
3603-09	Poly Drum	100 lb	bul	Inquire	

$Na_2CO_3 \cdot H_2O$ FW: 124.00

Meets NF Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Water (H_2O) 12.0-15.0%
Heavy Metals (as Pb) ..... max. 0.001%
Assay (Na_2CO_3) (anhydrous basis) 99.5-100.5%
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets BP/Ph.Eur. Chemical Specifications

Assay (Na_2CO_3) 83.0-87.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
Alkali Hydroxides and Bicarbonates ..... Passes Test
Chloride (Cl) ..... max. 125 ppm
Sulfate (SO_4) ..... max. 250 ppm
Arsenic (As) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 50 ppm
Iron (Fe) ..... max. 50 ppm

CAS: 5968-11-6 MERCK INDEX: 14,8596

Sodium Carbonate, 1N Volumetric Solution

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5646-02	Poly	1 L	sol	53.20	
		6 x 1 L	sol	44.35	266.10

Na_2CO_3 FW: 105.99

SRM No ..... Reported on Label
Normality 0.995-1.005
Standardization at 25°C traceable to NIST Standard Reference Material.

CAS: 5968-11-6

Sodium Carbonate, DILUT-IT Analytical Concentrate, 0.1N

(1/10 equiv. = 5.300 g Na_2CO_3)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4683-01	Ampoule	1 pk	spr	40.40	
		6 x 1 pk	spr	33.65	201.90

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 497-19-8

Sodium Chlorate, Crystal

BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3616-01	Glass	500 g	csa	160.90	
		4 x 500 g	csa	107.25	429.00

$NaClO_3$ FW: 106.44

Meets ACS Specifications

Assay ($NaClO_3$) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
Bromate (BrO_3) ..... max. 0.015%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 5 ppm
Calcium (Ca) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.002%
Potassium (K) ..... max. 0.01%

CAS: 7775-09-9 MERCK INDEX: 14,8598 IMO: 5.1:1495

Sodium Chloride

ULTREX Ultrapure Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4924-05	Glass	100 g	spr	326.95	

NaCl FW: 58.44

Analysis of Actual Lot (not specifications)
Certificate Provided Reports Actual Lot Analysis
Assay (NaCl) (dried basis) 100.3%
Loss on Drying at 650°C ..... < 0.001%
Particulate Matter 0.006%
Non-Metallic Impurities (in ppm)(µg/g):
Arsenic (As) ..... < 0.8
Bromide (Br) ..... < 1
Iodide (I) ..... < 0.2
Nitrogen Compounds (as N) ..... < 0.2
Phosphate (PO_4) ..... < 0.2
Sulfur Compounds (as SO_4) ..... < 1
Metallic Impurities (in ppm)(µg/g):
Aluminum (Al) ..... < 0.2
Barium (Ba) ..... < 0.2
Bismuth (Bi) ..... < 2.2
Cadmium (Cd) ..... < 0.1
Calcium (Ca) ..... < 0.1
Chromium (Cr) ..... < 0.2
Cobalt (Co) ..... < 0.2
Copper (Cu) ..... < 0.1
Iron (Fe) ..... < 0.2
Lead (Pb) ..... < 0.2
Lithium (Li) 1.6
Magnesium (Mg) ..... < 0.1
Manganese (Mn) ..... < 0.1
Mercury (Hg) ..... < 0.3
Molybdenum (Mo) ..... < 0.1
Nickel (Ni) ..... < 0.2
Potassium (K) 4.2
Silver (Ag) ..... < 0.3
Strontium (Sr) ..... < 0.2
Tin (Sn) ..... < 0.2
Titanium (Ti) ..... < 0.2
Vanadium (V) ..... < 0.1
Zinc (Zn) ..... < 0.2
Zirconium (Zr) ..... Actual Value Reported

CAS: 7647-14-5 MERCK INDEX: 14,8599

Sodium Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Sodium Chloride, Crystal					
BAKER ANALYZED ACS Reagent					
3624-01	Poly	500 g	csa	38.65	
		4 x 500 g	csa	25.75	103.00
3624-19	Poly	1 kg	csa	63.55	
		4 x 1 kg	csa	42.35	169.40
3624-05	Poly	2.5 kg	csa	111.15	
		4 x 2.5 kg	csa	74.10	296.40
3624-06	Poly Pail	12 kg	bks	Inquire	
3624-07	Flowmor	12 kg	bks	Inquire	
3624-20	Poly Drum	100 lb	bul	Inquire	
3624-60	Flowmor	50 kg	bul	Inquire	
3624-R		350 lb	bul	Inquire	

NaCl FW: 58.44

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (NaCl) (by Ag titrn) ..... min. 99.0%
pH of 5% Solution at 25°C 5.0-9.0
Insoluble Matter ..... max. 0.005%
Iodide (I) ..... max. 0.002%
Bromide (Br) ..... max. 0.01%
Chlorate and Nitrate (as NO_3) ..... max. 0.003%
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.004%
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 2 ppm
Calcium (Ca) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.001%
Potassium (K) ..... max. 0.005%

CAS: 7647-14-5 MERCK INDEX: 14,8599

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Sodium Chloride, Crystal					
ULTRAPURE BIOREAGENT					
For Liquid Chromatography and Molecular Biology Applications					
4058-01	Poly	500 g	upr	33.35	
4058-05	Poly	2.5 kg	upr	104.20	
4058-07	Poly Pail	12 kg	bks	Inquire	

NaCl FW: 58.44

Assay (NaCl) ..... min. 99.0%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
pH of 5% Solution at 25°C 5.5-7.5
Insoluble Matter ..... max. 0.005%
Bromide (Br) ..... max. 0.01%
Chlorate and Nitrate (as NO_3) ..... max. 0.003%
Iodide (I) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.003%
Barium (Ba) ..... max. 0.001%
Calcium, Magnesium, and R_2O_3 Precipitate ..... max. 0.005%
Potassium (K) ..... max. 0.005%

Trace Impurities (in ppm):

Nitrogen Compounds (as N) ..... max. 5
Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 2
Iron (Fe) ..... max. 1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

CAS: 7647-14-5 MERCK INDEX: 14,8599

Sodium Chloride, Granular cGMP					
USP, FCC					
3628-01	Glass	500 g	rss	47.05	
		4 x 500 g	rss	31.35	125.40
3628-05	Glass	2.5 kg	rss	134.65	
		4 x 2.5 kg	rss	89.75	359.00
3628-06	Poly Pail	12 kg	bks	Inquire	
3628-07	Flowmor	12 kg	bks	Inquire	
3628-F7	Flowmor	12 kg	bks	Inquire	
3628-20	Poly Drum	100 lb	bul	Inquire	
3628-60	Flowmor	50 kg	bul	Inquire	
3628-65	Flowmor	50 kg	bul	Inquire	
3628-68	Flowmor	100 kg	bul	Inquire	
3628-08	Poly Drum	350 lb	bul	Inquire	
3628-R	Poly Drum	350 lb	bul	Inquire	

NaCl FW: 58.44

Meets USP & FCC Requirements

Assay (NaCl) (USP) (dried basis) 99.0-100.5%
Assay (as NaCl) (FCC) (ignited basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Aluminum (Al) ..... max. 0.2 ppm
Appearance (White crystals or granules) ..... Passes Test
Appearance of Solution ..... Passes Test
Arsenic (As) ..... max. 1 ppm
Barium (Ba) ..... Passes Test
Calcium and Magnesium (as Ca) (by EDTA titration)(FCC) ..... max. 0.35%
Heavy Metals (as Pb) ..... max. 2 ppm
Nitrite (NO_2) ..... max. 0.01
Magnesium and Alkaline Earth Metals ..... max. 0.01%
Iodide (I) ..... Passes Test
Bromide (Br) ..... max. 0.010%
Iron (Fe) ..... max. 2 ppm
Loss on Drying ..... max. 0.5%
Phosphate (PO_4) ..... max. 0.0025%
Potassium (K) ..... max. 0.05%
Ferrocyanide ..... Passes Test
Sulfate (SO_4) ..... max. 0.020%

Preserve in well-closed containers.
Must be subjected to further processing during the preparation of injectable dosage forms

CAS: 7647-14-5 MERCK INDEX: 14,8599

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Chloride, Granular

cGMP

USP, FCC
Endotoxin Tested

3629-07	Poly Pail	12 kg	bks	Inquire	
3629-09	Poly Drum	100 lb	bul	Inquire	
3629-R	Poly Drum	350 lb	bul	Inquire	

NaCl FW: 58.44

Meets USP & FCC Requirements

Assay (NaCl) (USP) (dried basis) 99.0-100.5%
Assay (as NaCl) (FCC) (ignited basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Aluminum (Al) ..... max. 0.2 ppm
Arsenic (As) ..... max. 1 ppm
Appearance of Solution ..... Passes Test
Barium (Ba) ..... Passes Test
Calcium and Magnesium (as Ca) (by EDTA titration)(FCC) ..... max. 0.35%
Endotoxin Concentration (2.5 EU/g max.) ..... Passes Test
Heavy Metals (as Pb) ..... max. 2 ppm
Nitrite (NO_2) ..... max. 0.01
Iron (Fe) ..... max. 2 ppm
Magnesium and Alkaline Earth Metals ..... max. 0.01%
Loss on Drying ..... max. 0.5%
Iodide (I) ..... Passes Test
Bromide (Br) ..... max. 0.010%
Ferrocyanide ..... Passes Test
Phosphate (PO_4) ..... max. 0.0025%
Potassium (K) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.020%

Preserve in well-closed containers.
Must be subjected to further processing during the preparation of injectable dosage forms

CAS: 7647-14-5 MERCK INDEX: 14,8599

Sodium Chloride, Granular, USP

cGMP

Multi-Compendial

3627-01	Glass	500 g	rss	57.30	
		4 x 500 g	rss	38.20	152.80
3627-05	Glass	2.5 kg	rss	163.80	
		4 x 2.5 kg	rss	109.20	436.80
3627-07	Poly Pail	12 kg	bks	Inquire	
3627-20	Poly Drum	100 lb	bul	Inquire	
3627-65	Flowmor	50 kg	bul	Inquire	
3627-60	Flowmor	100 kg	bul	Inquire	
3627-08	Poly Drum	350 lb	bul	Inquire	

NaCl FW: 58.44

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Appearance of Solution ..... Passes Test
Aluminum (Al) ..... max. 0.2 ppm
Arsenic (As) ..... max. 1 ppm
Barium (Ba) ..... Passes Test
Bromides (Br) ..... max. 0.010%
Ferrocyanide ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Iodides (I) ..... Passes Test
Iron (Fe) ..... max. 2 ppm
Loss on Drying at 105°C ..... max. 0.5%
Magnesium and Alkaline Earth Metals ..... max. 0.01%
Nitrite (NO_2) ..... max. 0.01
Phosphate (PO_4) ..... max. 0.0025%
Potassium (K) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.020%
Assay (NaCl) (dried basis) 99.0-100.5%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Aluminum (Al) ..... max. 0.2 ppm
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Bromide (Br) ..... max. 100 ppm
Ferrocyanide ..... Passes Test
Iodide (I) ..... Passes Test
Nitrite (NO_2) ..... max. 0.01
Phosphate (PO_4) ..... max. 25 ppm
Sulfate (SO_4) ..... max. 200 ppm
Arsenic (As) ..... max. 1 ppm
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 2 ppm
Magnesium and Alkaline Earth Metals ..... max. 100 ppm
Loss on Drying at 105°C ..... max. 0.5%
Potassium (K) ..... max. 500 ppm
Assay (NaCl) (dried basis) 99.0-100.5%
Endotoxin Concentration, IU/g ..... max. 2.5

Meets JP Chemical Specifications

Assay (NaCl) (dried basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Bromide (Br) ..... Passes Test
Ferrocyanide ..... Passes Test
Iodide (I) ..... Passes Test
Iron (Fe) ..... Passes Test
Magnesium and Alkaline Earth Metals ..... Passes Test
Phosphate (PO_4) ..... Passes Test
Sulfates (as SO_4) ..... Passes Test
Heavy Metals (as Pb) ..... max. 3 ppm
Barium (Ba) ..... Passes Test
Arsenic (As) ..... max. 2 ppm
Loss on Drying ..... max. 0.5%

Preserve in well-closed containers.
Must be subjected to further processing during the preparation of injectable dosage forms

CAS: 7647-14-5 MERCK INDEX: 14,8599

Sodium Chloride, DILUT-IT Analytical Concentrate, 0.1N

(1/10 equiv. = 5.844 g NaCl)

4684-01	Ampoule	1 pk	spr	37.90	
		6 x 1 pk	spr	31.60	189.60

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7647-14-5 DENSITY: 1 L = 1.02 kg

Sodium Chlorite

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Chlorite, Anhydrous, Flakes
BAKER

V044-07	Glass	500 g	org	127.10	

$NaClO_2$ FW: 90.44

Assay ($NaClO_2$) ..... min. 79%
Appearance ..... Passes Test

CAS: 7758-19-2 MERCK INDEX: 14,8600 IMO: 5.1:1496

Sodium Chromate, 4-Hydrate, Crystal
BAKER ANALYZED Reagent

3640-04	Poly	125 g	non	81.25	
3640-01	Poly	500 g	csa	164.10	
		4 x 500 g	csa	109.40	437.60

$Na_2CrO_4 \cdot 4H_2O$ FW: 234.03

Meets Reagent Specifications for testing USP/NF monographs

Assay ($Na_2CrO_4 \cdot 4H_2O$) 99.0-103.5%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 8.0-9.5
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.01%
Aluminum (Al) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%

CAS: 10034-82-9 MERCK INDEX: 14,8601 IMO: 5.1:3085

Sodium Citrate, Dihydrate, Granular
BAKER ANALYZED ACS Reagent

3646-01	Poly	500 g	csa	67.75	
		4 x 500 g	csa	45.15	180.60
3646-05	Poly	2.5 kg	csa	214.45	
		4 x 2.5 kg	csa	142.95	571.80
3646-07	Poly Pail	12 kg	bks	Inquire	
3646-20	Poly Drum	100 lb	bul	Inquire	
3646-R	Lined Fiber Dr	275 lb	bul	Inquire	

$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$ FW: 294.10

Meets ACS Specifications

Assay ($C_6H_5Na_3O_7 \cdot 2H_2O$) (by non-aqueous titration) 99.0-101.0%
pH of 5% Solution at 25°C 7.0-9.0
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.005%
Ammonia (as NH_3) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 6132-04-3 MERCK INDEX: 14,8602

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Citrate, Dihydrate, Granular
USP, FCC cGMP

3649-01	Glass	500 g	rss	77.85	
		4 x 500 g	rss	51.90	207.60
3649-05	Poly	2.5 kg	rss	248.85	
		4 x 2.5 kg	rss	165.90	663.60
3649-07	Poly Pail	12 kg	bks	Inquire	
3649-08	Poly Drum	275 lb	bul	Inquire	

$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$ FW: 294.10

Meets USP & FCC Requirements

Assay ($C_6H_5Na_3O_7$) (calculated on the anhydrous basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Alkalinity ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Water (H_2O) 10.0-13.0%
Tartrate ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Water (FCC) 10.0-13.0%

CAS: 6132-04-3 MERCK INDEX: 14,8602

Sodium Citrate, Dihydrate, Granular, USP cGMP
Multi-Compendial

3648-07	Poly Pail	12 kg	bks	Inquire	

$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$ FW: 294.10

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Alkalinity ..... Passes Test
Water (H_2O) 10.0-13.0%
Tartrate ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Assay ($C_6H_5Na_3O_7$) (calculated on the anhydrous basis) 99.0-100.5%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Chloride (Cl) ..... max. 50 ppm
Oxalate (C_2O_4) ..... max. 300 ppm
Sulfate (SO_4) ..... max. 150 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Water (H_2O) 11.0-13.0%
Assay ($C_6H_5Na_3O_7$) (calculated on the anhydrous basis) 99.0-101.0%
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets JP Chemical Specifications

Assay ($C_6H_5Na_3O_7$) (calculated on the anhydrous basis) 99.0-101.0%
pH (1 in 20) 7.5-8.5
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.015%
Identification ..... Passes Test
Sulfate (SO_4) ..... max. 0.048%
Heavy Metals (as Pb) ..... max. 10 ppm
Arsenic (As) ..... max. 2 ppm
Tartrate ..... Passes Test

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Oxalate (C_2O_4) ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Loss on Drying at 180°C 10.0-13.0%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm

CAS: 6132-04-3 MERCK INDEX: 14,8602

Sodium Citrate, Dihydrate, Granular, USP cGMP
Multi-Compendial

3647-01	Glass	500 g	rss	94.75	
		4 x 500 g	rss	63.15	252.60
3647-05	Poly	2.5 kg	rss	298.80	
		4 x 2.5 kg	rss	199.20	796.80
3647-07	Poly Pail	12 kg	bks	Inquire	
3647-20	Poly Drum	100 lb	bul	Inquire	

$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$ FW: 294.10

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Alkalinity ..... Passes Test
Water (H_2O) 10.0-13.0%
Tartrate ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Assay ($C_6H_5Na_3O_7$) (calculated on the anhydrous basis) 99.0-100.5%

Meets BP/Ph.Eur. Chemical Specifications
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Chloride (Cl) ..... max. 50 ppm
Oxalate (C_2O_4) ..... max. 300 ppm
Sulfate (SO_4) ..... max. 150 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Water (H_2O) 11.0-13.0%
Assay ($C_6H_5Na_3O_7$) (calculated on the anhydrous basis) 99.0-101.0%
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets JP Chemical Specifications
Assay ($C_6H_5Na_3O_7$) (calculated on the anhydrous basis) 99.0-101.0%
pH (1 in 20) 7.5-8.5
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.015%
Identification ..... Passes Test
Sulfate (SO_4) ..... max. 0.048%
Heavy Metals (as Pb) ..... max. 10 ppm
Arsenic (As) ..... max. 2 ppm
Tartrate ..... Passes Test
Oxalate (C_2O_4) ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Loss on Drying at 180°C 10.0-13.0%

CAS: 6132-04-3 MERCK INDEX: 14,8602

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Citrate, Dihydrate, Granular
ULTRAPURE BIOREAGENT

4093-00	Poly	100 g	upr	24.15	
4093-01	Poly	500 g	upr	28.05	
4093-04	Poly	1 kg	upr	37.10	
4093-06	Poly Pail	5 kg	upr	139.20	

$C_6H_5Na_3O_7 \cdot 2H_2O$ FW: 294.10

Assay ($C_6H_5Na_3O_7 \cdot 2H_2O$) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 7.0-9.0
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.005%
Ammonia (as NH_3) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected

CAS: 6132-04-3 MERCK INDEX: 14,8602

Sodium Citrate, Dihydrate, Powder cGMP
USP, FCC

3650-01	Poly	500 g	rnc	69.05	
3650-05	Poly	2.5 kg	rss	244.30	
		4 x 2.5 kg	rss	162.85	651.40

$HOC(COONa)CH_2COONa)_2 \cdot 2H_2O$ FW: 294.10

Meets USP & FCC Requirements
Appearance (white powder) ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Alkalinity ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Water (H_2O) 10.0-13.0%
Tartrate ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Assay (as $C_6H_5Na_3O_7$) (calculated on anhydrous basis) 99.0-100.5%

CAS: 6132-04-3 MERCK INDEX: 14,8602

Sodium Cobaltinitrite, Powder
BAKER ANALYZED ACS Reagent
(sodium hexanitrocobaltate(III))
For Determination of Potassium

3656-04	Poly	125 g	non	108.75	
3656-01	Poly	500 g	non	317.60	

$Na_3Co(NO_2)_6$ FW: 403.94

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Insoluble Matter ..... max. 0.02%
Suitability for Potassium Determination ..... Passes Test

CAS: 13600-98-1 MERCK INDEX: 14,8603 IMO: 5.1:1479

Sodium Cyanide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Cyanide, Granular
BAKER ANALYZED ACS Reagent

3662-04		125 g	non	45.75	
3662-01		500 g	non	68.60	
3662-05		2 kg	non	186.90	

NaCN FW: 49.01

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (NaCN) (by Ag titrn) ..... min. 95.0%
Chloride (Cl) ..... max. 0.15%
Phosphate (PO_4) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.05%
Sulfide (S) ..... max. 0.005%
Thiocyanate (SCN) ..... max. 0.02%
Iron (Fe) ..... max. 0.005%
Trace Impurities (in ppm):
Lead (Pb) ..... max. 5

CAS: 143-33-9 MERCK INDEX: 14,8605 IMO: 6.1:1689

Sodium Cyanoborohydride
BAKER

V037-01		5 g	non	91.70	
V037-04	Glass	50 g	non	748.00	

$NaBH_3CN$ FW: 62.80

Assay ($NaBH_3CN$) ..... min. 95%
Product is packaged under Nitrogen blanket.

CAS: 25895-60-7 MERCK INDEX: 14,8606 IMO: 4.1:3179

Sodium Dichromate, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent

3672-04	Poly	125 g	csa	120.75	
		4 x 125 g	csa	80.50	322.00
3672-01	Poly	500 g	csa	219.15	
		4 x 500 g	csa	146.10	584.40
3672-05	Poly	2.5 kg	csa	787.50	
		4 x 2.5 kg	csa	525.00	2100.00
3672-07	Poly Pail	12 kg	bks	Inquire	

$Na_2Cr_2O_7 \cdot 2H_2O$ FW: 298.00

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Na_2Cr_2O_7 \cdot 2H_2O$) 99.5-100.5%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Aluminum (Al) ..... max. 0.002%

CAS: 7789-12-0 MERCK INDEX: 14,8609 IMO: 6.1:3290

Sodium Diethyldithiocarbamate, Trihydrate
BAKER ANALYZED ACS Reagent

8624-04	Poly	125 g	non	133.35	
8624-01	Poly	500 g	non	322.00	

$(C_2H_5)_2NCSSNa \cdot 3H_2O$ FW: 225.31

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Solubility in H_2O ..... Passes Test
Sodium (as Na_2SO_4) 30.5-32.5%
Sensitivity for Copper ..... Passes Test

CAS: 20624-25-3 MERCK INDEX: 14,3378

Sodium Dihydrogen Phosphate
See under Sodium Phosphate, Monobasic

Sodium Diphenylaminesulfonate, Powder
BAKER ANALYZED ACS Reagent

V026-01	Glass	5 g	non	110.65	

$C_6H_5NHC_6H_4\text{-}4\text{-}SO_3Na$ FW: 271.27

Meets ACS Specifications
Sensitivity as Indicator ..... Passes Test

CAS: 6152-67-6 MERCK INDEX: 14,7313

Sodium Disulfite
See Sodium meta-Bisulfite

Sodium Dithionite, Powder
Purified
(sodium hydrosulfite)

3712-01	Glass	500 g	csa	56.40	
		4 x 500 g	csa	37.60	150.40
3712-05	Poly	2.5 kg	csa	159.45	
		4 x 2.5 kg	csa	106.30	425.20

$Na_2S_2O_4$ FW: 174.11

Meets Reagent Specifications for testing USP/NF monographs
Assay ($Na_2S_2O_4$) ..... min. 88%
Alkalinity (as Na_2CO_3) ..... Actual Value Reported
Heavy Metals (as Pb) ..... Passes Test
Insoluble Matter ..... max. 0.02%
Suitability for Riboflavin Assay ..... Passes Test
Sulfide (S) ..... Passes Test

CAS: 7775-14-6 MERCK INDEX: 14,8611 IMO: 4.2:1384

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Dodecyl Sulfate (SDS)
ULTRAPURE BIOREAGENT
For Electrophoresis and Protein Solubilization

4095-00	Poly	25 g	upr	33.55	
4095-04	Poly	100 g	upr	50.40	
4095-02	Poly	1 kg	upr	268.20	
4095-05	Poly Pail	2 kg	upr	534.85	
4095-07	Poly Drum	12 kg	bks	Inquire	

$CH_3(CH_2)_{11}OSO_3Na$ FW: 288.38

Appearance ..... Passes Test
Assay (as $C_{12}H_{25}OSO_3Na$) ..... min. 99%
Absorbance of a 3% w/v Aqueous Solution at 280 nm (1-cm path) ..... max. 0.1
pH of 1% Solution at 25°C 5.0-8.0
Chloride (Cl) ..... max. 0.03%
Trace Impurities (in ppm):
Nitrogen (N) ..... max. 5
Phosphate (PO_4) ..... max. 1
Heavy Metals (as Pb) ..... max. 2
Iron (Fe) ..... max. 1
DNase Activity ..... None Detected
RNase Activity ..... None Detected

CAS: 151-21-3 MERCK INDEX: 14,8636 IMO: 4.1:1325

Sodium Dodecyl Sulfate (95%)
Practical

L050-07	Glass	500 g	bio	73.30	

$CH_3(CH_2)_{11}OSO_3Na$ FW: 288.38

Assay (as $C_{12}H_{25}OSO_3Na$) ..... min. 95%
Identification (by IR) ..... Passes Test

CAS: 151-21-3 MERCK INDEX: 14,8636 IMO: 4.1:1325

Sodium Ethylenediaminetetraacetate
See EDTA Disodium Salt, Dihydrate and Edetate Disodium

Sodium Fluoride, Powder
BAKER ANALYZED ACS Reagent

3688-04	Poly	125 g	csa	110.80	
		4 x 125 g	csa	73.85	295.40
3688-01	Poly	500 g	csa	200.85	
		4 x 500 g	csa	133.90	535.60
3688-05	Poly	2.5 kg	csa	700.45	
		4 x 2.5 kg	csa	466.95	1867.80
3688-07	Poly Pail	12 kg	bks	Inquire	
3688-R	Lined Fiber Dr	200 lb	bul	Inquire	

NaF FW: 41.99

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (NaF) ..... min. 99.0%
Insoluble Matter ..... max. 0.02%
Loss on Drying at 150°C ..... max. 0.3%
Chloride (Cl) ..... max. 0.005%
Titrable Acid (meq/g) ..... max. 0.03
Titrable Base (meq/g) ..... max. 0.01
Sodium Fluosilicate (Na_2SiF_6) ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.03%
Sulfite (SO_3) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.003%
Iron (Fe) ..... max. 0.003%
Potassium (K)(by FES) ..... max. 0.02%

CAS: 7681-49-4 MERCK INDEX: 14,8618 IMO: 6.1:1690

Sodium Fluoride, Powder
USP cGMP

3689-01	Poly	500 g	rss	247.00	
		4 x 500 g	rss	164.65	658.60
3689-05	Poly	2 kg	rss	859.60	
		4 x 2 kg	rss	573.05	2292.20
3689-08	Lined Fiber Dr	50 lb	bul	Inquire	
3689-09	Lined Fiber Dr	100 lb	bul	Inquire	
3689-R	Poly Drum	250 lb	bul	Inquire	

NaF FW: 41.99

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Loss on Drying ..... max. 1.0%
Fluosilicate ..... Passes Test
Chloride (Cl) ..... max. 0.012%
Heavy Metals (as Pb) ..... max. 0.003%
Assay (NaF) (dried basis) 98.0-102.0%

CAS: 7681-49-4 MERCK INDEX: 14,8618 IMO: 6.1:1690

Sodium Formate, Crystal
BAKER ANALYZED ACS Reagent

3700-01	Poly	500 g	non	76.80	
3700-05	Poly	2.5 kg	csa	338.50	
		4 x 2.5 kg	csa	225.65	902.60
3700-07	Poly Pail	12 kg	bks	Inquire	

HCOONa FW: 68.01

Meets ACS Specifications
Assay (HCOONa) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.001%
Calcium (Ca) ..... max. 0.005%
Trace Impurities (in ppm):
Iron (Fe) ..... max. 5
Heavy Metals (as Pb) ..... max. 5

CAS: 141-53-7 MERCK INDEX: 14,8621

Sodium Glycerophosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium β-Glycerophosphate

See β-Glycerophosphoric Acid, Disodium Salt

Sodium 1-Heptanesulfonate

See 1-Heptanesulfonic Acid Sodium Salt

Sodium Hexametaphosphate
BAKER

V030-09	Poly	3 kg	non	115.80	

$(NaPO_3)_6$ FW: 611.77

Assay (as P_2O_5) 65.0-68.0%

CAS: 10124-56-8 MERCK INDEX: 14,8667

Sodium 1-Hexanesulfonate

See 1-Hexanesulfonic Acid, Sodium Salt

Sodium Hexanitrocobaltate(III)

See Sodium Cobaltnitrite

Sodium Hydroxide, Pellets
BAKER ANALYZED ACS Reagent
Low in Carbonate

3722-04	Poly	125 g	non	36.95	
3722-01	Poly	500 g	csa	61.60	
		4 x 500 g	csa	41.05	164.20
3722-19	Poly	1 kg	csa	102.25	
		4 x 1 kg	csa	68.15	272.60
3722-05	Poly	2.5 kg	csa	147.70	
		4 x 2.5 kg	csa	98.45	393.80
3722-07	Poly Pail	12 kg	bks	Inquire	
3722-28		25 kg	bul	Inquire	

NaOH FW: 40.00

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (NaOH) (by acidimetry) ..... min. 98.0%
Calcium (Ca) ..... max. 0.005%
Sodium Carbonate (Na_2CO_3) ..... max. 0.4%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Ag) ..... max. 0.001%
Copper (Cu) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.002%
Potassium (K) ..... max. 0.01%
Trace Impurities (in ppm): 0.001
Nitrogen Compounds (as N) ..... max. 3
Phosphate (PO_4) ..... max. 2
Sulfate (SO_4) ..... max. 5
Iron (Fe) ..... max. 3
Mercury (Hg) ..... max. 0.1
Nickel (Ni) ..... max. 5

CAS: 1310-73-2 MERCK INDEX: 14,8627 IMO: 8:1823

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, Pellets
NF, FCC cGMP

3728-04	Glass	125 g	rnc	48.35	
3728-01	Poly	500 g	rss	80.95	
		4 x 500 g	rss	53.95	215.80
3728-05	Poly	2.5 kg	rss	192.55	
		4 x 2.5 kg	rss	128.35	513.40
3728-07	Poly Pail	12 kg	bks	Inquire	
3728-28		25 kg	bul	Inquire	
3728-20	Poly Drum	80 lb	bul	Inquire	
3728-R	Lined Fiber Dr	110 lb	bul	Inquire	
3728-70	Poly Drum	220 lb	bul	Inquire	

NaOH FW: 40.00

Meets NF & FCC Requirements

Identification ..... Passes Test
Insoluble Substances and Organic Matter ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%
Potassium (K) ..... Passes Test
Assay 95.0-100.5%
Carbonate (as Na_2CO_3) ..... max. 3.0%
Arsenic (As) ..... max. 3 ppm
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg) ..... max. 0.1 ppm

CAS: 1310-73-2 MERCK INDEX: 14,8627 IMO: 8:1823

Sodium Hydroxide, Pellets, NF
Multi-Compendial cGMP

3718-01	Poly	500 g	rss	97.35	
		4 x 500 g	rss	64.90	259.60
3718-05	Poly	2.5 kg	rss	231.40	
		4 x 2.5 kg	rss	154.25	617.00
3718-07	Poly Pail	12 kg	bks	Inquire	
3718-20	Poly Drum	80 lb	bul	Inquire	
3718-70	Poly Drum	220 lb	bul	Inquire	

NaOH FW: 40.00

Meets NF Requirements

Identification ..... Passes Test
Insoluble Substances and Organic Matter ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%
Potassium (K) ..... Passes Test
Carbonate (as Na_2CO_3) ..... max. 3.0%
Assay (NaOH) 95.0-100.5%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Carbonate (as Na_2CO_3) ..... max. 2.0%
Appearance of Solution ..... Passes Test
Chloride (Cl) ..... max. 50 ppm
Sulfate (SO_4) ..... max. 50 ppm
Heavy Metals (as Pb) ..... max. 20 ppm
Iron (Fe) ..... max. 10 ppm
Assay (NaOH) 97.0-100.5%

Meets JP Chemical Specifications

Assay 95.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.050%
Heavy Metals (as Pb) ..... max. 30 ppm
Potassium (K) ..... Passes Test
Carbonate (as Na_2CO_3) ..... max. 2.0%
Mercury (Hg) ..... Passes Test

CAS: 1310-73-2 MERCK INDEX: 14,8627 IMO: 8:1823

Sodium Hydroxide, 50% (w/w) Solution
BAKER ANALYZED Reagent

3727-01	Poly	500 mL	cso	71.05	
		12 x 500 mL	cso	47.35	568.20
3727-18	Poly	6 x 2.5 L	spr	125.25	751.50
3727-03	Poly	4 L	cso	153.40	
		4 x 4 L	cso	102.25	409.00
3727-07	Poly Pail	19 L	sbk	415.25	
3727-R	Poly Drum	360 lb	bul	Inquire	
3727-09	Poly Drum	600 lb	bul	Inquire	

NaOH FW: 40.00

Assay (NaOH) (by acidimetry) 50-52%
Color (APHA) ..... max. 20
Sodium Carbonate (Na_2CO_3) ..... max. 0.1%
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.001%
Ammonium Hydroxide Precipitate ..... max. 0.01%
Silica (SiO_2) ..... Actual Value Reported
Heavy Metals (as Ag) ..... max. 0.001%
Potassium (K) ..... max. 0.01%
Trace Impurities (in ppm):
Nitrogen Compounds (as N) ..... max. 5
Phosphate (PO_4) ..... max. 5
Iron (Fe) ..... max. 5
Mercury (Hg) ..... Actual Value Reported
Nickel (Ni) ..... max. 5
IMPORTANT: Material will freeze if stored below 60°F (16°C).
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 50% Solution
cGMP
Biotech Reagent
Water for Injection Quality Water

0897-07	Hedpak	19 L	bks	Inquire
0897-09	Poly Drum	200 L	bul	Inquire

Made from Water for Injection USP and Sodium Hydroxide pellets, NF(Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Assay (NaOH) 50-52%
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 1 ppm
Iron (Fe) ..... max. 0.5 ppm
Filtered through 5 micron filter
Store above 16°C (60°F) to prevent freezing

IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 50% Solution
cGMP
Biotech Reagent

0339-07	Hedpak	19 L	bks	Inquire
0339-09	Poly Drum	200 L	bul	Inquire
0339-26	Poly Tote	1135 L	bul	Inquire

Made from USP Purified Water and Sodium Hydroxide pellets, NF (Multicompendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Assay (NaOH) 50-52%
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 1 ppm
Iron (Fe) ..... max. 0.5 ppm
Filtered through 5 micron filter
Store above 16°C (60°F) to prevent freezing

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide Solution 40% (w/w)
cGMP
Biotech Reagent
Water for Injection Quality Water

0896-07	Hedpak	19 L	bks	Inquire

NaOH (in water) FW: 40.00

Made from Water for Injection USP and Sodium Hydroxide pellets, NF(Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Assay (NaOH (in water)) 39-41%
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 1 ppm
Iron (Fe) ..... max. 0.5 ppm
Filtered through 5 micron filter
Store above 16°C (60°F) to prevent freezing

IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 25% Solution
cGMP
Biotech Reagent

0338-07	Hedpak	19 L	bks	Inquire
0338-09	Poly Drum	200 L	bul	Inquire

Made from USP Purified Water and Sodium Hydroxide pellets, NF (Multicompendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Assay (NaOH) 24.5-25.5%
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 1 ppm
Iron (Fe) ..... max. 0.5 ppm
Endotoxin Concentration (EU/mL) ..... max. 2.0
Filtered through a 0.2 micron filter.

IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, 25% (w/w) Solution
BAKER ANALYZED Reagent

5661-02	Poly	1 L	cso	62.20	
		6 x 1 L	cso	41.45	248.70
5661-03	Cubitainer	4 L	cso	122.65	
		4 x 4 L	cso	81.75	327.00
5661-19	Hedpak	19 L	sbk	321.25	
5661-07	Cubitainer	20 L	sbk	316.70	

NaOH FW: 40.00

Assay (NaOH) 24.50-25.50%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 10% (w/w) Solution
Biotech Reagent

cGMP

0337-07	Hedpak	19 L	bks	Inquire

NaOH FW: 40.00

Made from USP Purified Water and Sodium Hydroxide pellets, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance of Solution .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Assay 9.0-11.0%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5
Mercury (Hg) .....max. 0.1
Filtered through a 0.2 micron filter.
Store above -10°C (14°F) to prevent freezing.
Protect from air to avoid absorption of carbon dioxide.

IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 10N Solution
Biotech Reagent

cGMP

5000-02	Poly	6 x 1 L	bks	Inquire
5000-03	Poly	4 L	bks	Inquire
5000-07	Hedpak	19 L	bks	Inquire
5000-09	Poly Drum	200 L	bul	Inquire
5000-27	Poly Tote	940 L	bul	Inquire

NaOH FW: 40.00

Made from USP Purified Water and Sodium Hydroxide pellets, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance (Clear, colorless liquid) .....Passes Test
Normality 9.9-10.1
Sodium Carbonate (Na_2CO_3) .....max. 0.6%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5
Endotoxin Concentration (EU/mL) .....max. 2.0
IMPORTANT: Material will freeze if stored below 41°F (5°C).
Filtered through 0.2 micron filter
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 10N Solution
Biotech Reagent
Water for Injection Quality Water

cGMP

0312-07	Hedpak	19 L	bks	Inquire

NaOH (in water) FW: 40.00

Made from Water for Injection USP and Sodium Hydroxide pellets, NF(Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance (Clear, colorless liquid) .....Passes Test
Normality 9.9-10.1
Sodium Carbonate (Na_2CO_3) .....max. 0.6%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5
Endotoxin Concentration (EU/mL) .....max. 2.0
Filtered through a 0.2 micron filter.
Store above 16°C (60°F) to prevent freezing

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 10N Volumetric Solution
BAKER ANALYZED Reagent

5674-02	Poly	1 L	sol	46.20	
		6 x 1 L	sol	38.50	231.00
5674-06	Poly	4 L	sol	83.35	
		4 x 4 L	sol	69.45	277.80
5674-03	Cubitainer	4 L	sol	83.35	
		4 x 4 L	sol	69.45	277.80
5674-17	Poly Pail	19 L	sol	199.30	
5674-07	Cubitainer	20 L	sol	205.95	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Appearance (Clear, colorless liquid) .....Passes Test
Normality 9.95-10.05
Sodium Carbonate (Na_2CO_3) .....max. 2.0%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

IMPORTANT: Material will freeze if stored below 41°F (5°C).
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 8.0N Solution
cGMP
Biotech Reagent

5007-03	Poly	4 L	bks	Inquire	
5007-07	Hedpak	19 L	bks	Inquire	
5007-09	Poly Drum	200 L	bul	Inquire	

NaOH FW: 40.00

Made from USP Purified Water and Sodium Hydroxide pellets, NF (Multicompendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance (Clear, colorless liquid) ..... Passes Test
Normality 7.9-8.1
Sodium Carbonate (Na_2CO_3) ..... max. 0.6%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Endotoxin Concentration (EU/mL) ..... max. 2.0
IMPORTANT: Material will freeze if stored below 41°F (5°C).
Filtered through 0.2 micron filter
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 6N Volumetric Solution
BAKER ANALYZED Reagent

5672-02	Poly	1 L	sol	43.50	
		6 x 1 L	sol	36.25	217.50
5672-03	Cubitainer	4 L	sol	76.00	
		4 x 4 L	sol	63.35	253.40

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 5.98-6.02
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, 5N Solution
cGMP
Biotech Reagent

5668-02	Poly	6 x 1 L	bks	Inquire	
5668-03	Poly	4 L	bks	Inquire	
5668-07	Hedpak	19 L	bks	Inquire	
5668-09	Poly Drum	200 L	bul	Inquire	

NaOH FW: 40.00

Made from USP Purified Water and Sodium Hydroxide pellets, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance (Clear, colorless liquid) ..... Passes Test
Normality 4.9-5.1
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 5.0N Solution
cGMP
Biotech Reagent
Water for Injection Quality Water

0895-07	Hedpak	19 L	bks	Inquire	

NaOH FW: 40.00

Made from Water for Injection USP and Sodium Hydroxide pellets, NF(Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance (Clear, colorless liquid) ..... Passes Test
Normality 4.9-5.1
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Endotoxin Concentration (EU/mL) ..... max. 2
Protect from air to avoid absorption of carbon dioxide.
Filtered through a 0.2 micron filter.
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

See Drug Development and Manufacturing section for more information about scale-up and process chromatography products, starting on page 64.

Sodium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, 5N Volumetric Solution
BAKER ANALYZED Reagent

5671-02	Poly	1 L	sol	43.50	
		6 x 1 L	sol	36.25	217.50
5671-06	Poly	4 L	sol	73.50	
		4 x 4 L	sol	61.25	245.00
5671-03	Cubitainer	4 L	sol	73.50	
		4 x 4 L	sol	61.25	245.00
5671-07	Cubitainer	20 L	sol	180.30	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
Appearance (Clear, colorless liquid) ..... Passes Test
SRM No ..... Reported on Label
Normality 4.95-5.05
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 4N Volumetric Solution
BAKER ANALYZED Reagent

5669-02	Poly	1 L	sol	44.95	
		6 x 1 L	sol	37.45	224.70
5669-03	Cubitainer	4 L	sol	76.00	
		4 x 4 L	sol	63.35	253.40

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 3.95-4.05
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 2.5N Volumetric Solution
BAKER ANALYZED Reagent

5666-02	Poly	1 L	sol	43.50	
		6 x 1 L	sol	36.25	217.50
5666-03	Cubitainer	4 L	sol	76.00	
		4 x 4 L	sol	63.35	253.40

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 2.40-2.60
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 2.0N Solution
cGMP
Biotech Reagent
Water for Injection Quality Water

0390-07	Hedpak	19 L	bks	Inquire	

NaOH FW: 40.00

Made from Water for Injection USP and Sodium Hydroxide pellets, NF(Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications
Appearance (Clear, colorless liquid) ..... Passes Test
Normality 1.9-2.1
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Endotoxin Concentration (EU/mL) ..... max. 2
Filtered through a 0.2 micron filter.
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 2N Volumetric Solution
BAKER ANALYZED Reagent

5633-02	Poly	1 L	sol	43.50	
		6 x 1 L	sol	36.25	217.50
5633-03	Cubitainer	4 L	sol	76.00	
		4 x 4 L	sol	63.35	253.40
5633-07	Cubitainer	20 L	sol	180.30	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 1.990-2.01
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, 1.0N Solution

cGMP

Biotech Reagent
Water for Injection Quality Water

0389-07	Hedpak	19 L	bks	Inquire	
0389-09	Poly Drum	200 L	bul	Inquire	

NaOH FW: 40.00

Made from Water for Injection USP and Sodium Hydroxide pellets, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance (Clear, colorless liquid) ..... Passes Test
Normality 0.9-1.1
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Endotoxin Concentration (EU/mL) ..... max. 2
Protect from air to avoid absorption of carbon dioxide.
Filtered through a 0.2 micron filter.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 1.0N Solution

cGMP

Biotech Reagent

0328-07	Hedpak	19 L	bks	Inquire	
0328-09	Poly Drum	200 L	bul	Inquire	

NaOH FW: 40.00

Made from USP Purified Water and Sodium Hydroxide pellets, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance (clear, colorless solution) ..... Passes Test
Normality 0.975-1.025
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Endotoxin Concentration (EU/mL) ..... max. 2.0
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 1N Volumetric Solution

BAKER ANALYZED Reagent

5635-02	Poly	1 L	sol	31.80	
		6 x 1 L	sol	26.50	159.00
5635-03	Cubitainer	4 L	sol	63.05	
		4 x 4 L	sol	52.55	210.20
5635-07	Cubitainer	20 L	sol	164.95	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Appearance (Clear, colorless liquid) ..... Passes Test
Normality (eq/L) 0.995-1.005
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Filtered through a 0.2 micron filter.
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.6N Volumetric Solution

BAKER ANALYZED Reagent

5667-02	Poly	1 L	sol	32.90	
		6 x 1 L	sol	27.40	164.40
5667-07	Cubitainer	20 L	sol	170.60	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.590-0.610
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.5N Solution

cGMP

Biotech Reagent

0329-07	Hedpak	19 L	bks	Inquire	
0329-09	Poly Drum	200 L	bul	Inquire	

NaOH FW: 40.00

Made from USP Purified Water and Sodium Hydroxide pellets, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance (clear, colorless solution) ..... Passes Test
Normality 0.480-0.520
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.5
Endotoxin Concentration (EU/mL) ..... max. 2.0
Filtered through 0.2 micron filter
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide

Sodium Hydroxide, 0.5N Solution

cGMP

Biotech Reagent
Water for Injection Quality Water

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
0388-07	Hedpak	19 L	bks	Inquire	
0388-09	Poly Drum	200 L	bul	Inquire	

NaOH FW: 40.00

Made from Water for Injection USP and Sodium Hydroxide pellets, NF (Multi-Compendial) which meets BP, Ph.Eur. and JP Chemical Specifications

Appearance (Clear, colorless liquid) . . . . . .Passes Test
Normality 0.48-0.52
Trace Impurities (in ppm):
Chloride (Cl) . . . . . .max. 5
Heavy Metals (as Pb) . . . . . .max. 1
Iron (Fe) . . . . . .max. 0.5
Endotoxin Concentration (EU/mL) . . . . . .max. 2
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.5N Volumetric Solution

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5634-02	Poly	1 L	sol	31.80	
		6 x 1 L	sol	26.50	159.00
5634-03	Cubitainer	4 L	sol	63.05	
		4 x 4 L	sol	52.55	210.20
5634-06	Poly	4 L	sol	65.20	
		4 x 4 L	sol	54.35	217.40
5634-07	Cubitainer	20 L	sol	164.95	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No . . . . . .Reported on Label
Normality 0.499-0.501
Trace Impurities (in ppm):
Chloride (Cl) . . . . . .max. 5
Heavy Metals (as Pb) . . . . . .max. 1
Iron (Fe) . . . . . .max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.25N Volumetric Solution

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5638-02	Poly	1 L	sol	32.90	
		6 x 1 L	sol	27.40	164.40
5638-03	Cubitainer	4 L	sol	63.05	
		4 x 4 L	sol	52.55	210.20

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No . . . . . .Reported on Label
Normality 0.2490-0.2510
Trace Impurities (in ppm):
Chloride (Cl) . . . . . .max. 5
Heavy Metals (as Pb) . . . . . .max. 1
Iron (Fe) . . . . . .max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.2N Volumetric Solution

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5665-02	Poly	1 L	sol	32.90	
		6 x 1 L	sol	27.40	164.40
5665-03	Cubitainer	4 L	sol	65.20	
		4 x 4 L	sol	54.35	217.40
5665-07	Cubitainer	20 L	sol	170.60	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No . . . . . .Reported on Label
Normality 0.1995-0.2005
Trace Impurities (in ppm):
Chloride (Cl) . . . . . .max. 5
Heavy Metals (as Pb) . . . . . .max. 1
Iron (Fe) . . . . . .max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.1N Volumetric Solution

BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5636-02	Poly	1 L	sol	31.80	
		6 x 1 L	sol	26.50	159.00
5636-03	Cubitainer	4 L	sol	63.05	
		4 x 4 L	sol	52.55	210.20
5636-07	Cubitainer	20 L	sol	164.95	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No . . . . . .Reported on Label
Normality 0.0995-0.1005
Trace Impurities (in ppm):
Chloride (Cl) . . . . . .max. 5
Heavy Metals (as Pb) . . . . . .max. 1
Iron (Fe) . . . . . .max. 0.5
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, 0.05N Volumetric Solution
BAKER ANALYZED Reagent

5664-02	Poly	1 L	sol	32.90	
		6 x 1 L	sol	27.40	164.40
5664-03	Cubitainer	4 L	sol	65.20	
		4 x 4 L	sol	54.35	217.40
5664-07	Cubitainer	20 L	sol	170.60	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0498-0.0502
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.02N Volumetric Solution
BAKER ANALYZED Reagent

5653-02	Poly	1 L	sol	31.80	
		6 x 1 L	sol	26.50	159.00
5653-03	Cubitainer	4 L	sol	65.20	
		4 x 4 L	sol	54.35	217.40
5653-07	Cubitainer	20 L	sol	170.60	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0195-0.0205
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Heavy Metals (as Pb) .....max. 0.5
Iron (Fe) .....max. 0.5
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.01N Volumetric Solution
BAKER ANALYZED Reagent

5663-02	Poly	1 L	sol	31.80	
		6 x 1 L	sol	26.50	159.00
5663-03	Cubitainer	4 L	sol	65.20	
		4 x 4 L	sol	54.35	217.40
5663-07	Cubitainer	20 L	sol	170.60	

NaOH FW: 40.00

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0095-0.0105
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Heavy Metals (as Pb) .....max. 1
Iron (Fe) .....max. 0.5
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, DILUT-IT Analytical Concentrate, 5N
(5 equiv. = 200.0 g NaOH)

4690-01	Ampoule	1 pk	spr	69.00	
		6 x 1 pk	spr	57.50	345.00

(Makes 5N solution after dilution to 1000 mL)
Low in Carbonate
Normality (by titrimetry) .....Passes Test
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, DILUT-IT Analytical Concentrate, 1N
(1 equiv. = 40.00 g NaOH)

4689-01	Ampoule	1 pk	spr	39.40	
		6 x 1 pk	spr	32.85	197.10

(Makes 1N solution after dilution to 1000 mL)
Low in Carbonate
Normality (by titrimetry) .....Passes Test
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.5N
(1/2 equiv. = 20.00 g NaOH)

4691-01	Ampoule	1 pk	spr	43.15	
		6 x 1 pk	spr	35.95	215.70

(Makes 0.5N solution after dilution to 1000 mL)
Low in Carbonate
Normality (by titrimetry) .....Passes Test
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.1N
(1/10 equiv. = 4.000 g NaOH)

4687-01	Ampoule	1 pk	spr	36.60	
		6 x 1 pk	spr	30.50	183.00

(Makes 0.1N solution after dilution to 1000 mL)
Low in Carbonate
Normality (by titrimetry) .....Passes Test
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.02N

(1/50 equiv. = 0.800 g NaOH)

4715-01	Ampoule	1 pk	spr	52.85	
		6 x 1 pk	spr	44.05	264.30

(Makes 0.02N solution after dilution to 1000 mL)
Low in Carbonate
Normality (by titrimetry) ..... Passes Test
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide Coated Non-fibrous Silicate

See under ASCARITE II

Sodium Hypochlorite Solution (5% Available Chlorine)

BAKER ANALYZED Reagent

9416-01	Poly	500 mL	cso	59.25	
		12 x 500 mL	cso	39.50	474.00
9416-03	Poly	4 L	cso	245.65	
		4 x 4 L	cso	163.75	655.00

NaOCl FW: 74.44

Appearance (Clear, light yellow liquid) ..... Passes Test
Available Chlorine (when packaged) 5.0-6.0%
Phosphate (PO_4) ..... max. 0.0005%
Calcium (Ca) ..... max. 0.001%
CAS: 7681-52-9 DENSITY: 1 L = 1.07 kg MERCK INDEX: 14,8628

Sodium Hypochlorite Solution USP, Sterile

See under Protocol C[3]

Sodium Hypophosphite, Monohydrate, Crystal

BAKER ANALYZED Reagent

3740-01	Poly	500 g	csa	120.45	
		4 x 500 g	csa	80.30	321.20

$NaH_2PO_2 \cdot H_2O$ FW: 105.99

Assay ($NaH_2PO_2 \cdot H_2O$) 99.0-105.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.04%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5
CAS: 10039-56-2 MERCK INDEX: 14,8629

Sodium Hyposulfite

See Sodium Thiosulfate

Sodium Iodide, Crystal

BAKER ANALYZED ACS Reagent

3748-01	Poly	500 g	non	313.45	
3748-07	Poly Pail	12 kg	bks	Inquire	

NaI FW: 149.89

Meets ACS Specifications

Assay (NaI) ..... min. 99.5%
pH of 5% Solution at 25°C 6.0-9.0
Insoluble Matter ..... max. 0.01%
Chloride and Bromide (as Cl) ..... max. 0.01%
Iodate (IO_3) ..... max. 3 ppm
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.002%
Heavy Metals ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Calcium (Ca) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.001%
Potassium (K) ..... max. 0.01%
CAS: 7681-82-5 MERCK INDEX: 14,8631

Sodium Lactate (60% Syrup)

BAKER

V034-08	Glass S/S	500 mL	non	106.55	

$CH_3CHOHCOONa$ FW: 112.06

Water (H_2O)(by Karl Fischer titrn) ..... max. 41%
CAS: 72-17-3 DENSITY: 1 L = 1.31 kg MERCK INDEX: 14,8635

Sodium Metabisulfite

See Sodium meta-Bisulfite

Sodium Metaphosphate

See Sodium Hexametaphosphate

Sodium Metasilicate

See Sodium meta-Silicate

Sodium Molybdate, Dihydrate

BAKER ANALYZED ACS Reagent

3764-01	Poly	500 g	non	223.80	
3764-05	Poly	2.5 kg	non	737.55	
3764-07	Poly Pail	12 kg	bks	Inquire	
3764-R		100 lb	bul	Inquire	

$Na_2MoO_4 \cdot 2H_2O$ FW: 241.95

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Appearance ..... Passes Test
Assay ($Na_2MoO_4 \cdot 2H_2O$) 99.5-103.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 7.0-10.5
Chloride (Cl) ..... max. 0.005%
Ammonium (NH_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.015%
Iron (Fe) ..... max. 0.001%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppm):
Phosphate (PO_4) ..... max. 5
Heavy Metals (as Pb) ..... max. 5

CAS: 10102-40-6 MERCK INDEX: 14,8645

Sodium Nitrate, Crystal
BAKER ANALYZED ACS Reagent

3770-01	Poly	500 g	csa	133.50	
		4 x 500 g	csa	89.00	356.00
3770-05	Poly	2.5 kg	csa	485.05	
		4 x 2.5 kg	csa	323.35	1293.40
3770-07	Flowmor	12 kg	bks	Inquire	
3770-09	Poly Drum	70 lb	bul	Inquire	

$NaNO_3$ FW: 84.99

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($NaNO_3$) ..... min. 99.0%
pH of 5% Solution at 25°C 5.5-8.3
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Iodate (IO_3) ..... max. 5 ppm
Nitrite (NO_2) ..... max. 0.001%
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 3 ppm

CAS: 7631-99-4 MERCK INDEX: 14,8647 IMO: 5.1:1498

Sodium Nitrite
BAKER ANALYZED ACS Reagent

3780-01	Poly	500 g	csa	90.70	
		4 x 500 g	csa	60.45	241.80
3780-05	Poly	2.5 kg	non	255.60	
3780-07	Lined Fiber Dr	12 kg	bks	Inquire	

$NaNO_2$ FW: 69.00

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($NaNO_2$) (by $KMnO_4$ titrn) ..... min. 98.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
pH of 5% Solution at 25°C 6.0-9.5
Loss on Drying at 105°C ..... max. 1.0%
Lead (Pb) ..... max. 0.001%
Arsenic (As) ..... max. 3 ppm
Iron (Fe) ..... max. 5 ppm
Calcium (Ca)(by FES) ..... max. 0.01%
Potassium (K)(by FES) ..... max. 0.005%

CAS: 7632-00-0 MERCK INDEX: 14,8648 IMO: 5.1:1500

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Nitroferricyanide, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent
(sodium pentacyanonitrosylferrate(III), dihydrate)

3792-04	Poly	125 g	non	111.30	
3792-01	Poly	500 g	non	246.05	

$Na_2Fe(CN)_5NO{\cdot}2H_2O$ FW: 297.95

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Na_2Fe(CN)_5NO{\cdot}2H_2O$) 99.0-102.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.02%
Sulfate (SO_4) ..... Passes Test

CAS: 13755-38-9 MERCK INDEX: 14,8649 IMO: 6.1:3288

Sodium Nitroprusside
See Sodium Nitroferricyanide

Sodium Oxalate, Powder
BAKER ANALYZED ACS Reagent

3800-01	Poly	500 g	non	174.35	
3800-05	Poly	2.5 kg	csa	662.65	
		4 x 2.5 kg	csa	441.75	1767.00

NaOCOCOONa FW: 134.00

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (NaOCOCOONa) ..... min. 99.5%
Insoluble Matter ..... max. 0.005%
Loss on Drying at 105°C ..... max. 0.01%
Neutrality ..... Passes Test
Chloride (Cl) ..... max. 0.002%
Ammonium (NH_4) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Substances Darkened by Hot H_2SO_4 ..... Passes Test

CAS: 62-76-0 MERCK INDEX: 14,8650 IMO: 6.1:2928

Sodium Oxalate, Powder
BAKER ANALYZED ACS Reagent
Primary Standard

3801-04	Glass	125 g	non	81.25	
3801-01	Poly	500 g	non	216.75	

NaOCOCOONa FW: 134.00

Meets ACS Specifications
Assay (NaOCOCOONa) 99.95-100.05%
Loss on Drying at 105°C ..... max. 0.01%
Insoluble Matter ..... max. 0.005%
Neutrality ..... Passes Test
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Ammonium (NH_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.002%
Potassium (K) ..... max. 0.005%
Substances Darkened by Hot H_2SO_4 ..... Passes Test

Sodium Pentacyanonitrosylferrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppm):
Iron (Fe) .....max. 5

CAS: 62-76-0 MERCK INDEX: 14,8650 IMO: 6.1:2928

Sodium Pentacyanonitrosylferrate(III)
See Sodium Nitroferricyanide

Sodium 1-Pentanesulfonate
See 1-Pentanesulfonic Acid, Sodium Salt

Sodium meta-Periodate
BAKER ANALYZED ACS Reagent
Sodium Tetraoxoiodate VII

3756-04	Poly	125 g	non	248.10
3756-01	Poly	500 g	non	720.30

$NaIO_4$ FW: 213.89

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($NaIO_4$) (by iodometry) 99.8-100.3%
Other Halogens (as Cl) .....max. 0.02%
Trace Impurities (in ppm):
Manganese (Mn) .....max. 3

CAS: 7790-28-5 MERCK INDEX: 14,8640 IMO: 5.1:1479

Sodium Peroxydisulfate
See Sodium Persulfate

Sodium Persulfate
BAKER

V035-07	Poly	500 g	non	85.35
V035-01	Poly Pail	12 kg	bks	Inquire

$Na_2S_2O_8$ FW: 238.03

Assay ($Na_2S_2O_8$) .....min. 95%

CAS: 7775-27-1 MERCK INDEX: 14,8656 IMO: 5.1:1505

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Phosphate, Monobasic, Monohydrate, Crystal
BAKER ANALYZED ACS Reagent
(sodium dihydrogen phosphate, monohydrate)

3818-01	Poly	500 g	csa	116.50	
		4 x 500 g	csa	77.65	310.60
3818-05	Poly	2.5 kg	csa	442.95	
		4 x 2.5 kg	csa	295.30	1181.20
3818-07	Poly Pail	12 kg	bks	Inquire	

$NaH_2PO_4 \cdot H_2O$ FW: 137.99

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($NaH_2PO_4 \cdot H_2O$) 98.0-102.0%
pH of 5% Solution at 25°C 4.1-4.5
Insoluble Matter .....max. 0.01%
Chloride (Cl) .....max. 5 ppm
Sulfate (SO_4) .....max. 0.003%
Calcium (Ca) .....max. 0.005%
Potassium (K) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%

CAS: 10049-21-5 MERCK INDEX: 14,8660

Sodium Phosphate, Monobasic, Monohydrate, Crystal
ULTRAPURE BIOREAGENT
(sodium dihydrogen phosphate, monohydrate)
For Liquid Chromatography and Molecular Biology Applications

4011-01	Poly	500 g	upr	85.75	
4011-05	Poly	2.5 kg	upr	337.15	

$NaH_2PO_4 \cdot H_2O$ FW: 137.99

Assay ($NaH_2PO_4 \cdot H_2O$) 99.0-102.0%
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
pH of 5% Solution at 25°C 4.1-4.5
Insoluble Matter, Calcium and NH_4OH Precipitate .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%

CAS: 10049-21-5 MERCK INDEX: 14,8660

Sodium Phosphate, Monobasic, Monohydrate, Crystal
cGMP
USP, FCC

3820-01	Glass	500 g	rss	140.95	
		4 x 500 g	rss	93.95	375.80
3820-07	Poly Pail	12 kg	bks	Inquire	

$NaH_2PO_4 \cdot H_2O$ FW: 137.99

Meets USP & FCC Requirements
Appearance (White crystals or granules) .....Passes Test
Assay (anhydrous basis) 98.0-103.0%
Aluminum, Calcium, and Related Elements .....Passes Test
Arsenic (As) .....max. 3 ppm
Chloride (Cl) .....max. 0.014%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Fluoride (F) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 20 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Substances ..... max. 0.2%
Lead (Pb) ..... max 4 mg/kg
Loss on Drying 10.0-15.0%
pH (1 in 20) 4.1-4.5
Sulfate (SO_4) ..... max. 0.15%
Water (H_2O) 10.0-15.0%

CAS: 10049-21-5 MERCK INDEX: 14,8660

Sodium Phosphate, Monobasic, Monohydrate, Crystal

cGMP

USP, FCC
Endotoxin Tested

3821-01	Glass	500 g	rss	173.55	
		4 x 500 g	rss	115.70	462.80
3821-07	Poly Pail	12 kg	bks	Inquire	

$NaH_2PO_4 \cdot H_2O$ FW: 137.99

Meets USP & FCC Requirements

Assay (anhydrous basis) 98.0-103.0%
Aluminum, Calcium, and Related Elements ..... Passes Test
Arsenic (As) ..... max. 3 ppm
Chloride (Cl) ..... max. 0.014%
Endotoxin Concentration (EU/g) ..... max. 2.5
Fluoride (F) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 20 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Substances ..... max. 0.2%
Lead (Pb) ..... max 4 mg/kg
Loss on Drying 10.0-15.0%
pH (1 in 20) 4.1-4.5
Sulfate (SO_4) ..... max. 0.15%
Water (H_2O) 10.0-15.0%

CAS: 10049-21-5 MERCK INDEX: 14,8660

Sodium Phosphate, Monobasic, Monohydrate, USP

cGMP

Multi-Compendial

3802-01	Glass	500 g	rss	170.20	
		4 x 500 g	rss	113.45	453.80
3802-05	Poly	2.5 kg	rss	648.10	
		4 x 2.5 kg	rss	432.05	1728.20
3802-07	Poly Pail	12 kg	bks	Inquire	

$NaH_2PO_4 \cdot H_2O$ FW: 137.99

Meets USP Requirements

Appearance (White crystals or granules) ..... Passes Test
Assay (anhydrous basis) 98.0-103.0%
Aluminum, Calcium, and Related Elements ..... Passes Test
Arsenic (As) ..... max. 8 ppm
Chloride (Cl) ..... max. 0.014%
Heavy Metals (as Pb) ..... max. 0.002%
Identification ..... Passes Test
Insoluble Substances ..... max. 0.2%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

pH (1 in 20) 4.1-4.5
Sulfate (SO_4) ..... max. 0.15%
Water (H_2O) 10.0-15.0%

The following test results are derived from testing Sodium Phosphate, Monobasic, Monohydrate, USP to the EP Chemical specifications for Sodium Dihydrogen Phosphate Dihydrate.

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Assay (anhydrous basis) 98.0-100.5%
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Arsenic (As) ..... max. 2 ppm
Reducing Substances ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Endotoxin Concentration (EU/g) ..... max. 2.5
Iron (Fe) ..... max. 10 ppm
Appearance of Solution ..... Passes Test
pH 4.2-4.5

Meets BP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Acidity 4.2-4.5
Clarity and Color of Solution ..... Passes Test
Arsenic (As) ..... max. 2 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Reducing Substances ..... Passes Test
Loss on Drying at 130°C 11.5-14.5%
Assay (anhydrous basis) 98.0-100.5%

CAS: 10049-21-5 MERCK INDEX: 14,8660

Sodium Phosphate, Monobasic, Dihydrate

BAKER ANALYZED Reagent

3819-01	Poly	500 g	non	109.80	
3819-05	Poly	2.5 kg	csa	462.60	
		4 x 2.5 kg	csa	308.40	1233.60

$NaH_2PO_4 \cdot 2H_2O$ FW: 155.99

Assay ($NaH_2PO_4 \cdot 2H_2O$) 98.0-102.0%
pH of 5% Solution at 25°C 4.1-4.5
Chloride (Cl) ..... max. 5 ppm
Insoluble Matter, Calcium and NH_4OH Precipitate ..... max. 0.01%
Nitrogen Compounds (as N) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.003%
Arsenic (As) ..... max. 0.5 ppm
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%

CAS: 13472-35-0 MERCK INDEX: 14,8660

Sodium Phosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Phosphate, Dibasic, 7-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
(disodium hydrogen phosphate, heptahydrate)

3824-01	Poly	500 g	csa	74.35	
		4 x 500 g	csa	49.55	198.20
3824-05	Poly	2.5 kg	csa	297.70	
		4 x 2.5 kg	csa	198.45	793.80
3824-07	Poly Pail	12 kg	bks	Inquire	

$Na_2HPO_4 \cdot 7H_2O$ FW: 268.07

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Na_2HPO_4 \cdot 7H_2O$) 98.0-102.0%
pH of 5% Solution at 25°C 8.7-9.3
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%

CAS: 7782-85-6 MERCK INDEX: 14,8659

Sodium Phosphate, Dibasic, 7-Hydrate, Crystal
USP

3817-01	Glass	500 g	rnc	79.05	
3817-05	Poly	2.5 kg	rss	335.95	
		4 x 2.5 kg	rss	223.95	895.80
3817-07	Poly Pail	25 lb	bul	Inquire	

$Na_2HPO_4 \cdot 7H_2O$ FW: 268.07

Meets USP Requirements

Assay (Na_2HPO_4) (dried basis) 98.0-100.5%
Arsenic (As) .....max. 16 ppm
Chloride (Cl) .....max. 0.06%
Heavy Metals (as Pb) .....max. 0.002%
Identification .....Passes Test
Insoluble Substances .....max. 0.4%
Loss on Drying at 130°C 43.0-50.0%
Sulfate (SO_4) .....max. 0.2%

CAS: 7782-85-6 MERCK INDEX: 14,8659

Sodium Phosphate, Dibasic, 7-Hydrate, Crystal
USP
Endotoxin Tested

3816-05	Poly	2.5 kg	rss	343.50	
		4 x 2.5 kg	rss	229.00	916.00
3816-07	Poly Pail	12 kg	bks	Inquire	

$Na_2HPO_4 \cdot 7H_2O$ FW: 268.07

Meets USP Requirements

Assay (Na_2HPO_4) (dried basis) 98.0-100.5%
Arsenic (As) .....max. 16 ppm
Chloride (Cl) .....max. 0.06%
Endotoxin Concentration (2.5 EU/g max.) .....Passes Test
Heavy Metals (as Pb) .....max. 0.002%
Identification .....Passes Test
Insoluble Substances .....max. 0.4%
Loss on Drying 43.0-50.0%
Sulfate (SO_4) .....max. 0.2%

CAS: 7782-85-6 MERCK INDEX: 14,8659

Sodium Phosphate, Dibasic, 7-Hydrate, USP
Multi-Compendial

3803-01	Glass	500 g	rnc	95.35	
3803-07	Poly Pail	12 kg	bks	Inquire	

$Na_2HPO_4 \cdot 7H_2O$ FW: 268.07

Meets USP Requirements

Appearance (Colorless or translucent crystals or granules) ...Passes Test
Assay (Na_2HPO_4) (dried basis) 98.0-100.5%
Arsenic (As) .....max. 16 ppm
Chloride (Cl) .....max. 0.06%
Endotoxin Concentration (EU/g) .....Actual Value Reported
Heavy Metals (as Pb) .....max. 0.002%
Identification .....Passes Test
Insoluble Substances .....max. 0.4%
Loss on Drying 43.0-50.0%
Sulfate (SO_4) .....max. 0.2%

The following test results are derived from testing Sodium Phosphate, Dibasic, 7-Hydrate, USP to the EP chemical specifications derived from Disodium Phosphate Dihydrate and Disodium Phosphate Dodecahydrate.

Identification A .....Passes Test
Identification C .....Passes Test
Identification D .....Passes Test
Reducing Substances .....Passes Test
Monosodium Phosphate .....max. 0.025
Arsenic (As) .....max. 2 ppm
Chloride (Cl) .....max. 200 ppm
Sulfate (SO_4) .....max. 500 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Appearance of Solution .....Passes Test
Iron (Fe) .....max. 20 ppm
Assay (anhydrous basis) 98.0-101.0%

CAS: 07782-85-6 MERCK INDEX: 14,8659

Sodium Phosphate, Dibasic, 12-Hydrate, Crystal
BAKER ANALYZED Reagent
(disodium hydrogen phosphate, dodecahydrate)

3822-01	Poly	500 g	csa	69.60	
		4 x 500 g	csa	46.40	185.60
3822-05	Poly	2.5 kg	csa	254.95	
		4 x 2.5 kg	csa	169.95	679.80
3822-07	Poly Pail	12 kg	bks	Inquire	

$Na_2HPO_4 \cdot 12H_2O$ FW: 358.14

Assay 98.0-102.0%
Insoluble Matter .....max. 0.005%
pH of 5% Solution at 25°C 8.7-9.3

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Trace Impurities (in ppm):
Nitrogen Compounds (as N) ..... max. 5

CAS: 10039-32-4 MERCK INDEX: 14,8659

Sodium Phosphate, Dibasic, Anhydrous
BAKER ANALYZED ACS Reagent
(disodium hydrogen phosphate)
Suitable for Buffer Solutions

3828-01	Poly	500 g	csa	86.10	
		4 x 500 g	csa	57.40	229.60
3828-05	Poly	2.5 kg	csa	329.40	
		4 x 2.5 kg	csa	219.60	878.40
3828-07	Poly Pail	12 kg	bks	Inquire	

Na_2HPO_4 FW: 141.96

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (Na_2HPO_4) (by acidimetry) ..... min. 99.0%
Insoluble Matter ..... max. 0.01%
Loss on Drying at 105°C ..... max. 0.2%
pH of 5% Solution at 25°C 8.7-9.3
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%

CAS: 7558-79-4 MERCK INDEX: 14,8659

Sodium Phosphate, Dibasic, Anhydrous
cGMP
USP, FCC, ACS
Endotoxin Tested

3826-07	Poly Pail	12 kg	bks	Inquire	

Na_2HPO_4 FW: 141.96

Meets USP & FCC Requirements
(Suitable for Buffer Solutions)
Assay (Na_2HPO_4) (dried basis) 98.0-100.5%
Arsenic (As) ..... max. 3 ppm
Chloride (Cl) ..... max. 0.06%
Endotoxin Concentration (5 EU/g max.) ..... Passes Test
Fluoride (F) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.002%
Identification ..... Passes Test
Insoluble Matter ..... max. 0.2%
Lead (Pb) ..... max 4 mg/kg
Loss on Drying at 120°C ..... max. 5.0%
Loss on Drying at 130°C ..... max. 5.0%
Sulfate (SO_4) ..... max. 0.2%
Meets ACS Specifications
Assay (Na_2HPO_4) (by acidimetry) ..... min. 99.0%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Loss on Drying at 105°C ..... max. 0.2%
pH of 5% Solution at 25°C 8.7-9.3
Sulfate (SO_4) ..... max. 0.005%

CAS: 7558-79-4 MERCK INDEX: 14,8659

Sodium Phosphate, Dibasic, Anhydrous
cGMP
USP, FCC

3827-01	Glass	500 g	rss	108.40	
		4 x 500 g	rss	72.25	289.00
3827-19	Glass	1 kg	rss	164.50	
		4 x 1 kg	rss	109.65	438.60
3827-07	Poly Pail	12 kg	bks	Inquire	

Na_2HPO_4 FW: 141.96

Meets USP & FCC Requirements
(Suitable for Buffer Solutions)
Assay (Na_2HPO_4) (dried basis) 98.0-100.5%
Arsenic (As) ..... max. 3 ppm
Chloride (Cl) ..... max. 0.06%
Fluoride (F) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Matter ..... max. 0.2%
Lead (Pb) ..... max 4 mg/kg
Loss on Drying at 120°C ..... max. 5.0%
Loss on Drying at 130°C ..... max. 5.0%
Sulfate (SO_4) ..... max. 0.2%

CAS: 7558-79-4 MERCK INDEX: 14,8659

Sodium Phosphate, Dibasic, Anhydrous, Powder
ULTRAPURE BIOREAGENT
(disodium hydrogen phosphate)
For Liquid Chromatography and Molecular Biology applications

4062-01	Poly	500 g	upr	66.30	
4062-05	Poly	2.5 kg	upr	252.10	

Na_2HPO_4 FW: 141.96

Assay (Na_2HPO_4) ..... min. 99.0%
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
pH of 5% Solution at 25°C 8.7-9.3
Insoluble Matter ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Loss on Drying at 105°C ..... max. 0.2%

CAS: 7558-79-4 MERCK INDEX: 14,8659

Sodium Phosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Phosphate, Dibasic, Anhydrous, USP

cGMP

Multi-Compendial

3804-01	Glass	500 g	rss	108.45	
		4 x 500 g	rss	72.30	289.20
3804-07	Poly Pail	12 kg	bks	Inquire	

Na_2HPO_4 FW: 141.96

Meets USP Requirements

Assay (Na_2HPO_4) (dried basis) 98.0-100.5%
Identification .....Passes Test
Loss on Drying at 130°C .....max. 5.0%
Insoluble Substances .....max. 0.4%
Chloride (Cl) .....max. 0.06%
Sulfate (SO_4) .....max. 0.2%
Arsenic (As) .....max. 16 ppm
Heavy Metals (as Pb) .....max. 0.002%
Endotoxin Concentration (2.5 EU/g max.) .....Passes Test

The following test results are derived from testing Sodium Phosphate, Dibasic, Anhydrous, USP to the JP Chemical specifications for Dibasic Sodium Phosphate, Dodecahydrate.

Identification .....Passes Test
Assay (Na_2HPO_4) (dried basis) 98.0-101.0%
pH (1 in 50) 9.0-9.4
Clarity and Color of Solution .....Passes Test
Chloride (Cl) .....max. 0.014%
Sulfate (SO_4) .....max. 0.038%
Carbonate (CO_3) .....Passes Test
Heavy Metals .....max. 10 ppm
Arsenic (As) .....max. 2 ppm

Meets EP chemical specifications as Disodium Phosphate, Anhydrous

Assay (Na_2HPO_4) (dried basis) 98.0-101.0%
Appearance of Solution .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Identification D .....Passes Test
Reducing Substances .....Passes Test
Arsenic (As) .....max. 2 ppm
Chloride (Cl) .....max. 200 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Iron (Fe) .....max. 20 ppm
Loss on Drying .....max. 1.0%
Monosodium Phosphate .....max. 0.025
Sulfate (SO_4) .....max. 500 ppm

CAS: 7558-79-4 MERCK INDEX: 14,8659

Information on the J.T.Baker multicompendial-tested product line begins on page 64.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Phosphate, Tribasic, 12-Hydrate, Crystal

BAKER ANALYZED ACS Reagent
(trisodium phosphate, dodecahydrate)

3836-01	Poly	500 g	csa	94.20	
		4 x 500 g	csa	62.80	251.20
3836-05	Poly	2.5 kg	csa	352.60	
		4 x 2.5 kg	csa	235.05	940.20
3836-07	Poly Pail	12 kg	bks	Inquire	

$Na_3PO_4 \cdot 12H_2O$ FW: 380.12

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Na_3PO_4 \cdot 12H_2O$) (by acidimetry) 98.0-102.0%
Excess Alkali (as NaOH) .....max. 2.5%
Insoluble Matter .....max. 0.01%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%

CAS: 10101-89-0 MERCK INDEX: 14,8662

Sodium Phosphate, Tribasic, 12-Hydrate, Crystal

Technical
(trisodium phosphate, dodecahydrate)

3840-07	Poly Pail	12 kg	bks	Inquire	

$Na_3PO_4 \cdot 12H_2O$ FW: 380.12

Assay ($Na_3PO_4 \cdot 12H_2O$) 95-115%
Insoluble Matter .....max. 0.02%
Heavy Metals (as Pb) .....max. 0.005%
Excess Alkali (as NaOH) .....max. 4.0%

CAS: 10101-89-0 MERCK INDEX: 14,8662

Sodium Potassium Tartrate

See Potassium Sodium Tartrate

Sodium Propionate

See Propionic Acid, Sodium Salt

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Pyrophosphate, 10-Hydrate, Crystal
BAKER ANALYZED ACS Reagent
(diphosphoric acid, tetrasodium salt, decahydrate)

3850-01	Poly	500 g	csa	86.65	
		4 x 500 g	csa	57.75	231.00
3850-05	Poly	2.5 kg	csa	312.30	
		4 x 2.5 kg	csa	208.20	832.80
3850-07	Poly Pail	12 kg	sbk	845.30	

$Na_4P_2O_7 \cdot 10H_2O$ FW: 446.06

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Na_4P_2O_7 \cdot 10H_2O$) 99.0-103.0%
Insoluble Matter .....max. 0.01%
pH of 5% Solution at 25°C 9.5-10.5
Chloride (Cl) .....max. 0.002%
Nitrogen Compounds (as N) .....max. 0.001%
Sulfate (SO_4) .....max. 0.005%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%
CAS: 13472-36-1 MERCK INDEX: 14,9240

Sodium Pyrosulfite
See Sodium meta-Bisulfite

Sodium Pyruvate
BAKER ANALYZED Reagent

3354-04	Glass	100 g	non	104.75	
3354-02	Glass	1 kg	non	599.10	

$CH_3COCOONa$ FW: 110.05

Meets Reagent Specifications for testing USP/NF monographs
Assay ($CH_3COCOONa$) (by non-aqueous titration) .....min. 99.0%
Free Pyruvic Acid ($CH_3COCOOH$) .....max. 1%
Solubility .....Passes Test
CAS: 113-24-6

Sodium Salicylate
See Salicylic Acid, Sodium Salt

Sodium Meta-Silicate, 9-Hydrate
BAKER ANALYZED Reagent

3868-01	Poly	500 g	csa	110.95	
		4 x 500 g	csa	73.95	295.80
3868-05	Poly	2.5 kg	csa	455.35	
		4 x 2.5 kg	csa	303.55	1214.20
3868-R	Lined Fiber Dr	225 lb	bul	Inquire	

$Na_2SiO_3 \cdot 9H_2O$ FW: 284.20

Appearance .....Passes Test
Assay .....Actual Value Reported
Chloride (Cl) .....max. 0.01%
Sulfate (SO_4) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.005%
CAS: 13517-24-3 MERCK INDEX: 14,8675 IMO: 8:3253

Sodium Silicate Solution
(Approximately 41° Baume)

3877-01	Glass	500 mL	cso	79.05	
		12 x 500 mL	cso	52.70	632.40

Specific Gravity at 25°/25°C 1.35-1.42
Product Information (not specifications):
Viscosity approximately 180 cps.
CAS: 1344-09-8 DENSITY: 1 L = 1.3 kg MERCK INDEX: 14,8676

Sodium Stannate, Trihydrate
BAKER ANALYZED Reagent

3880-01	Poly	500 g	non	428.70
3880-05	Poly	2.5 kg	non	1851.90

$Na_2SnO_3 \cdot 3H_2O$ FW: 266.71

Insoluble Matter .....max. 0.02%
Chloride (Cl) .....max. 0.01%
Sulfate (SO_4) .....max. 0.005%
Iron (Fe) .....max. 0.001%
CAS: 12058-66-1 MERCK INDEX: 14,8677

Sodium Succinate
See Succinic Acid, Disodium Salt

Sodium Sulfate, 10-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

3890-01	Glass	500 g	csa	107.80	
		4 x 500 g	csa	71.85	287.40
3890-R	Poly Drum	200 lb	bul	Inquire	

$Na_2SO_4 \cdot 10H_2O$ FW: 322.19

Meets ACS Specifications
Assay ($Na_2SO_4 \cdot 10H_2O$) .....min. 98.0%
Insoluble Matter .....max. 0.01%
pH of 5% Solution at 25°C 5.2-9.2
Chloride (Cl) .....max. 5 ppm
Phosphate (PO_4) .....max. 5 ppm
Calcium (Ca) .....max. 0.005%
Magnesium (Mg) .....max. 0.003%
Potassium (K) .....max. 0.005%
Trace Impurities (in ppm):
Nitrogen Compounds (as N) .....max. 3
Heavy Metals (as Pb) .....max. 3
Iron (Fe) .....max. 5
CAS: 7727-73-3 MERCK INDEX: 14,8680

Sodium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Sulfate, Anhydrous, Granular Powder
BAKER ANALYZED ACS Reagent

3891-01	Glass	500 g	csa	63.40	
		4 x 500 g	csa	42.25	169.00
3891-05	Glass	2.5 kg	csa	161.10	
		4 x 2.5 kg	csa	107.40	429.60
3891-07	Flowmor	12 kg	sbk	412.35	

Na_2SO_4 FW: 142.04

Meets ACS Specifications

Assay (Na_2SO_4) .....min. 99.0%
Insoluble Matter .....max. 0.01%
Loss on Ignition .....max. 0.5%
pH of 5% Solution at 25°C 5.2-9.2
Chloride (Cl) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Calcium (Ca) .....max. 0.01%
Magnesium (Mg) .....max. 0.005%
Potassium (K) .....max. 0.01%
Nitrogen Compounds (as N) .....max. 5 ppm
Heavy Metals (as Pb) .....max. 5 ppm
Iron (Fe) .....max. 0.001%

CAS: 7757-82-6 MERCK INDEX: 14,8680

Sodium Sulfate, Anhydrous, Granular (12-60 Mesh)
ULTRA RESI-ANALYZED, ACS Reagent
Suitable for Use in Pesticide Residue Analysis
Tested for Hexane Extractable Impurities

3375-01	Glass	500 g	csa	47.05	
		4 x 500 g	csa	31.35	125.40
3375-05	Glass	2.5 kg	csa	174.40	
		4 x 2.5 kg	csa	116.25	465.00
3375-07	Lined Fiber Dr	12 kg	sbk	465.95	
3375-09		45.5 kg	spr	814.60	

Na_2SO_4 FW: 142.04

Meets ACS Specifications

Assay (Na_2SO_4) .....min. 99.0%
Insoluble Matter .....max. 0.01%
Loss on Ignition .....max. 0.5%
pH of 5% Solution at 25°C 5.2-9.2
Chloride (Cl) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Calcium (Ca) .....max. 0.01%
Iron (Fe) .....max. 0.001%
Magnesium (Mg) .....max. 0.005%
Potassium (K) .....max. 0.01%
Extraction-Concentration Suitability .....Passes Test
Heavy Metals (as Pb) .....max. 5 ppm
Nitrogen Compounds (as N) .....max. 5 ppm

CAS: 7757-82-6 MERCK INDEX: 14,8680

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Sulfate, Anhydrous, Powder
BAKER ANALYZED ACS Reagent

3898-01	Glass	500 g	csa	58.50	
		4 x 500 g	csa	39.00	156.00
3898-05	Glass	2.5 kg	csa	171.10	
		4 x 2.5 kg	csa	114.05	456.20
3898-07	Flowmor	12 kg	sbk	434.45	

Na_2SO_4 FW: 142.04

Meets ACS Specifications

Assay (Na_2SO_4) .....min. 99.0%
Insoluble Matter .....max. 0.01%
Loss on Ignition .....max. 0.5%
pH of 5% Solution at 25°C 5.2-9.2
Chloride (Cl) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Calcium (Ca) .....max. 0.01%
Magnesium (Mg) .....max. 0.005%
Potassium (K) .....max. 0.01%
Nitrogen Compounds (as N) .....max. 5 ppm
Heavy Metals (as Pb) .....max. 5 ppm
Iron (Fe) .....max. 0.001%

CAS: 7757-82-6 MERCK INDEX: 14,8680

Sodium Sulfide, 9-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

3910-01	Glass	500 g	csa	196.75	
		4 x 500 g	csa	131.15	524.60
3910-05	Poly	2.5 kg	csa	817.65	
		4 x 2.5 kg	csa	545.10	2180.40

$Na_2S{\cdot}9H_2O$ FW: 240.18

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($Na_2S{\cdot}9H_2O$) .....min. 98.0%
Sulfite and Thiosulfate (as SO_2) .....max. 0.1%
Ammonium (NH_4) .....max. 0.005%
Iron (Fe) .....Passes Test
Product may turn slightly yellow on exposure to air. Color has no effect on specifications.
Keep material refrigerated between 2-8°C (36-46°F).

CAS: 1313-84-4 MERCK INDEX: 14,8681 IMO: 8:1849

See Environmental Testing section for more information on pages 88-90.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Sulfite, Anhydrous
BAKER ANALYZED ACS Reagent

3922-01	Poly	500 g	csa	46.65	
		4 x 500 g	csa	31.10	124.40
3922-05	Poly	2.5 kg	csa	144.15	
		4 x 2.5 kg	csa	96.10	384.40
3922-07	Poly Pail	12 kg	bks	Inquire	

Na_2SO_3 FW: 126.04

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (Na_2SO_3) (by iodometry) ..... min. 98.0%
Insoluble Matter ..... max. 0.005%
Free Acid ..... Passes Test
Titrable Free Base (meq/g) ..... max. 0.03
Chloride (Cl) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%

CAS: 7757-83-7 MERCK INDEX: 14,8682

Sodium Sulfite, Exsiccated
Purified

3888-01	Poly	500 g	csa	64.65	
		4 x 500 g	csa	43.10	172.40

Na_2SO_3 FW: 126.04

Assay (Na_2SO_3) ..... min. 95%
Description ..... Passes Test
Identification ..... Passes Test
Solubility in H_2O ..... Passes Test
Thiosulfate (S_2O_3) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 8

CAS: 7757-83-7 MERCK INDEX: 14,8682

Sodium Sulfocyanate
See Sodium Thiocyanate

Sodium Tartrate, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent
Suitable for Standardization of Karl Fischer Reagents

3930-01	Poly	500 g	csa	136.45	
		4 x 500 g	csa	90.95	363.80
3930-05	Poly	2.5 kg	csa	489.30	
		4 x 2.5 kg	csa	326.20	1304.80
3930-R	Lined Fiber Dr	250 lb	bul	Inquire	

$NaOCO(CHOH)_2COONa{\cdot}2H_2O$ FW: 230.08

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($NaOCO(CHOH)_2COONa{\cdot}2H_2O$) 99.0-101.0%
Loss on Drying at 150°C 15.61-15.71%
pH of 5% Solution at 25°C 7.0-9.0
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 5 ppm
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.005%
Ammonium (NH_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 0.001%

CAS: 6106-24-7 MERCK INDEX: 14,8684

Sodium Tetraborate
See Sodium Borate, 10-Hydrate

Sodium Tetrahydroborate
See Sodium Borohydride

Sodium Tetraphenylboron, Powder
BAKER ANALYZED ACS Reagent
(sodium tetraphenylborate)

V038-03	Glass	25 g	non	207.70	

$NaB(C_6H_5)_4$ FW: 342.23

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($NaB(C_6H_5)_4$) ..... min. 99.5%
Loss on Drying ..... max. 0.5%
Clarity of Solution ..... Passes Test
Suitability for Potassium Determination ..... Passes Test

CAS: 143-66-8 MERCK INDEX: 14,8690

Sodium Thiocyanate, Crystal
BAKER ANALYZED ACS Reagent

3938-01	Poly	500 g	csa	147.45	
		4 x 500 g	csa	98.30	393.20
3938-05	Poly	2.5 kg	csa	512.65	
		4 x 2.5 kg	csa	341.75	1367.00
3938-07	Poly Pail	12 kg	bks	Inquire	
3938-R	Poly Drum	110 lb	bul	Inquire	

NaSCN FW: 81.07

Meets ACS Specifications

Assay (NaSCN) ..... min. 98.0%
Insoluble Matter ..... max. 0.005%
Carbonate (as Na_2CO_3) ..... max. 0.2%
Chloride (Cl) ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.01%
Sulfide (S) ..... max. 0.001%
Ammonium (NH_4) ..... max. 0.002%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 2

CAS: 540-72-7 MERCK INDEX: 14,9327

Sodium Thiosulfate

Sodium Thiosulfate, 5-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3946-01	Poly	500 g	csa	57.45	
		4 x 500 g	csa	38.30	153.20
3946-19	Poly	1 kg	csa	94.00	
		4 x 1 kg	csa	62.65	250.60
3946-05	Poly	2.5 kg	csa	193.50	
		4 x 2.5 kg	csa	129.00	516.00
3946-07	Poly Pail	12 kg	bks	Inquire	

$Na_2S_2O_3 \cdot 5H_2O$ FW: 248.18

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($Na_2S_2O_3 \cdot 5H_2O$) (by iodometry) 99.5-101.0%
Insoluble Matter .....max. 0.005%
pH of 5% Solution at 25°C 6.0-8.4
Nitrogen Compounds (as N) .....max. 0.002%
Sulfate and Sulfite (as SO_4) .....max. 0.1%
Sulfide (S) .....Passes Test

CAS: 10102-17-7 MERCK INDEX: 14,8694

Sodium Thiosulfate, 5-Hydrate, Crystal, USP
Multi-Compendial

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3945-05	Poly	2.5 kg	rss	265.90	
		4 x 2.5 kg	rss	177.25	709.00

$NaS_2O_3 \cdot 5H_2O$ FW: 248.18

Meets USP Requirements
Assay (NaS_2O_3) (dried basis) 99.0-100.5%
Identification A .....Passes Test
Identification B .....Passes Test
Water (H_2O) 32.0-37.0%
Calcium (Ca) .....Passes Test
Heavy Metals (as Pb) .....max. 0.002%
Meets BP/Ph.Eur. Chemical Specifications
Assay (as $NaS_2O_3 \cdot 5H_2O$) 99.0-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Identification D .....Passes Test
Appearance of Solution .....Passes Test
pH (1 in 10) 6.0-8.4
Sulfate and Sulfite (as SO_4) .....max. 0.2%
Sulfide (S) .....Passes Test
Heavy Metals (as Pb) .....max. 10 ppm
Meets JP Chemical Specifications
Assay (NaS_2O_3) (dried basis) 99.0-101.0%
Identification .....Passes Test
pH (1 in 10) 6.0-8.0
Clarity and Color of Solution .....Passes Test
Heavy Metals (as Pb) .....max. 20 ppm
Calcium (Ca) .....Passes Test
Arsenic (As) .....max. 5 ppm
Loss on Drying 32.0-37.0%

CAS: 10102-17-7

Sodium Thiosulfate, Anhydrous, Granular
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3954-01	Poly	500 g	csa	70.75	
		4 x 500 g	csa	47.15	188.60
3954-05	Glass	2.5 kg	csa	243.75	
		4 x 2.5 kg	csa	162.50	650.00
3954-09	Lined Fiber Dr	100 lb	bul	Inquire	

$Na_2S_2O_3$ FW: 158.11

Assay ($Na_2S_2O_3$) .....min. 98.0%
Insoluble Matter .....max. 0.01%
Calcium (Ca) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.001%
Trace Impurities (in ppm):
Sulfide (S) .....max. 1

CAS: 7772-98-7 MERCK INDEX: 14,8694

Sodium Thiosulfate, 1N Volumetric Solution
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5654-02	Poly	1 L	sol	53.35	
		6 x 1 L	sol	44.45	266.70
5654-03	Cubitainer	4 L	sol	87.60	
		4 x 4 L	sol	73.00	292.00

$Na_2S_2O_3$ FW: 158.11

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.995-1.005
Sulfate and Sulfite (as SO_4) .....max. 0.02%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 1

CAS: 7772-98-7

Sodium Thiosulfate, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5637-02	Poly	1 L	sol	42.20	
		6 x 1 L	sol	35.15	210.90
5637-03	Cubitainer	4 L	sol	63.25	
		4 x 4 L	sol	52.70	210.80
5637-07	Cubitainer	20 L	sol	148.75	

$Na_2S_2O_3$ FW: 158.11

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.0995-0.1005
Sulfate and Sulfite (as SO_4) .....max. 0.01%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 1

CAS: 7772-98-7

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Thiosulfate, DILUT-IT Analytical Concentrate, 0.01N

(1/100 equiv. = 1.581 g $Na_2S_2O_3$)

4693-01	Ampoule	1 pk	spr	37.90	
		6 x 1 pk	spr	31.60	189.60

(Makes 0.01N solution after dilution to 1000 mL)

Normality (by titrimetry) ..... Passes Test

CAS: 7772-98-7

Sodium Thiosulfate, DILUT-IT Analytical Concentrate, 0.1N

(1/10 equiv. = 15.81 g $Na_2S_2O_3$)

4695-01	Ampoule	1 pk	spr	38.05	
		6 x 1 pk	spr	31.70	190.20

(Makes 0.1N solution after dilution to 1000 mL)

Normality (by titrimetry) ..... Passes Test

CAS: 7772-98-7

Solid Phase Extraction Columns
See Analytical Chromatography Section, p. 22-45

Solochrome Dark Blue B
See Calcon

Soluble Starch
See Starch, Soluble Potato

SOLUSORB Solvent Adsorbent
See under Spill Cleanup Products

Solvent Blue 3
See Aniline Blue WS

Solvent Red 24
See Sudan IV

Solvent Red 43
See Eosin Y

Solvent Spill Cleanup Products
See under Spill Cleanup Products

Solvents, High Purity
See Analytical Chromatography Section, p. 22-45, and individual solvent listings

Sorbents for Chromatography
See Analytical Chromatography Section, p. 22-45

Sorbent Selection Kit
See Analytical Chromatography Section, p. 22-45

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sorbic Acid

BAKER ANALYZED Biochemical Reagent

V040-05	Glass	100 g	bio	58.00	

$CH_3CH:CHCH:CHCOOH$ FW: 112.13

Assay ($C_6H_8O_2$) (dried basis, by acid-base titrn) 99.0-101.0%
Melting Point ..... 132.0-135.0 °C.
Ash (sulfated) ..... max. 0.2%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.5%
Arsenic (As) ..... max. 0.0003%
Heavy Metals (as Pb) ..... max. 0.001%

CAS: 110-44-1 MERCK INDEX: 14,8721 FLASH POINT: 127°C

Sorbitan Mono-and Trialkanoates, Polyoxyethylene Derivatives
See under Polyoxyethylene Sorbitan Products

Sorbitol

BAKER ANALYZED Biochemical Reagent

V045-07	Poly	500 g	bio	77.85	
V045-09	Poly Pail	3 kg	bio	297.40	

$HOCH_2(CHOH)_4CH_2OH$ FW: 182.17

Assay ($C_6H_{14}O_6$) ..... min. 91.0%
Ash (sulfated) ..... max. 0.1%
Loss on Drying at 80°C (in vacuo) ..... max. 1.0%
Reducing Sugars ..... max. 0.3%
Total Sugars ..... max. 1.0%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.01%
Arsenic (As) ..... max. 0.0003%
Heavy Metals (as Pb) ..... max. 0.001%

CAS: 50-70-4 MERCK INDEX: 14,8725

Sorensen's Reagent
See Potassium Phosphate, Monobasic

SPADNS

BAKER ANALYZED Reagent
(4,5-dihydroxy-3-[(p-sulfophenyl)azo]-2,7-) naphthalenedisulfonic acid, trisodium salt

J189-02	Glass	10 g	non	115.95	

$(HO)_2C_{10}H_3(SO_3Na)_2N:NC_6H_4SO_3Na$ FW: 570.42

Sensitivity as Indicator ..... Passes Test

CAS: 23647-14-5

SPE Products
See Analytical Chromatography Section, p. 22-45

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Spill Cleanup Products

Avantor offers proprietary formulations to effectively counteract the hazards associated with acid, caustic, mercury, and solvent spills. J.T.Baker Spill Cleanup Products are available as convenient kits for use in the lab and in bulk sizes for larger spills.

Safety Video for Spills in the Lab

Description	Product Number	Price
Spills in the Lab	4568-00	150.95

Acid Neutralizers and SAF-T-SPILL Kits

NEUTRASORB Acid Neutralizer

4456-05	Fiber Box	3.2 kg	saf	166.20	
		5 x 3.2 kg	saf	110.80	554.00
4456-09	Lined Fiber Dr	45.4 kg	saf	1386.40	

Acid SAF-T-SPILL Kit

4442-02	Poly	1 kt	saf	395.20	
		4 x 1 kt	saf	263.45	1053.80

Contents of Kit: 1 NEUTRASORB Acid Neutralizer 1 pair Goggles 1 pair Gloves 1 Sponge 1 Scoop 1 Brush 5 Waste Disposal Bags/Ties/Labels 1 Instruction Sheet

Caustic Neutralizers and SAF-T-SPILL Kits

NEUTRACIT-2 Caustic Neutralizer

4470-05	Fiber Box	1.2 kg	saf	124.35	
		5 x 1.2 kg	saf	82.90	414.50
4470-99	Lined Fiber Dr	90.9 kg	saf	2498.60	

Caustic SAF-T-SPILL Kit

4441-02	Poly	1 kt	saf	290.65	
		4 x 1 kt	saf	193.75	775.00

Contents of Kit: 1 NEUTRACIT-2 Caustic Neutralizer 1 pair Gloves 1 pair Goggles 1 Sponge 1 Brush 1 Scoop 5 Waste Disposal Bags/Ties/Labels 1 Instruction Sheet

Mercury Spill Cleanup Products and SAF-T-SPILL Kits

Mercury Spill Clean-up Kit
For Laboratory Spill Control Center

4439-01		1 kt	saf	325.00	
		6 x 1 kt	saf	216.65	1299.90

Contents of Kit: 250 g CINNASORB Elemental Mercury Absorbent Base, 20 g CINNASORB Elemental Mercury AbsorbentActivator, 0.9 kg RESISORB Mercury Vapor Absorbent, 1 Mercury Aspirator, 1 Scoop, 1 pair Gloves, 1 Sponge, 2 Spatulas, 1 Disposal Bag/Tie/Label, 1 Mixing Cup, 1 Disposal Bottle Label, 1 Instruction Sheet, (Spill Capacity: 25 mL (337.5 g) Mercury)

IMO: 8:1759

Solvent Adsorbent and SAF-T-SPILL Kits

SOLUSORB Solvent Adsorbent

4458-05	Fiber Box	1.1 kg	saf	88.20	
		5 x 1.1 kg	saf	58.80	294.00
4458-08	Lined Fiber Dr	18 kg	saf	446.25	

CAS: 7440-44-0

Solvent SAF-T-SPILL Kit

4437-02	Poly	1 kt	saf	256.95	
		4 x 1 kt	saf	171.30	685.20

Contents of Kit: 1 SOLUSORB Solvent Adsorbent, 1 pair Gloves, 1 pair Goggles, 1 Sponge, 1 Brush, 1 Scoop, 5 Waste Disposal Bags/Ties/Labels, 1 Instruction Sheet

CAS: 7440-44-0

Laboratory Spill Cleanup Centers and Accessories

Laboratory Spill Cleanup Center Kits

4434-03	Poly	1 kt	saf	745.55	

Contents of Kit: 1 each SAF-T-SPILL kit for acids, caustics, and solvents; 1 cabinet; 1 *Spills in the Lab* Training Video

For neutralization capacities of these products, please see page 600.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

SAF-T-SPILL Bulk Center

4433-02	Fiber Box	1 kt	saf	797.40	

Contents: 1.2 kg NEUTRACIT-2 Caustic Neutralizer, 2 x 3.2 kg NEUTRA-SORB Acid Neutralizer, 2 x 1.1 kg SOLUSORB Solvent Adsorbent, 1 Video -Spills in the Lab, 1 Cabinet -Laboratory Spill Control Center, 1 Equipment Kit-Laboratory Spill Control Center

Safety Equipment Kit

4483-03		1 ea	saf	154.85	

Contents: 5 Polyethylene Disposal Bags, 5 Bag Ties, 5 Acid Waste Disposal Labels, 5 Caustic Waste Disposal Labels, 5 Solvent Waste Disposal Labels, 1 Pair Safety Gloves, 1 Pair Safety Glasses, 4 Plastic Disposal Scoops, 1 Sponge

Spirit Aurine

See Rosolic Acid

Stains

See individual entries

Stannic Chloride, 5-Hydrate, Lump

BAKER ANALYZED Reagent
(tin(IV) chloride, pentahydrate)

3972-01	Poly	500 g	non	207.50	

$SnCl_4 \cdot 5H_2O$ FW: 350.58

Assay ($SnCl_4 \cdot 5H_2O$) 99.0-102.0%
Insoluble in HCl .....max. 0.01%
Sulfate (SO_4) .....max. 0.002%
Arsenic (As) .....max. 0.002%
Iron (Fe) .....max. 0.003%

CAS: 10026-06-9 MERCK INDEX: 14,8774 IMO: 8:2440

Stannous Chloride, Dihydrate, Crystal

BAKER ANALYZED ACS Reagent
(tin(II) chloride, dihydrate)
Suitable for Mercury Determination

3980-01	Poly	500 g	csa	294.75	
		4 x 500 g	csa	196.50	786.00
3980-05	Poly	2.5 kg	csa	1283.20	
		4 x 2.5 kg	csa	855.45	3421.80

$SnCl_2 \cdot 2H_2O$ FW: 225.63

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($SnCl_2 \cdot 2H_2O$) 98.0-103.0%
Solubility in HCl .....Passes Test
Sulfate (SO_4) .....Passes Test
Calcium (Ca) .....max. 0.005%
Iron (Fe) .....max. 0.003%
Lead (Pb) .....max. 0.01%
Magnesium (Mg) .....max. 0.01%
Potassium (K) .....max. 0.005%
Sodium (Na) .....max. 0.01%
Trace Impurities (in ppm):
Arsenic (As) .....max. 2
Mercury (Hg) .....max. 0.05

CAS: 10025-69-1 MERCK INDEX: 14,8783

Starch, Soluble Potato, Powder

BAKER ANALYZED ACS Reagent
For Iodometry

4006-04	Poly	125 g	non	59.70	
4006-01	Poly	500 g	non	130.85	
4006-05	Poly	2.5 kg	csa	490.80	
		4 x 2.5 kg	csa	327.20	1308.80

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Solubility .....Passes Test
pH of 2% Solution at 25°C 5.0-7.0
Residue after Ignition .....max. 0.4%
Sensitivity .....Passes Test

CAS: 9005-84-9 MERCK INDEX: 14,8799

Stearic Acid, Powder (Triple Pressed)

cGMP

NF

0340-01	Poly	500 g	rss	68.35	
		4 x 500 g	rss	45.55	182.20
0340-05	Poly	1.5 kg	rss	145.50	
		4 x 1.5 kg	rss	97.00	388.00
0340-07	Poly Drum	12 kg	bks	Inquire	
0340-R	Leverpak	100 lb	bul	Inquire	

Meets NF Requirements

Congealing Temperature .....min. 54 °C.
Residue on Ignition .....max. 0.1%
Heavy Metals (as Pb) .....max. 0.001%
Mineral Acids .....Passes Test
Neutral Fats or Paraffin .....Passes Test
Iodine Value .....max. 4
Assay ($C_{18}H_{36}O_2$) (stearic acid) .....min. 40.0%
Assay ($C_{16}H_{32}O_2$) (palmitic acid) .....min. 40.0%
Assay (Total of Stearic & Palmitic) .....min. 90.0%

CAS: 57-11-4 MERCK INDEX: 14,8804 FLASH POINT: 190°C

Sterile Cleansers

See under Protocol C[3]

Stoddard Solvent

BAKER
(mixture of petroleum distillates)

V110-01	Lined Steel Dr	20 L	org	274.20	

Appearance .....Passes Test
Identification (by IR) .....Passes Test
Residue after Evaporation .....max. 0.002%

CAS: 8052-41-3 DENSITY: 1 L = 0.79 kg MERCK INDEX: 14,6201
IMO: 3:1268 FLASH POINT: 38°C

Solvent Spill Cleanup Products available. See pp. 378.

Strontium

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Strontium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Strontium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(strontium nitrate in 5% HNO_3)
Plasma Standard

5747-04	Poly	100 mL	spr	112.60	

Sr AW: 87.62

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Strontium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Strontium Nitrate in 5% HNO_3)
Plasma Standard

5781-04		100 mL	spr	69.65	

Sr AW: 87.62

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Strontium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(strontium nitrate in 5% HNO_3)

6469-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Sr AW: 87.62

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Strontium Chloride, 6-Hydrate Crystal

BAKER ANALYZED ACS Reagent
Low in Magnesium

4036-04	Poly	125 g	non	62.35	
4036-01	Poly	500 g	csa	169.05	
		4 x 500 g	csa	112.70	450.80
4036-05	Poly	2.5 kg	csa	573.85	
		4 x 2.5 kg	csa	382.55	1530.20

$SrCl_2 \cdot 6H_2O$ FW: 266.62

Meets ACS Specifications

Assay ($SrCl_2 \cdot 6H_2O$) 99.0-103.0%
Insoluble Matter ..... .max. 0.005%
pH of 5% Solution at 25°C 5.0-7.0
Sulfate (SO_4) ..... .max. 0.001%
Barium (Ba) ..... .max. 0.05%
Calcium (Ca) ..... .max. 0.05%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... .max. 5
Iron (Fe) ..... .max. 5
Magnesium (Mg) ..... .max. 2

CAS: 10025-70-4 MERCK INDEX: 14,8840

Styrene (Stabilized)

BAKER

V091-09	Glass	4 L	non	106.05	
V091-01	Steel Pail	20 L	sbo	320.40	

$C_6H_5CH{:}CH_2$ FW: 104.15

Note: Although this product contains a stabilizer, it will polymerize on exposure to light. It is therefore recommended that it be stored in a cool (10 -15°C) dark area.

CAS: 100-42-5 DENSITY: 1 L = 0.9059 kg MERCK INDEX: 14,8860
IMO: 3:2055 FLASH POINT: 31°C

Solvent Spill Cleanup Products available. See pp. 378.

Succinic Acid, Powder

BAKER ANALYZED ACS Reagent

0346-01	Poly	500 g	non	135.80	
0346-05	Poly	2.5 kg	non	315.55	
0346-07	Poly Pail	12 kg	bks	Inquire	

$HOCOCH_2CH_2COOH$ FW: 118.09

Meets ACS Specifications

Assay ($HOCOCH_2CH_2COOH$) ..... .min. 99.0%
Melting Point ..... .185.0-191.0 °C.
Insoluble Matter ..... .max. 0.01%
Residue after Ignition ..... .max. 0.02%
Chloride (Cl) ..... .max. 0.001%
Nitrogen Compounds (as N) ..... .max. 0.001%
Phosphate (PO_4) ..... .max. 0.001%
Sulfate (SO_4) ..... .max. 0.003%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... .max. 5
Iron (Fe) ..... .max. 5

CAS: 110-15-6 MERCK INDEX: 14,8869

Succinic Acid, Disodium Salt, 6-Hydrate

BAKER ANALYZED Reagent

V103-06	Poly	250 g	non	217.00	
V103-05	Poly Pail	5 kg	non	797.65	

$NaOCOCH_2CH_2COONa \cdot 6H_2O$ FW: 270.15

Assay ($NaOCOCH_2CH_2COONa \cdot 6H_2O$) 97-102%
Identification (by IR) ..... .Passes Test
Loss on Drying at 90°C ..... .max. 40%

CAS: 6106-21-4 MERCK INDEX: 14,8679

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sucrose
ULTREX Ultrapure Reagent

4842-05	Glass	100 g	spr	134.70	
4842-07	Glass	500 g	spr	461.40	

$C_{12}H_{22}O_{11}$ FW: 342.30

Analysis of Actual Lot (not specifications)
Certificate Provided Reports Actual Lot Analysis

Specific Rotation $[\alpha]_D^{25}$ .....66.0 °
Homogeneity by GC .....Passes Test
Homogeneity by TLC .....No Extraneous Spots
Titrable Acid (µeq/g) 0.02
Ash (sulfated) 0.004%
Invert Sugar 0.009%
Loss on Drying at 105°C 0.006%
Particulate Matter .....< 0.0001%

Non-Metallic Impurities (in ppm)(µg/g):

Arsenic (As) .....< 0.8
Boron (B) 0.3
Chloride (Cl) 25
Nitrogen Compounds (as N) 10
Silicon (Si) 0.1
Sulfate and Sulfite (as SO_4) 1

Metallic Impurities (in ppm)(µg/g):

Aluminum (Al) 0.6
Bismuth (Bi) .....< 2.2
Cadmium (Cd) 0.1
Calcium (Ca) 0.1
Chromium (Cr) .....< 0.2
Cobalt (Co) .....< 0.2
Copper (Cu) 0.1
Iron (Fe) .....< 0.2
Lead (Pb) .....< 0.2
Magnesium (Mg) .....< 0.1
Manganese (Mn) 0.9
Mercury (Hg) .....< 0.3
Molybdenum (Mo) .....< 0.1
Nickel (Ni) .....< 0.2
Silver (Ag) .....< 0.3
Sodium (Na) 0.8
Tin (Sn) 1.3
Titanium (Ti) .....< 0.2
Vanadium (V) .....< 0.1
Zinc (Zn) .....< 0.2

CAS: 57-50-1 MERCK INDEX: 14,8881

Sucrose
ULTRAPURE BIOREAGENT
For Density Gradient Centrifugation

4097-04	Poly	1 kg	upr	44.05	
4097-06	Poly Pail	5 kg	upr	143.45	
4097-07	Poly Pail	12 kg	bks	Inquire	

$C_{12}H_{22}O_{11}$ FW: 342.30

DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Clarity and Color of Solution .....Passes Test
Clarity of Solution .....Passes Test
Glucose .....max. 0.1%

Trace Impurities (in ppm):

Total of Copper, Iron and Lead .....max. 5
Assay ($C_{12}H_{22}O_{11}$) (by HPLC) .....min. 99.9%

CAS: 57-50-1 MERCK INDEX: 14,8881

Sucrose, NF
cGMP
Multi-Compendial
High Purity (Low Endotoxin)

4005-04	Poly	100 g	upr	48.30	
4005-05	Poly	1 kg	bks	Inquire	
4005-06	Poly Pail	5 kg	bks	Inquire	
4005-07	Poly Pail	12 kg	bks	Inquire	

$C_{12}H_{22}O_{11}$ FW: 342.3

Beet Derived

Meets NF Requirements

Specific Rotation $[\alpha]_D^{25}$ .....min. 65.9 °
Residue on Ignition .....max. 0.05%
Chloride (Cl) .....max. 0.0035%
Sulfate (SO_4) .....max. 0.006%
Appearance (white to off white powder) .....Passes Test
Calcium (Ca) .....Passes Test
Heavy Metals (as Pb) .....max. 5 ppm
Invert Sugar, mg .....max. 112
Residual Ethanol .....max. 5000 ppm
Residual Methanol .....max. 3000 ppm

Meets EP/BP Chemical Specifications

Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Appearance of Solution .....Passes Test
Conductivity, uS cm-1 .....max. 35
Dextrins .....Passes Test
Optical Rotation .....+66.3 - +67.0 °
Color .....max. 45
Reducing Sugars .....Passes Test
Sulfite (SO_2) .....max. 10 ppm
Loss on Drying at 105°C .....max. 0.1%

Meets JP Chemical Specifications

Identification A .....Passes Test
Identification B .....Passes Test
Clarity and Color of Solution .....Passes Test
Dextrins .....Passes Test
Acidity or Alkalinity .....Passes Test
Conductivity, uS cm-1 .....max. 35
Optical Rotation .....+66.3 - +67.0 °
Invert Sugar .....max. 0.04%
Sulfite (SO_2) .....max. 15 ppm
Lead (Pb) .....max. 0.5 ppm
Loss on Drying at 105°C .....max. 0.1%
Endotoxin Concentration (EU/g) .....max. 0.6
Microbial Limits (cfu/g) .....max. 100

Preserve in well-closed containers.

CAS: 57-50-1 MERCK INDEX: 14,8881

Sucrose

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sucrose, Crystal
BAKER ANALYZED ACS Reagent

4072-01	Poly	500 g	csa	70.30	
		4 x 500 g	csa	46.85	187.40
4072-05	Poly	2.5 kg	csa	189.55	
		4 x 2.5 kg	csa	126.35	505.40
4072-07	Poly Pail	12 kg	sbk	368.80	
4072-09	Lined Fiber Dr	100 lb	bul	Inquire	

$C_{12}H_{22}O_{11}$ FW: 342.30

Meets ACS Specifications

Specific Rotation $[\alpha]_D^{25}$ ..... +66.3 - +66.8 °
Insoluble Matter ..... max. 0.005%
Loss on Drying at 105°C ..... max. 0.03%
Residue after Ignition ..... max. 0.01%
Titrable Acid (meq/g) ..... max. 0.0008
Chloride (Cl) ..... max. 0.005%
Sulfate and Sulfite (as SO_4) ..... max. 0.005%
Invert Sugar ..... max. 0.05%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 57-50-1 MERCK INDEX: 14,8881

Sucrose, Crystal, NF
Multi-Compendial

cGMP

4074-01	Poly	500 g	rss	97.90	
		4 x 500 g	rss	65.25	261.00
4074-05	Poly	2.5 kg	rss	250.75	
		4 x 2.5 kg	rss	167.15	668.60
4074-07	Poly Pail	12 kg	bks	Inquire	
4074-20	Poly Drum	50 kg	bul	Inquire	
4074-19	Poly Drum	90 kg	bul	Inquire	

$C_{12}H_{22}O_{11}$ FW: 342.30

Meets NF Requirements

Specific Rotation $[\alpha]_D^{25}$ ..... min. 65.9 °
Residue on Ignition ..... max. 0.05%
Chloride (Cl) ..... max. 0.0035%
Sulfate (SO_4) ..... max. 0.006%
Calcium (Ca) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Invert Sugar ..... max. 112 mg

Meets BP/Ph.Eur. Chemical Specifications

Identification A (EP/BP) ..... Passes Test
Identification B (EP/BP) ..... Passes Test
Identification C (EP/BP) ..... Passes Test
Appearance of Solution ..... Passes Test
Conductivity, uS cm-1 ..... max. 35
Optical Rotation ..... +66.3 - +67.0 °
Colour Value ..... max. 45
Reducing Sugars ..... Passes Test
Sulfite (SO_2) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 0.1%

Meets JP Chemical Specifications

Identification A (JP) ..... Passes Test
Identification B (JP) ..... Passes Test
Optical Rotation ..... +66.3 - +67.0 °
Clarity and Color of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Sulfite (SO_2) ..... max. 15 ppm
Lead (Pb) ..... max. 0.5 ppm
Invert Sugar (JP) ..... max. 0.04%
Conductivity, uS cm-1 ..... max. 35
Loss on Drying at 105°C ..... max. 0.1%
Endotoxin Concentration (EU/g) ..... max. 25

CAS: 57-50-1 MERCK INDEX: 14,8881

Sudan III
BAKER
(1-[[p-(phenylazo)phenyl]azo]-2-naphthol)
(C.I. 26100)

V138-03	Glass	25 g	bio	65.75

CAS: 85-86-9 MERCK INDEX: 14,8884

Sudan IV
BAKER ANALYZED Reagent, Certified Stain
Certified for use in Fat Staining
(C.I. 26105)

V141-03	Glass	25 g	non	82.55

$CH_3C_6H_4N{:}NC_6H_3(CH_3)N{:}NC_{10}H_6OH$ FW: 380.45

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum
(0.4 mg/200 mL in C_6H_6, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 85-83-6 MERCK INDEX: 14,8393

Sulfamic Acid
BAKER ANALYZED ACS Reagent

V145-05	Poly	100 g	non	63.90
V145-07	Poly	500 g	non	210.85

NH_2SO_3H FW: 97.09

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (NH_2SO_3H) (dried basis) 99.3-100.3%
Insoluble Matter ..... max. 0.01%
Residue after Ignition ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.001%
Trace Impurities (in ppm):
Iron (Fe) ..... max. 5

CAS: 5329-14-6 MERCK INDEX: 14,8921 IMO: 8:2967

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfamic Acid
Practical

V147-08	Poly	1 kg	non	73.95	
V147-09	Poly Pail	12 kg	bks	Inquire	

NH_2SO_3H FW: 97.09

Identification (by IR) ..... Passes Test

CAS: 5329-14-6 MERCK INDEX: 14,8921 IMO: 8:2967

Sulfamic Acid, Ammonium Salt
See Ammonium Sulfamate

Sulfanilamide
BAKER

V153-05	Glass	100 g	bio	68.25	
V153-07	Glass	500 g	bio	115.30	

$4\text{-}NH_2C_6H_4SO_2NH_2$ FW: 172.21

Melting Point ..... 163-166 °C.

CAS: 63-74-1 MERCK INDEX: 14,8925

Sulfanilamide
Purified
(Not Sterilized)

4079-01	Glass	500 g	non	112.30	

$4\text{-}NH_2C_6H_4SO_2NH_2$ FW: 172.21

Description ..... Passes Test
Assay ($(C_6H_8N_2O_2S)$) (dried basis) 98.5-100.5%
Identification ..... Passes Test
Loss on Drying ..... max. 1.0%
Ash (sulfated) ..... max. 0.1%
Acidity ..... Passes Test
Solubility in Acetone, Dilute HCl ..... Passes Test
Chloride (Cl) ..... max. 0.014%
Sulfate (SO_4) ..... max. 0.04%
Heavy Metals (as Pb) ..... max. 0.002%

CAS: 63-74-1 MERCK INDEX: 14,8925

Sulfanilic Acid, Anhydrous, Powder
BAKER ANALYZED ACS Reagent
For Nitrogen Dioxide Determination (ASTM D-1607)

0354-04	Poly	125 g	non	143.20	
0354-01	Poly	500 g	non	265.25	

$4\text{-}NH_2C_6H_4SO_3H$ FW: 173.19

Exceeds ACS Specifications

Assay ($4\text{-}NH_2C_6H_4SO_3H$) 98.0-102.0%
Residue after Ignition ..... max. 0.01%
Insoluble in Na_2CO_3 Solution ..... max. 0.01%
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.005%
Suitability for Nitrogen Dioxide Determination (ASTM D-1607) ..... Passes Test

Trace Impurities (in ppm):
Nitrite (NO_2) ..... max. 0.5

CAS: 121-57-3 MERCK INDEX: 14,8926

Sulfosalicylic Acid, Dihydrate, Crystal
BAKER ANALYZED ACS Reagent
(2-hydroxy-5-sulfobenzoic acid dihydrate)

0364-01	Glass	500 g	csa	256.35	
		4 x 500 g	csa	170.90	683.60
0364-05	Glass	2 kg	csa	882.55	
		4 x 2 kg	csa	588.35	2353.40

$2\text{-}HOC_6H_3\text{-}1\text{-}COOH\text{-}5\text{-}SO_3H{\cdot}2H_2O$ FW: 254.22

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_7H_6O_6S{\cdot}2H_2O$) 99.0-101.0%
Insoluble Matter ..... max. 0.02%
Residue after Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.001%
Salicylic Acid (HOC_6H_4COOH) ..... max. 0.04%
Sulfate (SO_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%

CAS: 5965-83-3 MERCK INDEX: 14,8964

Sulfuric Acid
BAKER ANALYZED ACS Reagent

9681-02	Glass S/S	500 mL	cma	50.85	
		12 x 500 mL	cma	50.85	610.20
9681-01	Glass	12 x 500 mL	cma	30.90	370.80
9681-00	Poly Coated	6 x 500 mL	cma	36.50	219.00
9681-05	Glass S/S	2.5 L	cma	84.15	
		6 x 2.5 L	cma	84.15	504.90
9681-03	Glass	6 x 2.5 L	cma	50.75	304.50
9681-33	Poly Coated	6 x 2.5 L	cma	59.15	354.90
9681-07	Poly Pail	76 lb	bul	Inquire	
9681-10	Glass Carboy	95 lb	bul	Inquire	
9681-08	Poly Drum	220 lb	bul	Inquire	
9681-09	Poly Drum	440 lb	bul	Inquire	
9681-15	Poly Drum	750 lb	bul	Inquire	

H_2SO_4 FW: 98.08

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (H_2SO_4) 95.0-98.0%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Specific Gravity at 60°/60°F ..... min. 1.84
Residue after Ignition ..... max. 4 ppm
Substances Reducing Permanganate (as SO_2) ..... max. 2 ppm
Trace Impurities (in ppm):
Ammonium (NH_4) ..... max. 1
Arsenic (As) ..... max. 0.004
Chloride (Cl) ..... max. 0.1
Nitrate (NO_3) ..... max. 0.5

Sulfuric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppb):

Aluminum (Al)	max. 200
Calcium (Ca)	max. 200
Chromium (Cr)	max. 100
Copper (Cu)	max. 100
Gold (Au)	max. 100
Heavy Metals (as Pb)	max. 500
Iron (Fe)	max. 200
Lead (Pb)	max. 200
Magnesium (Mg)	max. 200
Manganese (Mn)	max. 100
Mercury (Hg)	max. 5
Nickel (Ni)	max. 200
Potassium (K)	max. 300
Sodium (Na)	max. 300
Tin (Sn)	max. 200
Titanium (Ti)	max. 200
Zinc (Zn)	max. 200

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg MERCK INDEX: 14,8974
IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid
ULTREX II Ultrapure Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
6902-05	Fluoropolymer	500 mL	spr	363.70	

H_2SO_4 FW: 98.08

Certificate Provided Reports Actual Lot Analysis

Assay (H_2SO_4)(w/w)	93-98%

Trace Impurities in ppt (pg/g):

Aluminum (Al)	max. 50
Antimony (Sb)	max. 50
Arsenic (As)	max. 500
Barium (Ba)	max. 10
Beryllium (Be)	max. 10
Bismuth (Bi)	max. 10
Cadmium (Cd)	max. 10
Calcium (Ca)	max. 100
Cerium (Ce)	max. 10
Cesium (Cs)	max. 10
Chromium (Cr)	max. 10
Cobalt (Co)	max. 10
Copper (Cu)	max. 10
Dysprosium (Dy)	max. 10
Erbium (Er)	max. 10
Europium (Eu)	max. 10
Gadolinium (Gd)	max. 10
Gallium (Ga)	max. 10
Germanium (Ge)	max. 100
Hafnium (Hf)	max. 10
Holmium (Ho)	max. 10
Indium (In)	max. 10
Iron (Fe)	max. 50
Lanthanum (La)	max. 10
Lead (Pb)	max. 10
Lithium (Li)	max. 10
Lutetium (Lu)	max. 10
Magnesium (Mg)	max. 50
Manganese (Mn)	max. 10
Mercury (Hg)	max. 100
Molybdenum (Mo)	max. 10
Neodymium (Nd)	max. 10
Nickel (Ni)	max. 50

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Niobium (Nb)	max. 10
Palladium (Pd)	Actual Value Reported
Platinum (Pt)	Actual Value Reported
Potassium (K)	max. 50
Praseodymium (Pr)	max. 10
Rhodium (Rh)	max. 50
Rubidium (Rb)	max. 10
Samarium (Sm)	max. 10
Scandium (Sc)	max. 10
Selenium (Se)	max. 500
Silver (Ag)	max. 50
Sodium (Na)	max. 50
Strontium (Sr)	max. 10
Tantalum (Ta)	Actual Value Reported
Tellurium (Te)	max. 100
Terbium (Tb)	max. 10
Thallium (Tl)	max. 10
Thorium (Th)	max. 10
Thulium (Tm)	max. 10
Tin (Sn)	max. 50
Titanium (Ti)	max. 50
Tungsten (W)	max. 10
Uranium (U)	max. 10
Vanadium (V)	max. 10
Ytterbium (Yb)	max. 10
Yttrium (Y)	max. 10
Zinc (Zn)	max. 50
Zirconium (Zr)	max. 10

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg MERCK INDEX: 14,8974
IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid
BAKER INSTRA-ANALYZED Reagent
Low Selenium
For Trace Metal Analysis

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9673-00	Poly Coated	500 mL	spr	77.80	
		6 x 500 mL	spr	44.45	266.70
9673-33	Poly Coated	2.5 L	spr	130.10	
		6 x 2.5 L	spr	74.35	446.10

H_2SO_4 FW: 98.08

Meets ACS Specifications

Assay (H_2SO_4)	95.0-98.0%
Appearance	Passes Test
Color (APHA)	max. 10
Residue after Ignition	max. 3 ppm
Substances Reducing Permanganate (as SO_2)	max. 2 ppm

Trace Impurities (in ppm):

Ammonium (NH_4)	max. 1
Chloride (Cl)	max. 0.1
Nitrate (NO_3)	max. 0.2
Phosphate (PO_4)	max. 0.5

Trace Impurities (in ppb):

Aluminum (Al)	max. 30
Arsenic and Antimony (as As)	max. 4
Barium (Ba)	max. 10
Beryllium (Be)	max. 10
Bismuth (Bi)	max. 10
Boron (B)	max. 10
Cadmium (Cd)	max. 2
Calcium (Ca)	max. 50

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chromium (Cr) ..... max. 6
Cobalt (Co) ..... max. 0.5
Copper (Cu) ..... max. 1
Gallium (Ga) ..... max. 10
Germanium (Ge) ..... max. 10
Gold (Au) ..... max. 10
Heavy Metals (as Pb) ..... max. 500
Iron (Fe) ..... max. 50
Lead (Pb) ..... max. 0.5
Lithium (Li) ..... max. 10
Magnesium (Mg) ..... max. 7
Manganese (Mn) ..... max. 1
Mercury (Hg) ..... max. 0.5
Molybdenum (Mo) ..... max. 10
Nickel (Ni) ..... max. 2
Niobium (Nb) ..... max. 10
Potassium (K) ..... max. 500
Selenium (Se) ..... max. 50
Silicon (Si) ..... max. 100
Silver (Ag) ..... max. 1
Sodium (Na) ..... max. 500
Strontium (Sr) ..... max. 5
Tantalum (Ta) ..... max. 10
Thallium (Tl) ..... max. 20
Tin (Sn) ..... max. 5
Titanium (Ti) ..... max. 10
Vanadium (V) ..... max. 10
Zinc (Zn) ..... max. 5
Zirconium (Zr) ..... max. 10

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg MERCK INDEX: 14,8974
IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, NF
Multi-Compendial

cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9671-02	Glass S/S	500 mL	rac	61.70	
		12 x 500 mL	rac	61.70	740.40
9671-03	Glass	6 x 2.5 L	rac	64.75	388.50
9671-07	Poly Pail	76 lb	bul	Inquire	
9671-08	Poly Drum	700 lb	bul	Inquire	

H_2SO_4 FW: 98.08

Meets NF Requirements

Identification ..... Passes Test
Residue on Ignition ..... max. 0.005%
Chloride (Cl) ..... max. 0.005%
Arsenic (As) ..... max. 1 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Reducing Substances ..... Passes Test
Assay (as H_2SO_4) (by acidimetry) 95.0-98.0%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Chloride (Cl) ..... max. 50 ppm
Nitrate (NO_3) ..... Passes Test
Arsenic (As) ..... max. 1 ppm
Iron (Fe) ..... max. 25 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Assay (H_2SO_4) 95.0-100.5%

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg MERCK INDEX: 14,8974
IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfuric Acid, 95.0-98.0%
NF, FCC

cGMP

9675-02	Glass S/S	500 mL	rac	56.00	
		12 x 500 mL	rac	56.00	672.00
9675-03	Glass	6 x 2.5 L	rac	59.25	355.50
9675-07	Poly Pail	76 lb	bul	Inquire	
9675-08	Poly Drum	700 lb	bul	Inquire	

H_2SO_4 FW: 98.08

Meets NF & FCC Requirements

Assay (H_2SO_4) (by acidimetry) 95.0-98.0%
Arsenic (As) ..... max. 1 ppm
Chloride (Cl) ..... max. 0.005%
Iron (Fe) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 5 ppm
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Nitrate (NO_3) ..... max 10 mg/kg
Reducing Substances ..... Passes Test
Residue on Ignition ..... max. 0.005%
Selenium (Se) ..... max. 0.002%

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg MERCK INDEX: 14,8974
IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 90.5-92.7%, For Babcock Milk Test
FCC

FOOD GRADE cGMP

9691-33	Poly Coated	6 x 2.5 L	cac	67.10	402.60

H_2SO_4 FW: 98.08

Meets FCC Requirements

Color (APHA) ..... max. 10
Assay (H_2SO_4) (by acidimetry) 90.5-92.7%
Description ..... Passes Test
Identification ..... Passes Test
Specific Gravity at 20°/20°C 1.820-1.830
Reducing Substances (as SO_2) ..... Passes Test
Chloride (Cl) ..... max. 0.005%
Nitrate (NO_3) ..... max 10 mg/kg
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.02%
Selenium (Se) ..... max. 0.002%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 3
Lead (Pb) ..... max. 5

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg MERCK INDEX: 14,8974
IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid

Sulfuric Acid, 50% (w/w) Solution
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9696-03	Glass	2.5 L	cac	93.65	
		6 x 2.5 L	cac	53.50	321.00
9696-09	Poly Drum	600 lb	bul	Inquire	

H_2SO_4 FW: 98.08

Assay (as H_2SO_4) (by acidimetry) 49-51%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Phosphate (PO_4) .....max. 1
Heavy Metals (as Pb) .....max. 0.5
Iron (Fe) .....max. 0.5

CAS: 7664-93-9 DENSITY: 1 L = 1.40 kg MERCK INDEX: 14,8974
IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 5N Volumetric Solution
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5691-02	Poly	1 L	sol	46.50	
		6 x 1 L	sol	38.75	232.50
5691-03	Cubitainer	4 L	sol	86.90	
		4 x 4 L	sol	72.40	289.60

H_2SO_4 FW: 98.08

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 4.95-5.05
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Phosphate (PO_4) .....max. 1
Heavy Metals (as Pb) .....max. 0.3
Iron (Fe) .....max. 0.5
Appearance .....Passes Test

CAS: 7664-93-9 DENSITY: 1 L = 1.40 kg MERCK INDEX: 14,8974
IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 3.5N Volumetric Solution
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5951-07	Cubitainer	20 L	sol	203.70	

H_2SO_4 FW: 98.08

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 3.48-3.52
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Phosphate (PO_4) .....max. 1
Heavy Metals (as Pb) .....max. 0.3
Iron (Fe) .....max. 0.5

CAS: 7664-93-9 DENSITY: 1 L = 1.40 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 1N Volumetric Solution
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5642-02	Poly	1 L	sol	35.20	
		6 x 1 L	sol	29.35	176.10
5642-03	Cubitainer	4 L	sol	67.70	
		4 x 4 L	sol	56.40	225.60
5642-07	Cubitainer	20 L	sol	176.40	
5642-09	Poly Drum	200 L	bul	Inquire	

H_2SO_4 FW: 98.08

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Appearance .....Passes Test
Normality 0.995-1.005
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Phosphate (PO_4) .....max. 1
Heavy Metals (as Pb) .....max. 0.3
Iron (Fe) .....max. 0.5

CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 0.5N Volumetric Solution
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5640-02	Poly	1 L	sol	36.35	
		6 x 1 L	sol	30.30	181.80

H_2SO_4 FW: 98.08

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.4995-0.5005
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Phosphate (PO_4) .....max. 1
Heavy Metals (as Pb) .....max. 0.3
Iron (Fe) .....max. 0.5

CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 0.2N Volumetric Solution
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5690-02	Poly	1 L	sol	36.50	
		6 x 1 L	sol	30.40	182.40
5690-03	Cubitainer	4 L	sol	70.00	
		4 x 4 L	sol	58.35	233.40

H_2SO_4 FW: 98.08

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No .....Reported on Label
Normality 0.1995-0.2005
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Phosphate (PO_4) .....max. 1
Heavy Metals (as Pb) .....max. 0.3
Iron (Fe) .....max. 0.5

CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfuric Acid, 0.125N Volumetric Solution
BAKER ANALYZED Reagent

5692-03	Cubitainer	4 L	sol	71.40	
		4 x 4 L	sol	59.50	238.00

H_2SO_4 FW: 98.08

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.1245-0.1255
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 1
Phosphate (PO_4) ..... max. 1
Heavy Metals (as Pb) ..... max. 0.3
Iron (Fe) ..... max. 0.5

CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 0.1N Volumetric Solution
BAKER ANALYZED Reagent

5641-02	Poly	1 L	sol	37.10	
		6 x 1 L	sol	30.90	185.40
5641-03	Cubitainer	4 L	sol	71.20	
		4 x 4 L	sol	59.35	237.40
5641-07	Cubitainer	20 L	sol	211.00	

H_2SO_4 FW: 98.08

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.0995-0.1005
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 1
Phosphate (PO_4) ..... max. 1
Heavy Metals (as Pb) ..... max. 0.3
Iron (Fe) ..... max. 0.5

CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 0.02N Volumetric Solution
BAKER ANALYZED Reagent

5693-02	Poly	1 L	sol	34.90	
		6 x 1 L	sol	29.10	174.60
5693-03	Cubitainer	4 L	sol	67.70	
		4 x 4 L	sol	56.40	225.60
5693-07	Cubitainer	20 L	sol	182.40	

H_2SO_4 FW: 98.08

Standardization at 25°C traceable to NIST Standard Reference Material.
SRM No ..... Reported on Label
Normality 0.0195-0.0205
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 1
Phosphate (PO_4) ..... max. 1
Heavy Metals (as Pb) ..... max. 0.3
Iron (Fe) ..... max. 0.5

CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfuric Acid, DILUT-IT Analytical Concentrate, 1N
(1 equiv. = 49.04 g H_2SO_4)

4700-01	Ampoule	1 pk	spr	40.80	
		6 x 1 pk	spr	34.00	204.00

(Makes 1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7664-93-9 DENSITY: 1 L = 1.40 kg MERCK INDEX: 14,8974
IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, DILUT-IT Analytical Concentrate, 0.1N
(1/10 equiv. = 4.904 g H_2SO_4)

4699-01	Ampoule	1 pk	spr	37.90	
		6 x 1 pk	spr	31.60	189.60

(Makes 0.1N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, DILUT-IT Analytical Concentrate, 0.02N
(1/50 equiv. = 0.9808 g H_2SO_4)

4704-01	Ampoule	1 pk	spr	42.35	
		6 x 1 pk	spr	35.30	211.80

(Makes 0.02N solution after dilution to 1000 mL)
Normality (by titrimetry) ..... Passes Test

CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfurous Acid
BAKER ANALYZED ACS Reagent
(solution of SO_2 in water)

0370-02	Glass S/S	500 mL	cac	181.90	
		12 x 500 mL	cac	103.95	1247.40
0370-05	Poly Coated	2.5 L	cac	350.70	
		6 x 2.5 L	cac	200.40	1202.40

H_2SO_3 FW: 82.08

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (SO_2) (by iodometry) 6.0-9.0%
Residue after Ignition ..... max. 0.005%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Heavy Metals (as Pb) ..... max. 2
Iron (Fe) ..... max. 5

CAS: 7782-99-2 DENSITY: 1 L = 1.03 kg MERCK INDEX: 14,8976
IMO: 8:1833

Acid Spill Cleanup Products available. See pp. 378.

Talc

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Talc, Powder
Multi-Compendial cGMP

4100-01	Poly	500 g	rss	67.00	
		4 x 500 g	rss	44.65	178.60
4100-05	Poly	2 kg	rnc	89.35	
4100-R	Leverpak	100 lb	bul	Inquire	

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Microbial Limit (cfu/g)
Total Aerobic Bacterial Count ..... max. 100
Total Molds and Yeasts ..... max. 50
Acidity and Alkalinity ..... Passes Test
Loss on Ignition ..... max. 7.0%
Water-Soluble Substances ..... max. 0.1%
Iron (Fe) ..... max. 0.25%
Lead (Pb) ..... max. 0.001%
Calcium (Ca) ..... max. 0.9%
Aluminum (Al) ..... max. 2.0%
Absence of Asbestos (Method B) ..... Passes Test
Magnesium (as MgO) 17.0-19.5%

Meets EP/BP Chemical Specifications

Free from Asbestos ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Water-Soluble Substances ..... max. 0.2%
Aluminum (Al) ..... max. 2.0%
Calcium (Ca) ..... max. 0.90%
Iron (Fe) ..... max. 0.25%
Lead (Pb) ..... max. 10.0 ppm
Magnesium (Mg) 17.0-19.5%
Loss on Ignition ..... max. 7.0%
Total Aerobic Microbial Count, cfu/g ..... max. 1000
Total Yeast and Mold Count, cfu/g ..... max. 100
Preserve in well-closed containers.

CAS: 14807-96-6 MERCK INDEX: 14,9037

Tannic Acid, Powder
BAKER ANALYZED Reagent
(gallotannic acid)

0377-04	Glass	125 g	non	76.45	
0377-01	Glass	500 g	non	145.55	

Residue after Ignition ..... max. 0.10%
Loss on Drying at 105°C ..... max. 12.0%

CAS: 1401-55-4 MERCK INDEX: 14,9052 FLASH POINT: 198°C

Tannic Acid, Powder
FCC
(gallotannic acid) FOOD GRADE cGMP

0380-04	Glass	125 g	non	118.35	

Meets FCC Requirements

Assay (dried basis) (FCC) ..... min. 96.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Loss on Drying ..... max. 7.0%
Gums or Dextrin ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Residue on Ignition ..... max. 1.0%
Resinous Substances ..... Passes Test

CAS: 1401-55-4 MERCK INDEX: 14,9052 FLASH POINT: 198°C

Tantalum, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Tantalum, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(tantalum pentachloride in 2% HF)
Plasma Standard

5748-04	Poison Pack	100 mL	spr	112.60	

Ta AW: 180.95

IMO: 8:2922

Tantalum, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Tantalum Pentachloride in 2% HF)
Plasma Standard

5782-04	Poison Pack	100 mL	spr	72.00	

Ta AW: 180.95

IMO: 8:2922

d-Tartaric Acid, Crystal
BAKER ANALYZED ACS Reagent
(L-tartaric acid)

0386-01	Poly	500 g	csa	142.80	
		4 x 500 g	csa	95.20	380.80
0386-05	Poly	2.5 kg	csa	532.00	
		4 x 2.5 kg	csa	354.65	1418.60
0386-07	Poly Pail	12 kg	bks	Inquire	

$HOCO(CHOH)_2COOH$ FW: 150.09

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay ($HOCO(CHOH)_2COOH$) (by acidimetry) ..... min. 99.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.02%
Chloride (Cl) ..... max. 0.001%
Oxalate (C_2O_4) ..... Passes Test
Phosphate (PO_4) ..... max. 0.001%
Sulfur Compounds (as S) ..... max. 0.002%
Trace Impurities (in ppm):
Heavy Metals (as Pb) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 87-69-4 MERCK INDEX: 14,9070

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tartaric Acid, Granular
NF, FCC cGMP

4104-01	Poly	500 g	rnc	141.40	

$HOCO(CHOH)_2COOH$ FW: 150.09

Meets NF & FCC Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ (calculated on dried basis) ..... +12.0 - +13.0 °
Lead (Pb) ..... max 2 mg/kg
Loss on Drying ..... max. 0.5%
Residue on Ignition ..... max. 0.1%
Oxalate (C_2O_4) ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Assay ($HOCO(CHOH)_2COOH$) (dried basis) 99.7-100.5%

CAS: 87-69-4 MERCK INDEX: 14,9070

Tartaric Acid, Granular, NF
Multi-Compendial cGMP

4105-05	Poly	2.5 kg	rnc	529.65	

$HOCO(CHOH)_2COOH$ FW: 150.09

Meets NF Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ (calculated on dried basis) ..... +12.0 - +13.0 °
Loss on Drying ..... max. 0.5%
Residue on Ignition ..... max. 0.1%
Oxalate (C_2O_4) ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Assay ($HOCO(CHOH)_2COOH$) (dried basis) 99.7-100.5%
Endotoxin Concentration (EU/g) ..... max. 10

Meets BP/Ph.Eur. Chemical Specifications

Assay ($HOCO(CHOH)_2COOH$) (dried basis) 99.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +12.0 - +12.8 °
Oxalic Acid ..... max. 350 ppm
Chloride (Cl) ..... max. 100 ppm
Sulfate (SO_4) ..... max. 150 ppm
Calcium (Ca) ..... max. 200 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 0.2%
Ash (sulfated) ..... max. 0.1%

Meets JP Chemical Specifications

Assay ($HOCO(CHOH)_2COOH$) (dried basis) 99.7-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Sulfate (SO_4) ..... max. 0.048%
Oxalate (C_2O_4) ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Calcium (Ca) ..... Passes Test
Arsenic (As) ..... max. 1 ppm
Loss on Drying ..... max. 0.5%
Residue on Ignition ..... max. 0.05%

CAS: 87-69-4 MERCK INDEX: 14,9070

Tartaric Acid, Metal Salts
See entry for individual metal tartrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

TEAB
See Tetraethylammonium Bromide

Tellurium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Tellurium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Te metal in 20% HCl)
Plasma Standard

5783-04		100 mL	spr	72.00	

Te AW: 127.60

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

TEMED
ULTRAPURE BIOREAGENT
(N,N,N′,N′ tetramethylethylenediamine)
Catalyst for polyacrylamide gels

4098-00		5 mL	upr	18.55	
4098-01	Glass	25 mL	upr	27.90	
4098-02	Glass	50 mL	upr	49.30	

$(CH_3)_2NCH_2CH_2N(CH_3)_2$ FW: 116.21

Assay ($C_6H_{16}N_2$) ..... Actual Value Reported
DNase Activity ..... None Detected
RNase Activity ..... None Detected
Protease Activity ..... None Detected
Refractive Index, η^{25}_D 1.414-1.420

CAS: 110-18-9 DENSITY: 1 L = 0.78 kg IMO: 3:2372
FLASH POINT: 10°C

Solvent Spill Cleanup Products available. See pp. 378.

Tergitol NP-10 (Nonionic)
BAKER
(1:10.5 nonylphenol-ethylene oxide condensate)

V312-07	Glass	500 mL	non	85.10	
V312-09	Glass	4 L	non	164.45	

Color (APHA) ..... max. 50
pH of 10% Solution at 25°C 5.0-8.0
Solubility in H_2O ..... Passes Test

CAS: 26027-38-3 DENSITY: 1 L = 1.06 kg MERCK INDEX: 14,7577
FLASH POINT: 197°C

Terpineol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Terpineol
Practical
(Mixed Isomers)

V281-07	Glass S/S	500 mL	bio	72.25	

$C_{10}H_{18}O$ FW: 154.25

Identification (by IR) ..... Passes Test

CAS: 98-55-5 DENSITY: 1 L = 0.930 kg MERCK INDEX: 14,9171
FLASH POINT: > 100°C

Test Strips
See pH Products p. 297-298 or p. 241

Test Solutions
See Drug Development and Manufacturing Section, p. 64-86

1,1,2,2-Tetrabromoethane
BAKER ANALYZED Reagent
(acetylene tetrabromide)

9443-01	Glass	500 mL	cso	396.45	
		12 x 500 mL	cso	264.30	3171.60

$Br_2CHCHBr_2$ FW: 345.65

Assay ($Br_2CHCHBr_2$) ..... min. 98%
Color (APHA) ..... max. 75
Density (g/mL) at 25°C 2.946-2.956
Free Halogens ..... Passes Test
Inorganic Halides(as Cl) ..... max. 0.0015%

CAS: 79-27-6 MERCK INDEX: 14,9185 IMO: 6.1:2504

1,1,2,2-Tetrabromoethane
Practical
(acetylene tetrabromide)

V323-06	Glass	500 mL	non	160.60	

$Br_2CHCHBr_2$ FW: 345.65

Assay ($Br_2CHCHBr_2$) ..... min. 96%

CAS: 79-27-6 DENSITY: 1 L = 2.967 kg MERCK INDEX: 14,9185
IMO: 6.1:2504

Tetrabutylammonium Bromide
BAKER

V356-05	Glass	100 g	non	235.70	

CAS: 1643-19-2

Tetrabutylammonium Chloride, Monohydrate
BAKER

V359-03	Glass	25 g	non	291.85	

$(CH_3CH_2CH_2CH_2)_4NCl{\cdot}H_2O$ FW: 295.93

Assay ($(CH_3CH_2CH_2CH_2)_4NCl{\cdot}H_2O$) 97.0-103.0%

CAS: 1112-67-0

Tetrabutylammonium Dihydrogen Phosphate
See Tetrabutylammonium Phosphate

Tetrabutylammonium Hydrogen Sulfate (98%)
HPLC
For Use in Ion-Pair Chromatography

V360-07	Glass	500 g	org	157.55	

$(CH_3CH_2CH_2CH_2)_4NHSO_4$ FW: 339.54

Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_{16}H_{37}NO_4S$) ..... min. 98%
Melting Range ..... 167-173 °C.

CAS: 32503-27-8 IMO: 8:3261

Tetrabutylammonium Hydroxide, 1M in Methanol
BAKER ANALYZED Reagent
For Titrant Use

V362-05	Glass S/S	100 mL	non	235.80	

$(CH_3CH_2CH_2CH_2)_4NOH$ FW: 259.48

Molarity 0.98-1.08

CAS: 2052-49-5 DENSITY: 1 L = 0.83 kg IMO: 3:2924
FLASH POINT: 11°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetrabutylammonium Hydroxide, Titrant (0.4M in H_2O)
HPLC
For Use in Ion-Pair Chromatography

V365-07	Poly	500 g	org	303.45	

$(CH_3CH_2CH_2CH_2)_4NOH$ FW: 259.48

Molarity 0.37-0.43
Appearance ..... Passes Test
Absorbance at 420 nm (neat) ..... max. 0.15
Bromide (Br) ..... max. 0.05%

CAS: 2052-49-5 IMO: 8:3267

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetrabutylammonium Hydroxide in Water
HPLC
For use in Ion-Pair Chromatography

9580-03	Poly	4 L	chp	4566.80	

$(CH_3CH_2CH_2CH_2)_4NOH$ FW: 259.48

Assay($(C_4H_9)_4NOH$), Molarity 0.98-1.02
Ultraviolet Absorbance (0.1M Solution in Water)
240 nm ..... max. 0.15
245 nm ..... max. 0.10
254 nm ..... max. 0.07
280 nm ..... max. 0.04
300 nm ..... max. 0.04
Solution Test ..... Passes Test
IMO: 8:3267

Tetrabutylammonium Iodide
BAKER

V369-05	Poly	100 g	non	161.30	

$(CH_3CH_2CH_2CH_2)_4NI$ FW: 369.38

Assay ($(CH_3CH_2CH_2CH_2)_4NI$) ..... min. 98%
CAS: 311-28-4

Tetrabutylammonium Phosphate
HPLC
For Use in Ion-Pair Chromatography

V375-03	Glass	25 g	org	575.95	

$(CH_3CH_2CH_2CH_2)_4NH_2PO_4$ FW: 339.46

Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_{16}H_{38}NO_4P$) ..... min. 97.0%
Appearance ..... Passes Test
Ultraviolet Absorbance (0.1% Solution in Water):
215-400 nm ..... max. 0.01
210 nm ..... max. 0.15
200 nm ..... max. 0.21
196 nm ..... max. 1.00
CAS: 5574-97-0

Tetrachloroauric(III) Acid
See Gold Chloride, Trihydrate

1,1,2,2-Tetrachloroethane
BAKER

V398-08	Glass	1 kg	org	199.00	

$CHCl_2CHCl_2$ FW: 167.85

Assay ($CHCl_2CHCl_2$) (by GC) ..... min. 98%
Appearance ..... Passes Test
CAS: 79-34-5 DENSITY: 1 L = 1.59 kg MERCK INDEX: 14,9189
IMO: 6.1:1702

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetrachloroethylene
BAKER ANALYZED Reagent

9465-01	Glass	500 mL	cso	76.65	
		12 x 500 mL	cso	51.10	613.20
9465-03	Glass	4 L	cso	297.85	
		4 x 4 L	cso	198.55	794.20

$Cl_2C{:}CCl_2$ FW: 165.83

Contains 3 -5 ppm of stabilizer.
Assay ($Cl_2C{:}CCl_2$) (by GC) ..... min. 99.0%
Residue after Evaporation ..... max. 0.005%
Acidity (as HCl) ..... max. 0.002%
Alkalinity (as NaOH) ..... max. 0.002%
Free Chlorine (as Cl) ..... Passes Test
Chloride (Cl) ..... max. 1 ppm
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.005%
Product Information (not specifications):
Boiling Point (typical) ..... 121.0°C.
Density (g/mL) at 25°C (typical) 1.614
CAS: 127-18-4 MERCK INDEX: 14,9190 IMO: 6.1:1897

Tetrachloroethylene
PHOTREX Reagent
For Spectrophotometry

9218-03	Glass	4 L	cso	718.20	
		4 x 4 L	cso	478.80	1915.20

$Cl_2C{:}CCl_2$ FW: 165.83

Contains 3 -5 ppm of stabilizer.
Assay ($Cl_2C{:}CCl_2$) (by GC) ..... min. 99.0%
Residue after Evaporation ..... max. 0.001%
Titrable Acid (meq/g) ..... max. 0.0005
Titrable Base (meq/g) ..... max. 0.0005
Free Chlorine (as Cl) ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.005%
Chloride (Cl) ..... max. 1 ppm
Ultraviolet Absorbance (1.00-cm cell vs. water):
400 nm ..... max. 0.03
350 nm ..... max. 0.05
310 nm ..... max. 0.15
305 nm ..... max. 0.25
300 nm ..... max. 1.00
Product Information (not specifications):
Boiling Point (typical) ..... 121.0°C.
Density (g/mL) at 25°C (typical) 1.614
Windows of Near Infrared Transmittance (10-mm path vs. air, 70-90% T), µm:
2.66-3.50 0.75-2.66

Windows of Infrared Transmittance (0.1-mm path, 60-100% T), µm:
2.0-8.7 11.4-12.0
8.9-10.4 13.4-16.0

CAS: 127-18-4 MERCK INDEX: 14,9190 IMO: 6.1:1897

Tetrachloroethylene

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetrachloroethylene
ULTRA RESI-ANALYZED (perchloroethylene)
For Trace Hydrocarbon Analysis by IR Spectrophotometry

9360-03	Glass	4 L	chp	331.35	
		4 x 4 L	chp	220.90	883.60

$Cl_2C:CCl_2$ FW: 165.83

Assay ($Cl_2C:CCl_2$) (by GC) .....min. 99.8%
Infrared Absorbance Test:
Range 3200-2700 cm^{-1}
Measured at 2930 cm^{-1}
(Hexadecane:isooctane:chlorobenzene standard mixture)
Hydrocarbon (exclusive of stabilizer) .....max. 5 ppm
Residue after Evaporation .....max. 10 ppm
Chloride (Cl) .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.5
Water (H_2O)(by Karl Fischer titrn) .....max. 0.005%
Free Halogen (ASTM-D 4755) .....Passes Test

CAS: 127-18-4 DENSITY: 1 L = 1.62 kg MERCK INDEX: 14,9190
IMO: 6.1:1897

Tetraethoxysilane
See Tetraethyl Orthosilicate

Tetraethylammonium Bromide
BAKER

V468-07	Poly	500 g	non	198.15	

$(C_2H_5)_4NBr$ FW: 210.16

Assay ($(C_2H_5)_4NBr$) .....min. 98%
Identification (by IR) .....Passes Test

CAS: 71-91-0 MERCK INDEX: 14,9199

Tetraethylammonium Chloride
BAKER

V470-05	Glass	100 g	org	118.00	

$(C_2H_5)_4NCl$ FW: 165.71

Assay ($C_8H_{20}ClN$)(by titrn) .....min. 98%
Solution (10%) in Water .....Passes Test
Appearance .....Passes Test

CAS: 56-34-8 MERCK INDEX: 14,9200

Tetraethyl Orthosilicate
BAKER

V492-09	Glass	4 L	non	357.00	

$(C_2H_5O)_4Si$ FW: 208.33

Assay (by GC) .....min. 99%

CAS: 78-10-4 DENSITY: 1 L = 0.933 kg IMO: 3:1292
FLASH POINT: 40.6°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetraethylrhodamine
See Rhodamine B (or O)

Tetrahydrofuran
BAKER ANALYZED ACS Reagent
Contains Butylated Hydroxytoluene as a Preservative

9450-01	Glass	500 mL	cso	103.80	
		12 x 500 mL	cso	69.20	830.40
9450-22	Al SAFETAINER	1 L	cso	207.60	
		6 x 1 L	cso	138.40	830.40
9450-03	Glass	4 L	cso	396.15	
		4 x 4 L	cso	264.10	1056.40
9450-05	Al SAFETAINER	4 L	cso	431.10	
		4 x 4 L	cso	287.40	1149.60
9450-33	Poly Coated	4 L	cso	444.00	
		4 x 4 L	cso	296.00	1184.00
9450-R	Steel Drum	400 lb	bul	Inquire	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

C_4H_8O FW: 72.11

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (C_4H_8O) (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 20
Peroxide (as H_2O_2) .....max. 0.015%
Residue after Evaporation .....max. 0.03%
Water (by KF, coulometric) .....max. 0.05%
Specific Gravity at 25°/25°C 0.884-0.886
Stabilizer (BHT) .....100-400 ppm
Distilling Range: .....65-66 °C.
Acidity .....Passes Test

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,9211
IMO: 3:2056 FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetrahydrofuran
BAKER
Contains Butylated Hydroxytoluene as a Preservative

V530-01	Steel Pail	20 L	sbo	698.40	

C_4H_8O FW: 72.11

Assay (C_4H_8O) (by GC, corrected for water) .....min. 99%

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,9211
IMO: 3:2056 FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetrahydrofuran
HPLC
Contains No Preservative
For Use in Liquid Chromatography and Spectrophotometry

9441-02	Glass	1 L	chp	133.05	
		6 x 1 L	chp	88.70	532.20
9441-03	Glass	4 L	chp	317.85	
		4 x 4 L	chp	211.90	847.60
9441-33	Poly Coated	4 L	chp	339.00	
		4 x 4 L	chp	226.00	904.00

C_4H_8O FW: 72.11

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-320 nm .....max. 0.01
280 nm .....max. 0.030
254 nm .....max. 0.15
230 nm .....max. 0.45
UV Cut-off, nm .....max. 212
Assay (by GC, corrected for water) .....min. 99.8%
Peroxide (as H_2O_2) .....max. 0.005%
Residue after Evaporation .....max. 2 ppm
Water (by KF, coulometric) .....max. 0.02%

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,9211
IMO: 3:2056 FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetrahydrofuran (Stabilized)
HPLC
Contains Butylated Hydroxytoluene as a Preservative
For Use in Gel Permeation Chromatography

9440-03	Glass	4 L	chp	294.10	
		4 x 4 L	chp	196.05	784.20

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

C_4H_8O FW: 72.11

Assay (by GC, corrected for water, exclusive of preservative) .min. 99.5%
Color (APHA) .....max. 10
Peroxide (as H_2O_2) .....max. 0.005%
Stabilizer (BHT) .....75-400 ppm
Water (by KF, coulometric) .....max. 0.010%

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,9211
IMO: 3:2056 FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

For more information on the J.T.Baker line of BakerDRY anhydrous solvents, see page 60.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetrahydrofuran, Low Water
HPLC
Contains No Preservative
For Use in Liquid Chromatography, Organic and Biosynthesis

9439-12	Septum-Seal Cap	1 L	chp	125.40	
		6 x 1 L	chp	83.60	501.60
9439-03	Glass	4 L	chp	357.75	
		4 x 4 L	chp	238.50	954.00
9439-33	Poly Coated	4 L	chp	382.45	
		4 x 4 L	chp	254.95	1019.80

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

C_4H_8O FW: 72.11

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-320 nm .....max. 0.005
280 nm .....max. 0.030
254 nm .....max. 0.15
230 nm .....max. 0.40
UV Cut-off, nm .....max. 212
Assay (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Peroxide (as H_2O_2) .....max. 10 ppm
Residue after Evaporation .....max. 2 ppm
Water (by KF, coulometric) .....max. 50 ppm

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,9211
IMO: 3:2056 FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetrahydrofuran, Ultra Low Water
BakerDRY
Contains No Preservative
For Use in Organic Synthesis, including Organometallic Synthesis

9446-10	Septum-Seal Cap	100 mL	lws	74.65	
		6 x 100 mL	lws	59.70	358.20
9446-12	Septum-Seal Cap	1 L	lws	122.25	
		6 x 1 L	lws	97.80	586.80

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

C_4H_8O FW: 72.11

Meets ACS Specifications
Assay (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Peroxide (as H_2O_2) .....max. 10 ppm
Residue after Evaporation .....max. 1 ppm
Water (by KF, coulometric) .....max. 10 ppm
Packaged under Argon

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,9211
IMO: 3:2056 FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetrahydrofuran

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetrahydrofuran, Ultra Low Water

BakerDRY
Contains BHT as a Preservative
For Use in Organic Synthesis, including Organometallic Synthesis

9447-10	Septum-Seal Cap	100 mL	lws	70.55	
		6 x 100 mL	lws	56.45	338.70
9447-12	Septum-Seal Cap	1 L	lws	119.05	
		6 x 1 L	lws	95.25	571.50

C_4H_8O FW: 72.11

Meets ACS Specifications

Assay (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Peroxide (as H_2O_2) .....max. 10 ppm
Residue after Evaporation .....max. 0.03%
Water (by KF, coulometric) .....max. 10 ppm
Stabilizer (BHT) .....100-300 ppm

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg MERCK INDEX: 14,9211
IMO: 3:2056 FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetrahydro-1,4-oxazine

See Morpholine

Tetramethylammonium Chloride

BAKER

V636-04	Glass	125 g	cor	93.60	
		4 x 125 g	cor	62.40	249.60

$(CH_3)_4NCl$ FW: 109.60

Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_4H_{12}ClN$) .....min. 98%
Infrared Spectrum .....Conforms

CAS: 75-57-0 MERCK INDEX: 14,9200 IMO: 6.1:2811

Tetramethylammonium Hydroxide, 5-Hydrate

BAKER

V642-03	Glass	25 g	non	170.75	
V642-07	Poly	1 kg	non	733.25	

$(CH_3)_4NOH{\cdot}5H_2O$ FW: 181.23

Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3)_4NOH{\cdot}5H_2O$) .....min. 98%

CAS: 10424-65-4 MERCK INDEX: 14,9224 IMO: 8:3423

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetramethylammonium Hydroxide (25% in H_2O)

BAKER ANALYZED Reagent

V649-05	Poly	100 g	org	139.80	

$(CH_3)_4NOH$ FW: 91.15

Meets Reagent Specifications for testing USP/NF monographs

Assay ($C_4H_{13}NO$) (by acid-base titration) 23-26%
Halogens (as Cl)(meq/g) .....max. 0.01
Appearance .....Passes Test

CAS: 75-59-2 DENSITY: 1 L = 1.0 kg MERCK INDEX: 14,9224
IMO: 8:1835 FLASH POINT: > 94°C

Tetramethylammonium Hydroxide (10% in H_2O)

BAKER ANALYZED Reagent

V643-07	Glass S/S	500 mL	non	370.35	

$(CH_3)_4NOH$ FW: 91.15

Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3)_4NOH$) .....min. 9.8%
Residue after Ignition .....max. 0.02%
Ammonia and Other Amines .....Passes Test

CAS: 75-59-2 DENSITY: 1 L = 1.0 kg MERCK INDEX: 14,9224
IMO: 8:1835 FLASH POINT: > 94°C

Tetramethylammonium Hydroxide (23% in Methanol)

BAKER ANALYZED Reagent

V645-07	Glass	500 mL	non	498.10	

$(CH_3)_4NOH$ FW: 91.15

Meets Reagent Specifications for testing USP/NF monographs

Assay ($(CH_3)_4NOH$) (by acidimetry) 23-25%
Clarity .....Passes Test
Color (APHA) .....max. 75
Chloride (Cl) .....max. 2.0%
Heavy Metals (as Pb) .....max. 0.01%

CAS: 75-59-2 DENSITY: 1 L = 0.92 kg IMO: 3:2924
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetramethylene Glycol

See 1,4-Butanediol

N,N,N′,N′ Tetramethylethylenediamine

See TEMED

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1,1,3,3-Tetramethylguanidine
Practical

V682-07	Glass	500 mL	non	278.05	

$(CH_3)_2NC(:NH)N(CH_3)_2$ FW: 115.18

Assay ($C_5H_{13}N_3$) (by GC) ..... min. 97%

CAS: 80-70-6 DENSITY: 1 L = 0.92 kg IMO: 3:2924

FLASH POINT: 53°C

N,N,N′,N′-Tetramethyl-p-phenylenediamine Dihydrochloride
BAKER

V687-01	Glass	5 g	non	250.90	

CAS: 100-22-1 MERCK INDEX: 14,9228

Tetrasulfatoceric Acid
See Ceric Sulfate

Tetrazolium Blue (Chloride)
BAKER

V737-00	Glass	1 g	bio	153.70	

$C_{40}H_{32}Cl_2N_8O_2$ FW: 727.67

Sensitivity to Reduction Systems ..... Passes Test

CAS: 1871-22-3 MERCK INDEX: 14,9244

Thallium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Thallium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Tl metal in 5% HNO_3)
Plasma Standard

5761-04		100 mL	spr	112.60	

Tl AW: 204.38

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Thallium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Tl metal in 5% HNO_3)
Plasma Standard

5784-04		100 mL	spr	69.65	

Tl AW: 204.38

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

THF
See Tetrahydrofuran

Thiamine Hydrochloride
cGMP
USP, FCC
(vitamin B_1 hydrochloride)

4110-05	Glass	100 g	rnc	131.80	
4110-06	Poly Pail	2.5 kg	rnc	1594.75	

$C_{12}H_{17}ClN_4OS{\cdot}HCl$ FW: 337.27

Meets USP & FCC Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
pH of 1% Solution at 25°C 2.7-3.4
Water (H_2O) ..... max. 5.0%
Residue on Ignition ..... max. 0.2%
Absorbance of Solution ..... max. 0.025
Nitrate (NO_3) ..... Passes Test
Assay ($C_{12}H_{17}ClN_4OS{\cdot}HCl$) (anhydrous basis) 98.0-102.0%
Color of Solution ..... Passes Test
Chromatographic Purity ..... max. 1.0%

CAS: 67-03-8 MERCK INDEX: 14,9295

Thin Layer Chromatography Products
See Analytical Chromatography Section, p. 22-45

Thioacetamide, Crystal
BAKER ANALYZED Reagent

8984-04	Glass	125 g	non	210.50	
8984-01	Glass	500 g	csa	731.20	
		4 x 500 g	csa	487.45	1949.80

CH_3CSNH_2 FW: 75.13

Assay (CH_3CSNH_2) ..... min. 99.0%
Melting Point ..... 111.0-114.0 °C.
Residue after Ignition ..... max. 0.05%

CAS: 62-55-5 MERCK INDEX: 14,9319

Thiobarbituric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2-Thiobarbituric Acid
BAKER ANALYZED Reagent

V774-05	Glass	100 g	non	180.70	

$C_4H_4N_2O_2S$ FW: 144.15

Assay ($C_4H_4N_2O_2S$) .....min. 98%
Residue after Ignition .....max. 0.1%
Identification (by IR) .....Passes Test

CAS: 504-17-6

Thiocarbamide
See Thiourea

Thiocyanic Acid, metal salts
See entry for individual metal thiocyanate

Thioethylene Glycol
See 2-Mercaptoethanol

Thioglycolic Acid
See Mercaptoacetic Acid

Thionyl Chloride
Purified

8660-01	Glass	500 mL	non	274.40	

$SOCl_2$ FW: 118.97

Appearance .....Passes Test
Assay ($SOCl_2$) .....min. 99.6%

CAS: 7719-09-7 DENSITY: 1 L = 1.64 kg MERCK INDEX: 14,9348
IMO: 8:1836

Thiourea
BAKER ANALYZED ACS Reagent

4123-05	Poly	2.5 kg	csa	542.55	
		4 x 2.5 kg	csa	361.70	1446.80
4123-07	Flowmor	12 kg	bks	Inquire	

NH_2CSNH_2 FW: 76.12

Meets ACS Specifications

Assay (NH_2CSNH_2) .....min. 99.0%
Melting Point .....174-177 °C.
Residue after Ignition .....max. 0.1%
Solubility in H_2O .....Passes Test
Loss on Drying at 105°C .....max. 0.5%
Iron (Fe) .....max. 0.001%
Sensitivity for Bismuth .....Passes Test

CAS: 62-56-6 MERCK INDEX: 14,9367 IMO: 6.1:2811

Thorium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Thorium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent (thorium nitrate in 5% HNO_3) Plasma Standard

5750-04		100 mL	spr	112.60	

Th AW: 232.04

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Thorium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent (thorium nitrate in 5% HNO_3) Plasma Standard

5785-04		100 mL	spr	72.00	

Th AW: 232.04

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Thorium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent (thorium nitrate in 5% HNO_3)

6470-04	Poly	150 mL	spr	44.05	
		4 x 150 mL	spr	36.70	146.80

Th AW: 232.04

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

L-Threonine, USP
cGMP
Multi-Compendial

2089-06	Poly	1 kg	bio	1420.50
2089-07	Poly Pail	12 kg	bks	Inquire
2089-09	Poly Drum	50 kg	bul	Inquire

$C_4H_9NO_3$ FW: 119.12

Meets USP Requirements

Assay ($C_4H_8NO_3$) (dried basis) 98.5-101.5%
Identification .....Passes Test
Specific Rotation $[\alpha]_D^{25}$ .....-29.1 to -26.7 °
pH 5.0-6.5
Loss on Drying at 105°C .....max. 0.2%
Residue on Ignition .....max. 0.4%
Chloride (Cl) .....max. 0.05%
Sulfate (SO_4) .....max. 0.03%
Iron (Fe) .....max. 0.003%
Chromatographic Purity:
  Individual Impurities .....max. 0.5%
  Total Impurities .....max. 2.0%
Heavy Metals (as Pb) .....max. 0.0015%

Meets FCC Requirements

Assay ($C_4H_8NO_3$) (dried basis) 98.5-101.5%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying ..... max. 0.2%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... -29.0 to -26.5 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_4H_8NO_3$) (dried basis) 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
pH 5.0-6.5
Specific Rotation $[\alpha]_D^{20}$ ..... -29.0 to -27.6 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%

Meets JP Chemical Specifications

Assay ($C_4H_8NO_3$) (dried basis) 98.5-101.0%
Identification ..... Passes Test
Optical Rotation ..... -29.0 to -26.0 °
pH 5.2-6.2
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.021%
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 0.20%
Residue on Ignition ..... max. 0.10%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

Preserve in well-closed containers.
Store protected from light.

CAS: 72-19-5 MERCK INDEX: 14,9380

Thymol, Crystal

NF cGMP

4128-04	Glass	125 g	rnc	144.40	
4128-01	Glass	500 g	rnc	294.15	

$(H_3)_2CHC_6H_3$-1-CH_3-3-OH FW: 150.22

Meets Reagent Specifications for testing USP/NF monographs
Meets NF Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Melting Range ..... 48-51 °C.
Nonvolatile Residue ..... max. 0.05%
Assay ($C_{10}H_{14}O$) 99.0-101.0%

Preserve in tight, light-resistant containers.

CAS: 89-83-8 MERCK INDEX: 14,9399

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Thymol Blue

BAKER ANALYZED ACS Reagent (thymolsulfonphthalein)

V856-01	Glass	5 g	bio	114.95	
V856-02	Glass	10 g	bio	123.90	

$C_{27}H_{30}O_5S$ FW: 466.60

Meets ACS Specifications

Clarity of Solution ..... Passes Test

Visual Transition Intervals:

pH ..... (Pink) 1.2
pH ..... (Yellow) 2.8
pH ..... (Yellow) 8.0
pH ..... (Blue) 9.2

CAS: 76-61-9 MERCK INDEX: 14,9400

Thymol Blue, Sodium Salt

BAKER ANALYZED ACS Reagent (thymolsulfonphthalein, sodium salt)

V859-02	Glass	10 g	bio	207.25	

$C_{27}H_{29}NaO_5S$ FW: 488.58

Meets ACS Specifications

Clarity of Solution ..... Passes Test

Visual Transition Intervals:

pH ..... (Pink) 1.2
pH ..... (Yellow) 2.8
pH ..... (Yellow) 8.0
pH ..... (Blue) 9.2

CAS: 62625-21-2 MERCK INDEX: 14,9400

Thymol Blue, T.S.

BAKER ANALYZED Reagent

5929-01	Glass	500 mL	sol	37.20	

Visual Transition Interval:

pH ..... (Red) 1.2
pH ..... (Yellow) 2.8
pH ..... (Yellow) 8.0
pH ..... (Blue) 9.6

Product Information (not specifications):
Appearance (Clear, violet solution)

DENSITY: 1 L = 0.83 kg IMO: 3:1170 FLASH POINT: 13°C

Thymolphthalein

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Thymolphthalein
BAKER ANALYZED ACS Reagent
(2′,2″-dimethyl-5,5″-di-iso-propylphenolphthalein)

V857-02	Glass	10 g	bio	74.15	

$C_{28}H_{30}O_4$ FW: 430.55

Meets ACS Specifications

Clarity of Solution ..... Passes Test
Visual Transition Interval:
pH ..... (Colorless) 8.8
pH ..... (Blue) 10.5

CAS: 125-20-2 MERCK INDEX: 14,9401

Thymolphthalein, T.S.
BAKER ANALYZED Reagent

5932-01	Glass	500 mL	sol	43.35	
5932-02	Glass	1 L	sol	86.35	

Visual Transition Interval:
pH ..... (Colorless) 9.3
pH ..... (Blue) 10.5
Product Information (not specifications):
Appearance (clear, colorless solution)

DENSITY: 1 L = 0.83 kg IMO: 3:1170 FLASH POINT: 13°C

Thymolsulfonphthalein
See Thymol Blue

Thymolsulfonphthalein, Sodium Salt
See Thymol Blue, Sodium Salt

Tin, Granular
BAKER ANALYZED ACS Reagent
20 Mesh

4150-01	Poly	500 g	non	365.20	

Sn AW: 118.71

Meets ACS Specifications

Assay (Sn) (by EDTA titrn) ..... min. 99.5%
Antimony (Sb)(by AAS) ..... max. 0.02%
Copper (Cu)(by AAS) ..... max. 0.005%
Iron (Fe)(by AAS) ..... max. 0.01%
Lead (Pb)(by AAS) ..... max. 0.005%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1
Mesh:
On U.S. No. 18 Sieve ..... max. 5%
Thru U.S. No. 35 Sieve ..... max. 30%

CAS: 7440-31-5 MERCK INDEX: 14,9446

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tin, Shot
BAKER ANALYZED ACS Reagent

4144-01	Poly	500 g	non	312.90	

Sn AW: 118.71

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (Sn) (by EDTA titrn) ..... min. 99.9%
Antimony (Sb)(by AAS) ..... max. 0.02%
Copper (Cu)(by AAS) ..... max. 0.002%
Iron (Fe)(by AAS) ..... max. 0.01%
Lead (Pb)(by AAS) ..... max. 0.005%
Zinc (Zn)(by AAS) ..... max. 0.005%
Trace Impurities (in ppm):
Arsenic (As) ..... max. 1

CAS: 7440-31-5 MERCK INDEX: 14,9446

Tin, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Tin, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Sn metal in 20% HCl)
Plasma Standard

5751-04		100 mL	spr	112.60	

Sn AW: 118.71

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Tin, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Sn metal in 20% HCl)
Plasma Standard

5786-04		100 mL	spr	72.00	

Sn AW: 118.71

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Tin, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent
(Sn metal in 20% HCl)

6471-04	Glass	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Sn AW: 118.71

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tin(II) and Tin(IV) Compounds

See Stannous and Stannic listings

Tiron, Powder

BAKER ANALYZED Reagent
(4,5-dihydroxy-m-benzenedisulfonic acid, disodium salt, monohydrate)

V874-03	Glass	25 g	non	120.45	

$(HO)_2C_6H_2(SO_3Na)_2 \cdot H_2O$ FW: 332.22

Sensitivity as Indicator ..... Passes Test

CAS: 149-45-1 MERCK INDEX: 14,9465

Titanium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Titanium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ti metal in 5% HNO_3 and a trace of HF)
Plasma Standard

5752-04		100 mL	spr	112.60	

Ti AW: 47.88

IMO: 8:2922

Titanium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Ti metal in 5% HNO_3 and a trace of HF)
Plasma Standard

5787-04		100 mL	spr	72.00	

Ti AW: 47.88

IMO: 8:2922

Titanium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(ammonium hexafluorotitanate in H_2O)

6472-04	Poly	150 mL	spr	42.40	
		4 x 150 mL	spr	35.35	141.40

Ti AW: 47.88

DENSITY: 1 L = 1.0 kg

Titanium(IV) Chloride

See Titanium Tetrachloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Titanium Dioxide

BAKER ANALYZED Reagent
(titanium(IV) oxide)

4162-01	Poly	500 g	csa	64.45	
		4 x 500 g	csa	42.95	171.80
4162-09	Lined Fiber Dr	150 lb	bul	Inquire	

TiO_2 FW: 79.90

Arsenic (As) ..... max. 0.0001%
Iron (Fe) ..... max. 0.02%
Lead (Pb) ..... max. 0.03%
Zinc (Zn) ..... max. 0.01%

CAS: 13463-67-7 MERCK INDEX: 14,9472

Titanium Dioxide, Powder

ULTREX Ultrapure Reagent
(titanium (IV) oxide)

4962-05	Glass	100 g	spr	317.50	

TiO_2 FW: 79.90

Analysis of Actual Lot (not specifications)
Certificate Provided Reports Actual Lot Analysis
Assay (TiO_2) (based on loss on ignition) 99.9%
Loss on Ignition at 1150°C 0.08%
Identification ..... Passes Test
Non-Metallic Impurities (in ppm)(µg/g):
Chloride (Cl) ..... < 10
Silicon (Si) 1
Metallic Impurities (in ppm)(µg/g):
Aluminum (Al) ..... < 0.2
Calcium (Ca) 2
Chromium (Cr) 9
Copper (Cu) 8
Iron (Fe) 1
Lead (Pb) ..... < 0.1
Magnesium (Mg) ..... < 0.1
Manganese (Mn) ..... < 0.1
Molybdenum (Mo) ..... < 0.1
Nickel (Ni) ..... < 0.2
Niobium (Nb) ..... < 0.2
Silver (Ag) 13
Strontium (Sr) ..... < 0.2
Vanadium (V) 4
Zirconium (Zr) ..... < 0.2

CAS: 13463-67-7 MERCK INDEX: 14,9472

Titanium(IV) Oxide

See Titanium Dioxide

Titanium Tetrachloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Titanium Tetrachloride
Purified
(titanium(IV) chloride)

4167-01	Glass	500 mL	non	607.60	

$TiCl_4$ FW: 189.71

Assay ($TiCl_4$) .....min. 99%
Iron (Fe) .....max. 10 ppm

CAS: 07550-45-0 DENSITY: 1 L = 1.73 kg MERCK INDEX: 14,9478
IMO: 8:1838

TLC Products and Sorbents
See Analytical Chromatography Section, p. 22-45

Toluene
BAKER ANALYZED ACS Reagent

9460-01	Glass	500 mL	cso	40.00	
		12 x 500 mL	cso	26.65	319.80
9460-22	Al SAFETAINER	1 L	cso	90.70	
		6 x 1 L	cso	60.45	362.70
9460-03	Glass	4 L	cso	157.65	
		4 x 4 L	cso	105.10	420.40
9460-05	Al SAFETAINER	4 L	cso	187.95	
		4 x 4 L	cso	125.30	501.20
9460-33	Poly Coated	4 L	cso	187.00	
		4 x 4 L	cso	124.65	498.60
9460-07	Steel Pail	20 L	sbk	297.30	
9460-R	Steel Drum	390 lb	bul	Inquire	

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$C_6H_5CH_3$ FW: 92.14

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_6H_5CH_3$) (by GC) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (by KF, coulometric) .....max. 0.03%
Product Information (not specifications):
Boiling Point (typical) .....110.6°C.

CAS: 108-88-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,9529
IMO: 3:1294 FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Toluene
HPLC
For Use in Liquid Chromatography

9351-02	Glass	1 L	chp	63.85	
		6 x 1 L	chp	42.55	255.30
9351-03	Glass	4 L	chp	138.40	
		4 x 4 L	chp	92.25	369.00
9351-33	Poly Coated	4 L	chp	159.45	
		4 x 4 L	chp	106.30	425.20

$C_6H_5CH_3$ FW: 92.14

Assay (by GC, corrected for water) .....min. 99.7%
Ultraviolet Absorbance (1.00-cm cell vs. water):
350 nm .....max. 0.01
300 nm .....max. 0.10
288 nm .....max. 0.40
UV Cut-off, nm .....max. 285
Residue after Evaporation .....max. 3 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 0.02%

CAS: 108-88-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,9529
IMO: 3:1294 FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Toluene
ULTRA RESI-ANALYZED
For Organic Residue Analysis

9336-02	Glass	1 L	chp	69.75	
		6 x 1 L	chp	46.50	279.00
9336-03	Glass	4 L	chp	143.25	
		4 x 4 L	chp	95.50	382.00

$C_6H_5CH_3$ FW: 92.14

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 10
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Assay ($C_6H_5CH_3$) (by GC, corrected for water) .....min. 99.7%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 0.03%

CAS: 108-88-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,9529
IMO: 3:1294 FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Toluene
PHOTREX Reagent
For Spectrophotometry and Liquid Scintillation Counting

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9456-01	Glass	500 mL	cso	60.75	
		12 x 500 mL	cso	40.50	486.00
9456-03	Glass	4 L	cso	197.40	
		4 x 4 L	cso	131.60	526.40

$C_6H_5CH_3$ FW: 92.14

Meets ACS Specifications

Assay ($C_6H_5CH_3$) (by GC) .....min. 99.5%
Color (APHA) .....max. 5
Residue after Evaporation .....max. 0.0005%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (by KF, coulometric) .....max. 0.02%
Optical Absorbance (1-cm path vs water):
350-400nm .....max. 0.01
335 nm .....max. 0.02
310 nm .....max. 0.05
300 nm .....max. 0.10
293 nm .....max. 0.20
288 nm .....max. 0.50
286 nm .....max. 1.00
Counting Efficiency for ^3H
in Prepared "Cocktail" .....Actual Value Reported
Product Information (not specifications):
Boiling Point (typical) .....110.6°C.
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:

2.5-3.2	5.6-6.1	9.9-11.1
3.6-5.1	7.4-8.4	11.3-12.7
5.2-5.4	8.6-9.0	12.9-13.2

CAS: 108-88-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,9529
IMO: 3:1294 FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Toluene
BAKER
For Histological Use

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9462-03	Glass	4 L	cso	123.90	
		4 x 4 L	cso	82.60	330.40
9462-07	Steel Pail	20 L	sbk	233.30	

$C_6H_5CH_3$ FW: 92.14

Assay ($C_6H_5CH_3$) (by GC) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (by KF, coulometric) .....max. 0.03%

CAS: 108-88-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,9529
IMO: 3:1294 FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Toluene, Low Water
BakerDRY

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9364-10	Septum-Seal Cap	100 mL	lws	40.75	
		6 x 100 mL	lws	32.60	195.60
9364-12	Septum-Seal Cap	1 L	lws	58.00	
		6 x 1 L	lws	46.40	278.40

CT *Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.*

$C_6H_5CH_3$ FW: 92.14

Meets ACS Specifications

Assay ($C_6H_5CH_3$) (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (by KF, coulometric) .....max. 10 ppm
Product Information (not specifications):
Boiling Point (typical) .....111°C.

CAS: 108-88-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,9529
IMO: 3:1294 FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

p-Toluenesulfonic Acid, Monohydrate
Practical

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
W034-07	Poly	500 g	non	78.65	

$CH_3C_6H_4SO_3H{\cdot}H_2O$ FW: 190.22

Identification (by IR) .....Passes Test

CAS: 6192-52-5 MERCK INDEX: 14,9533 IMO: 8:2585
FLASH POINT: 184°C

p-Toluenesulfonic Acid, Monohydrate, Crystal
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
W031-05	Poly	100 g	non	72.40	

$CH_3C_6H_4SO_3H{\cdot}H_2O$ FW: 190.22

Assay ($CH_3C_6H_4SO_3H{\cdot}H_2O$) .....min. 97.2%
Residue after Ignition .....max. 0.02%

CAS: 06192-52-5 MERCK INDEX: 14,9533 IMO: 8:2585
FLASH POINT: 184°C

Toluidine Blue O
BAKER
(3-amino-7-(dimethylamino)-2-methylphenazathionium chloride)
(C.I. 52040)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
W143-03	Glass	25 g	bio	150.05	

CAS: 92-31-9 MERCK INDEX: 14,9520

Trehalose

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

α,α-Trehalose, Dihydrate

cGMP

Biotech Reagent
High Purity (Low Endotoxin)

4226-04	Poly	100 g	upr	74.60	
4226-05	Poly	1 kg	bks	Inquire	
4226-06	Poly Pail	5 kg	bks	Inquire	
4226-07	Poly Pail	12 kg	bks	Inquire	

$C_{12}H_{22}O_{11}2H_2O$ FW: 378.33

Non-Animal Derived

Appearance (white to off white powder) ..... Passes Test
Arsenic (As) ..... max. 0.5 ppm
Assay (by HPLC) ..... min. 97.5%
Chloride (Cl) ..... max. 0.007%
Conductivity, uS cm-1 ..... max. 15
Endotoxin Concentration (EU/g) ..... max. 2.4
Heavy Metals (as Pb) ..... max. 10 ppm
Identification (by FTIR) ..... Passes Test
Iron (Fe) ..... max. 5 ppm
Microbial Limits (cfu/g) ..... max. 100
pH of 10% solution 5.0-7.0
Reducing Sugars ..... Passes Test
Residual Ethanol ..... max. 5000 ppm
Residual Methanol ..... max. 3000 ppm
Glucose Area ..... max. 0.5%
Residue on Ignition ..... max. 0.1%
Solution (20% in water is clear, colorless) ..... Passes Test
Specific Optical Rotation $[\alpha]_D^{20}$ ..... +177.5 - +180.5 °
Sulfate (SO_4) ..... max. 0.01%
Water (by Karl Fischer titrn) 9.0-10.0%

CAS: 6138-23-4

Triacetin

BAKER

W307-07	Glass S/S	500 g	org	73.60	

$CH_3COOCH(CH_2OCOCH_3)_2$ FW: 218.21

Assay ($C_9H_{14}O_6$) (by GC) ..... min. 99%
Appearance ..... Passes Test

CAS: 102-76-1 DENSITY: 1 L = 1.1562 kg MERCK INDEX: 14,9589
FLASH POINT: 138°C

Tributyl Phosphate

BAKER

W432-07	Glass	500 mL	non	54.55	

$(CH_3CH_2CH_2CH_2O)_3PO$ FW: 266.32

Meets Reagent Specifications for testing USP/NF monographs

Identification (by IR) ..... Passes Test
Refractive Index, η^{25}_D 1.4205-1.4225

CAS: 126-73-8 DENSITY: 1 L = 0.98 kg MERCK INDEX: 14,9619
FLASH POINT: 120°C

Trichloroacetic Acid, Crystal

BAKER ANALYZED ACS Reagent

0414-04	Glass	125 g	non	75.45	
0414-01	Glass	500 g	csa	218.35	
		4 x 500 g	csa	145.55	582.20
0414-05	Glass	2.5 kg	csa	834.40	
		4 x 2.5 kg	csa	556.25	2225.00

Cl_3CCOOH FW: 163.39

Exceeds ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs

Assay (Cl_3CCOOH) (by acidimetry) ..... min. 99.0%
Clarity of Solution ..... Passes Test
Insoluble Matter ..... max. 0.01%
Residue after Ignition ..... max. 0.03%
Chloride (Cl) ..... max. 0.002%
Nitrate (NO_3) ..... max. 0.002%
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Substances Darkened by H_2SO_4 ..... Passes Test

CAS: 76-03-9 MERCK INDEX: 14,9627 IMO: 8:1839

1,2,4-Trichlorobenzene

HPLC
Suitable for Use in Gel Permeation Chromatography

9444-05	Poly Coated	3.8 L	chp	253.60	

$C_6H_3Cl_3$ FW: 181.45

Assay ($C_6H_3Cl_3$) (by GC) ..... min. 99%
Ultraviolet Absorbance (1.00-cm cell vs. water):
350 nm ..... max. 0.15
375 nm ..... max. 0.05
400 nm ..... max. 0.01
UV Cut-off, nm ..... max. 310
Residue after Evaporation ..... max. 5 ppm
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.01%
Physical Data (not specifications):
Refractive Index, η^{20}_D 1.572
Density, g/mL at 20°C 1.454
Boiling Point (°C) 213.5
Vapor Pressure at 100°C, mm Hg 20

CAS: 120-82-1 MERCK INDEX: 14,9630 IMO: 6.1:2321
FLASH POINT: 105°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trichloroethylene, Stabilized
BAKER ANALYZED ACS Reagent

9458-04	Glass	150 mL	non	33.95	
9458-01	Glass	500 mL	cso	49.20	
		12 x 500 mL	cso	32.80	393.60
9458-03	Glass	4 L	cso	263.85	
		4 x 4 L	cso	175.90	703.60
9458-05	Al SAFETAINER	4 L	cso	297.75	
		4 x 4 L	cso	198.50	794.00

$ClCH{:}CCl_2$ FW: 131.39

Meets ACS Specifications

Assay ($ClCH{:}CCl_2$) (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 5 ppm
Free Halogens .....Passes Test
Water (H_2O)(by coulometry) .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.0001
Titrable Base (meq/g) .....max. 0.0003
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 0.1
Copper (Cu) .....max. 0.1
Nickel (Ni) .....max. 0.1
Product Information (not specifications):
Boiling Point (typical) .....87.1°C.
Density (g/mL) at 25°C (typical) 1.458

CAS: 79-01-6 MERCK INDEX: 14,9639 IMO: 6.1:1710

Trichloromethane
See Chloroform

Triethanolamine
BAKER ANALYZED Reagent

9468-01	Glass	500 mL	cso	120.75	
		12 x 500 mL	cso	80.50	966.00
9468-03	Glass	4 L	cso	506.35	
		4 x 4 L	cso	337.55	1350.20
9468-07	Steel Pail	20 L	sbk	747.95	

$(HOCH_2CH_2)_3N$ FW: 149.19

Assay (by GC) .....min. 99.0%
Residue after Ignition .....max. 0.005%
Water (by KF, volumetric) .....max. 0.2%
Iron (Fe) .....max. 0.001%

CAS: 102-71-6 DENSITY: 1 L = 1.13 kg MERCK INDEX: 14,9665
FLASH POINT: 179°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Triethylamine
BAKER

W639-09	Glass	4 L	non	242.55	

$(C_2H_5)_3N$ FW: 101.19

Assay ($(C_2H_5)_3N$) (by GC) .....min. 98%

CAS: 121-44-8 DENSITY: 1 L = 0.73 kg MERCK INDEX: 14,9666
IMO: 3:1296 FLASH POINT: -9°C

Solvent Spill Cleanup Products available. See pp. 378.

Triethylamine
BAKER ANALYZED Reagent

W635-07	Glass	500 mL	cor	89.80	
		12 x 500 mL	cor	59.85	718.20
W635-09	Glass	4 L	cor	288.60	
		4 x 4 L	cor	192.40	769.60

$(C_2H_5)_3N$ FW: 101.19

Assay ($(C_2H_5)_3N$) (by GC, corrected for water) .....min. 99%
Color (APHA) .....max. 15
Water (H_2O) .....max. 0.2%
Identification (by IR) .....Passes Test

CAS: 121-44-8 DENSITY: 1 L = 0.73 kg MERCK INDEX: 14,9666
IMO: 3:1296 FLASH POINT: -9°C

Solvent Spill Cleanup Products available. See pp. 378.

Triethylamine
BAKER BIO-ANALYZED Reagent

9111-07	Glass	500 mL	cor	65.85	
		6 x 500 mL	cor	43.90	263.40

$(C_2H_5)_3N$ FW: 101.19

Assay (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Identification (by IR) .....Passes Test
Water (H_2O) .....max. 0.10%

CAS: 121-44-8 DENSITY: 1 L = 0.73 kg MERCK INDEX: 14,9666
IMO: 3:1296 FLASH POINT: -9°C

Solvent Spill Cleanup Products available. See pp. 378.

Trifluoroacetic Acid
BAKER ANALYZED Reagent

W729-05	Glass in Can	100 mL	non	134.65	
W729-07	Glass	500 mL	non	263.20	

F_3CCOOH FW: 114.03

Meets Reagent Specifications for testing USP/NF monographs

Assay (F_3CCOOH) .....min. 99.0%
Residue after Evaporation .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.001%

Trifluoroacetic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppm):
Iron (Fe) ..... max. 5

CAS: 76-05-1 DENSITY: 1 L = 1.53 kg MERCK INDEX: 14,9681
IMO: 8:2699

Acid Spill Cleanup Products available. See pp. 378.

Trifluoroacetic Acid
HPLC
(Gradient Tested for HPLC Peptide and Protein Analysis)

9470-00	Ampoule	10x1 mL	chp	105.25	
9470-01	Metal Can	70 mL	chp	252.20	
9470-07	Glass	500 mL	chp	875.80	
		12 x 500 mL	chp	583.85	7006.20
9470-02	Glass	1 L	chp	1462.80	

F_3CCOOH FW: 114.03

Assay (F_3CCOOH) ..... min. 99.5%
Ultraviolet Absorbance (1.00-cm cell vs. water):
230 nm ..... max. 0.15
254 nm ..... max. 0.01
UV Cut-off, nm ..... max. 210
Residue after Evaporation ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Trace Impurities (in ppm):
Iron (Fe) ..... max. 5
Gradient Elution Test (a.u.):
215 nm ..... max. 0.05

CAS: 76-05-1 DENSITY: 1 L = 1.53 kg MERCK INDEX: 14,9681
IMO: 8:2699

Acid Spill Cleanup Products available. See pp. 378.

Trifluoroacetic Anhydride
BAKER

W732-05	Glass S/S	100 mL	non	207.70	

$(CF_3CO)_2O$ FW: 210.03

Meets Reagent Specifications for testing USP/NF monographs
Assay ..... min. 99%

CAS: 407-25-0 DENSITY: 1 L = 1.50 kg IMO: 8:3094

1,3,5-Trihydroxybenzene
See Phloroglucinol

1,2,3-Triketohydrindene
See Ninhydrin, Monohydrate

1,3,5-Trimethylbenzene
See Mesitylene

Trimethylcarbinol
See tert-Butyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2,2,4-Trimethylpentane
BAKER ANALYZED ACS Reagent
(iso-octane)

9478-01	Glass	500 mL	cso	104.40	
		12 x 500 mL	cso	69.60	835.20
9478-03	Glass	4 L	cso	411.85	
		4 x 4 L	cso	274.55	1098.20

$(CH_3)_3CCH_2CH(CH_3)_2$ FW: 114.23

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($(CH_3)_3CCH_2CH(CH_3)_2$) (by GC, corrected for water) .... min. 99.0%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.001%
Water-Soluble Titrable Acid, meq/g ..... max. 0.0003
Sulfur Compounds (as S) ..... max. 0.005%
Product Information (not specifications):
Boiling Point (typical) ..... 99.3°C.
Density (g/mL) at 25°C (typical) 0.690

CAS: 540-84-1 MERCK INDEX: 14,5193 IMO: 3:1262
FLASH POINT: -12°C

Solvent Spill Cleanup Products available. See pp. 378.

2,2,4-Trimethylpentane
HPLC
For Use in Liquid Chromatography

9480-03	Glass	4 L	chp	170.95	
		4 x 4 L	chp	113.95	455.80

$(CH_3)_3CCH_2CH(CH_3)_2$ FW: 114.23

Ultraviolet Absorbance (1.00-cm cell vs. water):
400-280 nm ..... max. 0.01
254 nm ..... max. 0.015
225 nm ..... max. 0.10
UV Cut-off, nm ..... max. 205
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission ..... max. 0.3
at Emission Maximum for Impurities ..... max. 1.0
Assay (by GC, corrected for water) ..... min. 99.8%
Residue after Evaporation ..... max. 2 ppm
Titrable Acid (µeq/g) ..... max. 0.3
Water (by KF, coulometric) ..... max. 100 ppm

CAS: 540-84-1 DENSITY: 1 L = 0.69 kg MERCK INDEX: 14,5193
IMO: 3:1262 FLASH POINT: -12°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2,2,4-Trimethylpentane
ULTRA RESI-ANALYZED
(iso-octane)
For Organic Residue Analysis

9335-02	Glass	1 L	chp	79.35	
		6 x 1 L	chp	52.90	317.40
9335-03	Glass	4 L	chp	199.35	
		4 x 4 L	chp	132.90	531.60

$(CH_3)_3CCH_2CH(CH_3)_2$ FW: 114.23

Trace Organic Residues:
FID-Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 5
ECD-Sensitive Impurities (as Heptachlor Epoxide)
Single Impurity Peak (pg/mL) .....max. 10
Neat Solvent Front Characterization:
ECD-Sensitive Impurities (as Ethylene Dibromide)
Single Impurity Peak (ng/mL) .....max. 5
Assay ($(CH_3)_3CCH_2CH(CH_3)_2$) (by GC, corrected for water) ....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (by KF, coulometric) .....max. 0.03%

CAS: 540-84-1 DENSITY: 1 L = 0.69 kg MERCK INDEX: 14,5193
IMO: 3:1262 FLASH POINT: -12°C

Solvent Spill Cleanup Products available. See pp. 378.

2,2,4-Trimethylpentane
PHOTREX Reagent
(iso-octane)
For Spectrophotometry

9479-03	Glass	4 L	cso	472.50	
		4 x 4 L	cso	315.00	1260.00

$(CH_3)_3CCH_2CH(CH_3)_2$ FW: 114.23

Meets ACS Specifications
Assay ($(CH_3)_3CCH_2CH(CH_3)_2$) (by GC, corrected for water) ....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0005%
Sulfur Compounds (as S) .....max. 0.005%
Water (by KF, coulometric) .....max. 0.05%
Water-Soluble Titrable Acid, meq/g .....max. 0.0003
Ultraviolet Absorbance (1.00-cm cell vs. water):
400-250 nm .....max. 0.01
240 nm .....max. 0.04
230 nm .....max. 0.10
220 nm .....max. 0.20
210 nm .....max. 1.00
Product Information (not specifications):
Boiling Point (typical) .....99.3°C.
Density (g/mL) at 25°C (typical) 0.690
Windows of Infrared Transmittance (0.1-mm path, 50-100% T), µm:
2.5-3.3
3.6-6.6
7.5-7.7
8.7-10.2
10.3-15.0

CAS: 540-84-1 MERCK INDEX: 14,5193 IMO: 3:1262
FLASH POINT: -12°C

Solvent Spill Cleanup Products available. See pp. 378.

Trioctylphosphine Oxide
BAKER

X005-05	Glass	100 g	non	489.65	

$[CH_3(CH_2)_7]_3PO$ FW: 386.65

Melting Point .....50-55 °C.
CAS: 78-50-2 FLASH POINT: 252°C

2,3,5-Triphenyl-2H-tetrazolium Chloride
BAKER

X135-01	Glass	5 g	non	67.45	
X135-03	Glass	25 g	non	179.75	

$C_{19}H_{15}ClN_4$ FW: 334.81

Meets Reagent Specifications for testing USP/NF monographs
Identification (by IR) .....Passes Test
Loss on Drying at 105°C .....max. 5.0%
Residue after Ignition .....Passes Test
Sensitivity .....Passes Test
Solubility .....Passes Test

CAS: 298-96-4 MERCK INDEX: 14,9744

Tripotassium Phosphate
See Potassium Phosphate, Tribasic, n-Hydrate

Tris
See Tromethamine USP

TRIS (Base)
BAKER ANALYZED ACS Reagent
(tris(hydroxymethyl)aminomethane)

X171-05	Poly	100 g	bio	49.30	
X171-07	Poly	500 g	bio	114.10	
X171-03	Poly Pail	2.5 kg	bio	216.95	
X171-08	Poly Pail	12 kg	bks	Inquire	
X171-09	Poly Drum	50 kg	bul	Inquire	

$NH_2C(CH_2OH)_3$ FW: 121.14

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_4H_{11}NO_3$) (dried basis) 99.8-100.1%
Absorbance of a 40% Solution: .....Passes Test
Water (H_2O)(by Karl Fischer titrn) .....max. 2%
Insoluble Matter .....max. 0.005%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5
pH of 0.1M Solution at 25°C .....Actual Value Reported

CAS: 77-86-1 MERCK INDEX: 14,9772

TRIS

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

TRIS (Base)

ULTRAPURE BIOREAGENT
For Molecular Biology Applications

4109-04	Poly	250 g	upr	42.45	
4109-01	Poly	500 g	upr	58.95	
4109-02	Poly	1 kg	upr	104.60	
4109-06	Poly Pail	5 kg	upr	423.20	
4109-07	Poly Pail	12 kg	bks	Inquire	
4109-F7	Flowmor	12 kg	bks	Inquire	
4109-08	Poly Drum	25 kg	bul	Inquire	
4109-09	Poly Drum	50 kg	bul	Inquire	

$NH_2C(CH_2OH)_3$ FW: 121.14

Assay ($C_4H_{11}NO_3$) (dried basis) .....min. 99.9%
Assay ($C_4H_{11}NO_3$) 99.0-101.0%
Appearance (White crystals) .....Passes Test
Absorbance of a 1M Solution:
260 nm .....max. 0.06
280 nm .....max. 0.06
400 nm .....max. 0.01
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected
pH of 0.1M Solution at 25°C 10.0-11.0
Insoluble Matter .....max. 0.005%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.3%
Trace Impurities (in ppm):
Arsenic (As) .....max. 1
Calcium (Ca) .....max. 1
Copper (Cu) .....max. 1
Iron (Fe) .....max. 1
Lead (Pb) .....max. 1
Magnesium (Mg) .....max. 1
Manganese (Mn) .....max. 1
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Description .....Passes Test
Melting Range .....168-172 °C.
pH (1 in 20) 10.0-11.5
Loss on Drying .....max. 1.0%
Residue after Ignition .....max. 0.1%
Heavy Metals (as Pb) .....max. 0.001%
Material also meets the chemical specifications of Tromethamine, USP

CAS: 77-86-1 MERCK INDEX: 14,9772

For more information on products for drug discovery, see pages 58-63.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

TRIS (Base)

BAKER ANALYZED Biochemical Reagent
(tris(hydroxymethyl)aminomethane)
For Liquid Chromatography Applications

4099-02	Glass	1 kg	upr	83.80	
4099-06	Poly Pail	5 kg	upr	333.05	
4099-07	Poly Pail	12 kg	bks	Inquire	
4099-09	Poly Drum	50 kg	upr	2957.80	

$NH_2C(CH_2OH)_3$ FW: 121.14

Appearance .....Passes Test
Assay ($C_4H_{11}NO_3$) (dried basis) .....min. 99.0%
Absorbance of a 40% Solution:
280 nm .....max. 0.2
400 nm .....max. 0.02
Insoluble Matter .....max. 0.005%
Water (H_2O)(by Karl Fischer titrn) .....max. 2%
Trace Impurities (in ppm):
Heavy Metals (as Pb) .....max. 5
Iron (Fe) .....max. 5

CAS: 77-86-1 MERCK INDEX: 14,9772

TRIS Hydrochloride

ULTRAPURE BIOREAGENT
For Molecular Biology and Liquid Chromatography Applications

4103-04	Poly	250 g	upr	67.20	
4103-01	Poly	500 g	upr	103.05	
4103-02	Poly	1 kg	upr	153.05	
4103-06	Poly Pail	5 kg	upr	692.75	
4103-07	Poly Pail	12 kg	bks	Inquire	
4103-F7	Flowmor	12 kg	bks	Inquire	
4103-08	Poly Drum	50 kg	bul	Inquire	
4103-F9		50 kg	bul	Inquire	

$NH_2C(CH_2OH)_3$·HCl FW: 157.60

Assay ($NH_2C(CH_2OH)_3$·HCl) (dried basis) .....min. 99.0%
Appearance .....Passes Test
Absorbance of a 1M Solution:
260 nm .....max. 0.06
280 nm .....max. 0.06
400 nm .....max. 0.01
Water (H_2O)(by Karl Fischer titrn) .....max. 0.5%
RNase Activity .....None Detected
DNase Activity .....None Detected
Protease Activity .....None Detected
Trace Impurities (in ppm):
Calcium (Ca) .....max. 1
Copper (Cu) .....max. 1
Iron (Fe) .....max. 1
Lead (Pb) .....max. 1
Magnesium (Mg) .....max. 1

CAS: 1185-53-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

TRIS Hydrochloride

cGMP

Biotech Reagent
Made from Tromethamine USP

4106-01	Poly	500 g	upr	137.10	
4106-05	Poly	2.5 kg	upr	478.05	
4106-07	Poly Pail	12 kg	bks	Inquire	
4106-F7	Flowmor	12 kg	bks	Inquire	
4106-09		50 kg	bul	Inquire	
4106-F9	Flowmor	50 kg	bul	Inquire	

$NH_2C(CH_2OH)_3 \cdot HCl$ FW: 157.60

Assay ($NH_2C(CH_2OH)_3 \cdot HCl$) ..... min. 99.0%
Appearance ..... Passes Test
Absorbance of a 1M Solution:
260 nm ..... max. 0.06
280 nm ..... max. 0.06
400 nm ..... max. 0.01
Identification (by IR) ..... Passes Test
Loss on Drying at 105°C ..... max. 0.5%
Endotoxin Concentration (EU/g) ..... max. 2.5
Melting Point ..... 147-153 °C.
pH of 0.5M Solution at 25°C 3.5-5.0
Trace Impurities (in ppm):
Arsenic (As) ..... max. 10
Calcium (Ca) ..... max. 10
Copper (Cu) ..... max. 10
Iron (Fe) ..... max. 10
Lead (Pb) ..... max. 10
Magnesium (Mg) ..... max. 10

CAS: 1185-53-1

Tris(hydroxymethyl)aminomethane

See under TRIS (Base)

Trisodium Phosphate, Dodecahydrate

See Sodium Phosphate, Tribasic, 12-Hydrate

Trolamine

See Triethanolamine

Tromethamine, USP

cGMP

Multi-Compendial
Tris (Base)

4102-01	Poly	500 g	upr	75.30	
4102-05	Poly	2.5 kg	upr	253.05	
4102-07	Poly Pail	12 kg	bks	Inquire	
4102-F7	Flowmor	12 kg	bks	Inquire	
4102-09	Poly Drum	50 kg	bul	Inquire	
4102-F9	Flowmor	50 kg	bul	Inquire	

$NH_2C(CH_2OH)_3$ FW: 121.14

Meets USP Requirements
Assay ($C_4H_{11}NO_3$) 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Melting Range ..... 168-172 °C.
pH (1 in 20) 10.0-11.5
Loss on Drying ..... max. 1.0%
Residue on Ignition ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 0.001%
Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_4H_{11}NO_3$) (dried basis) 99.0-100.5%
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
pH 10.0-11.5
Related Substances ..... max. 1.0%
Chloride (Cl) ..... max. 100 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%
ULTRAPURE BIOREAGENT Specifications
Assay ($C_4H_{11}NO_3$) (dried basis) ..... min. 99.9%
Absorbance of a 1M Solution:
260 nm ..... max. 0.06
280 nm ..... max. 0.06
400 nm ..... max. 0.01
Endotoxin Concentration (EU/g) ..... max. 2.5
Iron (Fe) ..... max. 1 ppm
Lead (Pb) ..... max. 1 ppm

CAS: 77-86-1 MERCK INDEX: 14,9772

Trypan Blue

BAKER
(C.I. 23850)

X242-03	Glass	25 g	org	71.35	

CAS: 72-57-1 MERCK INDEX: 14,9792

L-Tryptophan, USP

cGMP

Multi-Compendial

2092-05	Poly	100 g	bio	153.05	
2092-06	Poly	1 kg	bio	1228.40	
2092-07	Poly Pail	12 kg	bks	Inquire	

$C_{11}H_{12}N_2O_2$ FW: 204.23

Meets USP Requirements
Assay ($C_{11}H_{12}N_2O_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... -32.8 to -29.4 °
pH 5.5-7.0
Loss on Drying at 105°C ..... max. 0.3%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0015%
Meets FCC Requirements
Assay ($C_{11}H_{12}N_2O_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying at 105°C ..... max. 0.3%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{25}$ ..... -32.7 to -29.7 °

TTC

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Meets JP Chemical Specifications

Assay ($C_{11}H_{12}N_2O_2$) (dried basis) 98.5-101.0%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... -33.0 to -30.0 °
pH 5.4-6.4
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.021%
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 0.30%
Residue on Ignition ..... max. 0.10%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

Meets Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Optical Rotation $[\alpha]_D^{20}$ ..... -33.0 to -30.0 °
Ninhydrin-Positive Substances ..... max. 0.5%
1,1'Ethylidenebistryptophan and Other Related Subtances
1,1'Ethylidenebistryptophan ..... max. 10 ppm
Sum of the Areas less than Tryptophan ..... max. 100 ppm
Sum of the Areas greater than Tryptophan ..... max. 300 ppm
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 20 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 0.5%
Sulfated Ash ..... max. 0.1%
Assay ($C_{11}H_{12}N_2O_2$) (dried basis) 98.5-101.0%
Preserve in well-closed containers.
Store protected from light.

CAS: 73-22-3 MERCK INDEX: 14,9797

TTC

See 2,3,5-Triphenyl-2H-tetrazolium Chloride

Tungstophosphoric Acid

See Phosphotungstic Acid, n-Hydrate

Turmeric

See Curcumin, Crystalline

L-Tyrosine, USP

Multi-Compendial cGMP

2093-06	Poly	1 kg	bio	417.85	

$C_9H_{11}NO_3$ FW: 181.19

Meets USP Requirements

Assay ($C_9H_{11}NO_3$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... -11.2 to -9.8 °
Loss on Drying ..... max. 0.3%
Residue on Ignition ..... max. 0.4%
Chloride (Cl) ..... max. 0.04%
Sulfate (SO_4) ..... max. 0.04%
Iron (Fe) ..... max. 0.003%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%
Heavy Metals (as Pb) ..... max. 0.0015%

Meets FCC Requirements

Assay ($C_9H_{11}NO_3$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying ..... max. 0.3%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... -12.3 to -11.3 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_9H_{11}NO_3$) (dried basis) 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... -12.3 to -11.0 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Iron (Fe) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

CAS: 60-18-4 MERCK INDEX: 14,9839

L-(-)-Tyrosine

BAKER ANALYZED Biochemical Reagent

X260-05	Poly	100 g	bio	100.45	

$HOC_6H_4CH_2CH(NH_2)COOH$ FW: 181.19

Assay ($C_9H_{11}NO_3$) (dried basis, by non-aqueous acid-base titration) ..... min. 98.5%
Specific Rotation $[\alpha]_D^{20}$ (dried basis, c = 5 in 1N HCl) ..... -12.3 to --9.5 °
Homogeneity by TLC ..... No Extraneous Spots
Ash (sulfated) ..... max. 0.1%
Loss on Drying at 105°C ..... max. 0.3%
Arsenic (As) ..... max. 0.0003%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.003%

CAS: 60-18-4 MERCK INDEX: 14,9839

L-Tyrosine Disodium Salt, Dihydrate

BAKER ANALYZED Biochemical Reagent

2094-05	Poly	100 g	bio	80.50	
2094-07	Poly Pail	12 kg	bks	Inquire	

$C_9H_9NO_3Na_2.2H_2O$ FW: 261.19

Assay ($C_9H_9NO_3Na_2.2H_2O$) ..... min. 98%
Appearance (white or tan crystals with an occasional brown crystal(s)) ..... Passes Test
Identification ..... Passes Test
Endotoxin Concentration, IU/mg ..... Actual Value Reported
Heavy Metals (as Pb) ..... max. 15 ppm
Solution (10%) in Water ..... Passes Test
pH of 1% Aqueous Solution at 25°C 10.5-11.5
Specific Rotation $[\alpha]_D^{20}$ ..... -14.4 to -12.6 °

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water (by KF) (H_2O) 12.0-16.0%
CAS: 69847-45-6

ULTRAPURE BIOREAGENTs
See Drug Discovery Section, p. 58-63

ULTREX Bottle-Top Dispenser

6910-01	Corrugated Box	1 ea	spr	1533.55	

ULTREX Dispenser Base

6912-01	Corrugated Box	1 ea	spr	66.00	

Uranin
See Fluorescein, Sodium Derivative, Sodium Salt

Uranium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Uranium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent (uranium octoxide in 5% HNO_3) Plasma Standard

5753-04		100 mL	spr	112.60	

U AW: 238.03

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Uranium, 1000 µg/mL (0.10% w/v)
BAKER INSTRA-ANALYZED Reagent (Uranium Octoxide in 5% HNO_3) Plasma Standard

5788-04		100 mL	spr	72.00	

U AW: 238.03

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Urea
BAKER ANALYZED ACS Reagent

4204-01	Poly	500 g	csa	49.80	
		4 x 500 g	csa	33.20	132.80
4204-05	Poly	2.5 kg	csa	189.45	
		4 x 2.5 kg	csa	126.30	505.20
4204-07	Poly Pail	12 kg	bks	Inquire	
4204-09	Lined Fiber Dr	100 lb	bul	Inquire	

NH_2CONH_2 FW: 60.06

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay 99.0-100.5%
Melting Point .....132-135 °C.
Moisture .....max. 0.4%
Total Nitrogen (as N) .....min. 46.0%
Insoluble Matter .....max. 0.01%
Residue after Ignition .....max. 0.01%
Sulfate (SO_4) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.001%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 5
Cyanate (CNO) .....None Detected
CAS: 57-13-6 MERCK INDEX: 14,9867

Urea
USP cGMP

4206-01	Poly	500 g	rss	63.00	
		4 x 500 g	rss	42.00	168.00
4206-05	Poly	2.5 kg	rss	224.35	
		4 x 2.5 kg	rss	149.55	598.20
4206-07	Poly Pail	12 kg	bks	Inquire	
4206-20		85 lb	bul	Inquire	
4206-60		50 kg	bul	Inquire	
4206-09	Leverpak	110 lb	bul	Inquire	

NH_2CONH_2 FW: 60.06

Meets USP Requirements
Identification A .....Passes Test
Identification B .....Passes Test
Melting Range .....132-135 °C.
Residue on Ignition .....max. 0.1%
Alcohol Insoluble Matter .....max. 0.04%
Chloride (Cl) .....max. 0.007%
Sulfate (SO_4) .....max. 0.010%
Heavy Metals (as Pb) .....max. 0.002%
Assay (NH_2CONH_2) 99.0-100.5%
Preserve in tight containers. Store at 25°C, excursions permitted between15°C and 30°C
CAS: 57-13-6 MERCK INDEX: 14,9867

Urea

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Urea
ULTRAPURE BIOREAGENT
For Protein Solubilization and Denaturation

4111-01	Poly	500 g	upr	41.75	
4111-05	Poly	2.5 kg	upr	119.80	
4111-07	Poly Pail	12 kg	bks	Inquire	
4111-09	Poly Drum	50 kg	bul	Inquire	
4111-F9	Flowmor	50 kg	bul	Inquire	

NH_2CONH_2 FW: 60.06

Assay (NH_2CONH_2) ..... min. 99.5%
Appearance ..... Passes Test
RNase Activity ..... None Detected
DNase Activity ..... None Detected
Protease Activity ..... None Detected
Absorbance of a 5M Solution:
260 nm ..... max. 0.05
280 nm ..... max. 0.03
Biuret ..... max. 0.01
Cyanate (CNO) ..... None Detected
Insoluble Matter ..... max. 0.005%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.5%
Conductivity of 8.5M Solution, µmho/cm ..... max. 30
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 1
Copper (Cu) ..... max. 1
Iron (Fe) ..... max. 1
Lead (Pb) ..... max. 1

CAS: 57-13-6 MERCK INDEX: 14,9867

Urea
USP

cGMP

4208-07	Poly Pail	12 kg	bks	Inquire	
4208-09	Poly Drum	50 kg	bul	Inquire	

NH_2CONH_2 FW: 60.06

Meets USP Requirements
Alcohol Insoluble Matter ..... max. 0.04%
Assay (NH_2CONH_2) 99.0-100.5%
Chloride (Cl) ..... max. 0.007%
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Melting Range ..... 132-135 °C.
Residue on Ignition ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.010%
ULTRAPURE BIOREAGENT Specifications
Absorbance of a 5M Solution:
260 nm ..... max. 0.05
280 nm ..... max. 0.03
Assay (NH_2CONH_2) ..... min. 99.5%
Biuret ..... max. 0.01
Conductivity of 8.5M Solution, µmho/cm ..... max. 45
Cyanate (CNO) ..... None Detected
Endotoxin Concentration (EU/g) ..... max. 2.5
Insoluble Matter ..... max. 0.01%
Water (H_2O) ..... max. 0.5%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 1
Copper (Cu) ..... max. 1
Iron (Fe) ..... max. 1
Lead (Pb) ..... max. 5

CAS: 57-13-6 MERCK INDEX: 14,9867

Urea, USP
Multi-Compendial

cGMP

4203-01	Poly	500 g	rss	74.35	
		4 x 500 g	rss	49.55	198.20
4203-07	Poly Pail	12 kg	bks	Inquire	
4203-08	Poly Drum	85 lb	bul	Inquire	
4203-60	Flowmor	50 kg	bul	Inquire	

NH_2CONH_2 FW: 60.06

Meets USP Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Melting Range ..... 132-135 °C.
Residue on Ignition ..... max. 0.1%
Alcohol Insoluble Matter ..... max. 0.04%
Chloride (Cl) ..... max. 0.007%
Sulfate (SO_4) ..... max. 0.010%
Heavy Metals (as Pb) ..... max. 0.002%
Assay (NH_2CONH_2) 99.0-100.5%
Endotoxin Concentration (EU/g) ..... max. 2.5
Meets BP/Ph.Eur. Chemical Specifications
Assay (NH_2CONH_2) (dried basis) 98.5-101.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Alkalinity ..... Passes Test
Biuret ..... max. 0.1%
Ammonium (NH_4) ..... max. 500 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 1.0%
Ash (sulfated) ..... max. 0.1%
Meets JP Chemical Specifications
Assay (NH_2CONH_2) 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Melting Point ..... 132.5-134.5 °C.
Chloride (Cl) ..... max. 0.007%
Sulfate (SO_4) ..... max. 0.010%
Heavy Metals (as Pb) ..... max. 20 ppm
Alcohol Insoluble Matter ..... max. 0.040%
Residue on Ignition ..... max. 0.10%
Preserve in tight containers. Store at 25°C, excursions permitted between15°C and 30°C

CAS: 57-13-6 MERCK INDEX: 14,9867

Vacuum Manifold
See Analytical Chromatography Section, p. 22-45

iso-Valerone
See 2,6-Dimethyl-4-heptanone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

L-Valine, USP

cGMP

Multi-Compendial

2095-05	Poly	100 g	bio	100.50	
2095-06	Poly	1 kg	bio	608.90	
2095-07	Poly Pail	12 kg	bks	Inquire	

$C_5H_{11}NO_2$ FW: 117.15

Meets USP Requirements

Assay ($C_5H_{11}NO_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Specific Rotation $[\alpha]_D^{25}$ ..... +26.6 - +28.8 °
pH 5.5-7.0
Loss on Drying at 105°C ..... max. 0.3%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.03%
Iron (Fe) ..... max. 0.003%
Chromatographic Purity:
Individual Impurities ..... max. 0.5%
Total Impurities ..... max. 2.0%
Heavy Metals (as Pb) ..... max. 0.0015%

Meets FCC Requirements

Assay ($C_5H_{11}NO_2$) (dried basis) 98.5-101.5%
Identification ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Loss on Drying ..... max. 0.3%
Residue on Ignition ..... max. 0.1%
Specific Rotation $[\alpha]_D^{20}$ ..... +26.7 - +29.0 °

Meets BP/Ph.Eur. Chemical Specifications

Assay ($C_5H_{11}NO_2$) (dried basis) 98.5-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Specific Rotation $[\alpha]_D^{20}$ ..... +26.5 - +29.0 °
Ninhydrin-Positive Substances ..... Passes Test
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Ammonium (NH_4) ..... max. 200 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Loss on Drying ..... max. 0.5%
Ash (sulfated) ..... max. 0.1%

Meets JP Chemical Specifications

Assay ($C_5H_{11}NO_2$) (dried basis) 98.5-101.0%
Identification ..... Passes Test
Optical Rotation ..... +26.5 - +29.0 °
pH 5.5-6.5
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.021%
Sulfate (SO_4) ..... max. 0.028%
Ammonium (NH_4) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 20 ppm
Arsenic (As) ..... max. 2 ppm
Related Substances ..... Passes Test
Loss on Drying at 105°C ..... max. 0.30%
Residue on Ignition ..... max. 0.10%
Endotoxin Concentration, IU/mg ..... Actual Value Reported

CAS: 72-18-4 MERCK INDEX: 14,9909

Vanadium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Vanadium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(vanadium pentoxide in 5% HNO_3)
Plasma Standard

5754-04		100 mL	spr	112.60	

V AW: 50.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Vanadium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(vanadium pentoxide in 5% HNO_3)
Plasma Standard

5789-04		100 mL	spr	72.00	

V AW: 50.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Vanadium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(vanadium oxide in 5% HNO_3)

6473-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

V AW: 50.94

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Vanadium(V) Oxide

See Vanadium Pentoxide

Vanadium Pentoxide

BAKER ANALYZED Reagent
(vanadium(V) oxide)

4207-01	Poly	500 g	non	260.80	

V_2O_5 FW: 181.88

Meets Reagent Specifications for testing USP/NF monographs

Assay (V_2O_5) ..... min. 99.5%
Iron (Fe) ..... max. 0.03%
Potassium (K) ..... max. 0.05%
Sodium (Na) ..... max. 0.02%

CAS: 1314-62-1 MERCK INDEX: 14,9921 IMO: 6.1:2862

Vanillin

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Vanillin
BAKER

X449-07	Glass	500 g	non	142.55	

4-HOC_6H_3-3-OCH_3-1-CHO FW: 152.15

Melting Point .....81-83 °C.

CAS: 121-33-5 MERCK INDEX: 14,9932

Vinylbenzene
See Styrene

Volumetric Solutions
See individual alphabetic product listings

Water
ULTREX II Ultrapure Reagent

6906-02	Poly	1 L	spr	145.55	
		6 x 1 L	spr	116.45	698.70

H_2O FW: 18.00

Certificate Provided Reports Actual Lot Analysis
Trace Impurities in ppb (ng/g):
Chloride (Cl) .....max. 100
Phosphate (PO_4) .....max. 100
Sulfate (SO_4) .....max. 200
Trace Impurities in ppt (pg/g):
Aluminum (Al) .....max. 20
Antimony (Sb) .....max. 10
Arsenic (As) .....max. 10
Barium (Ba) .....max. 10
Beryllium (Be) .....max. 10
Bismuth (Bi) .....max. 10
Boron (B) .....max. 50
Cadmium (Cd) .....max. 10
Calcium (Ca) .....max. 20
Cerium (Ce) .....max. 10
Cesium (Cs) .....max. 10
Chromium (Cr) .....max. 10
Cobalt (Co) .....max. 10
Copper (Cu) .....max. 10
Dysprosium (Dy) .....max. 1
Erbium (Er) .....max. 1
Europium (Eu) .....max. 1
Gadolinium (Gd) .....max. 1
Gallium (Ga) .....max. 10
Germanium (Ge) .....max. 10
Gold (Au) .....max. 10
Hafnium (Hf) .....max. 1
Holmium (Ho) .....max. 1
Indium (In) .....max. 1
Iron (Fe) .....max. 20
Lanthanum (La) .....max. 1
Lead (Pb) .....max. 10
Lithium (Li) .....max. 10
Lutetium (Lu) .....max. 1
Magnesium (Mg) .....max. 10
Manganese (Mn) .....max. 10
Mercury (Hg) .....max. 20
Molybdenum (Mo) .....max. 10
Neodymium (Nd) .....max. 1
Nickel (Ni) .....max. 10
Niobium (Nb) .....max. 10
Palladium (Pd) .....max. 10
Platinum (Pt) .....max. 10
Potassium (K) .....max. 10
Praseodymium (Pr) .....max. 10
Rhenium (Re) .....max. 10
Rhodium (Rh) .....max. 10
Rubidium (Rb) .....max. 10
Ruthenium (Ru) .....max. 10
Samarium (Sm) .....max. 10
Scandium (Sc) .....max. 10
Selenium (Se) .....max. 50
Silver (Ag) .....max. 10
Sodium (Na) .....max. 10
Strontium (Sr) .....max. 10
Tantalum (Ta) .....max. 10
Tellurium (Te) .....max. 1
Terbium (Tb) .....max. 10
Thallium (Tl) .....max. 10
Thorium (Th) .....max. 10
Thulium (Tm) .....max. 10
Tin (Sn) .....max. 50
Titanium (Ti) .....max. 10
Tungsten (W) .....max. 10
Vanadium (V) .....max. 10
Ytterbium (Yb) .....max. 10
Yttrium (Y) .....max. 1
Zinc (Zn) .....max. 10
Zirconium (Zr) .....max. 10

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,10039

Water
HPLC

4218-02	Glass	1 L	chp	41.95	
		6 x 1 L	chp	27.95	167.70
4218-03	Glass	4 L	chp	89.40	
		4 x 4 L	chp	59.60	238.40

H_2O FW: 18.00

Specifications provided on label, not actual analysis.
UV Absorbance on Gradient Elution[1]:
Largest Peak at 254nm (au) .....max. 0.001
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.1
at Emission Maximum for Impurities .....max. 0.2
Filtration Test .....Passes Test
Residue after Evaporation .....max. 2 ppm
[1]Gradient Test: Sample enrichment for 10 minutes, followed by linear gradient elution from 100% H_2O to 100% acetonitrile for 20 minutes at 2.0 mL/min on a BAKERBOND 5 micron C_{18} 0.46 x 25 cm column.

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,10039

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water
ULTRA RESI-ANALYZED
For Environmental Inorganic and Organic Trace Analysis

4219-03	Glass	4 L	spr	143.25	
		4 x 4 L	spr	95.50	382.00

H_2O FW: 18.00

For Use in EPA Methods:
200 Series for Metals
300 Series for Inorganic Non-Metals
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Residue after Evaporation .....max. 2 ppm
Filtration Test .....Passes Test
Volatile Organic Trace Analysis:
Gas Chromatography with Purge and Trap Concentration (EPA Contract Required Quantitation Limit -CRQL):
Photoionization Detection (PID) Below CRQL .....Passes Test
Electroconductivity Detection (ELCD) Below CRQL .....Passes Test
Total Organic Carbon (100 ppb max) .....Passes Test
EPA Contract Lab Program:
Inorganic Target Analytes (Below CRQL) .....Passes Test

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,10039

Water
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9831-02	Glass	1 L	cbs	43.00	
		6 x 1 L	cbs	28.65	171.90
9831-03	Glass	4 L	cbs	91.80	
		4 x 4 L	cbs	61.20	244.80
9831-23	NOWPak	20 L	npk	Inquire	

H_2O FW: 18.02

Appearance .....Passes Test
Gradient Elution Test (a.u.):
254 nm .....max. 0.002
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.1
at Emission Maximum for Impurities .....max. 0.2
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1.0 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....max. 50
* Calcium (Ca) .....max. 50
Iron (Fe) .....max. 50
Lithium (Li) .....max. 30
Magnesium (Mg) .....max. 50
Nickel (Ni) .....max. 30
Potassium (K) .....max. 50
* Sodium (Na) .....max. 50
* May change over time due to extraction from glass container.
Filtered through a 0.2 micron filter.

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,10039

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water
BAKER ANALYZED ULTRA LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9823-01	Glass	2 x 1 L	spr	100.45	200.90
9823-02	Glass	1 L	spr	127.50	
		6 x 1 L	spr	85.00	510.00

H_2O FW: 18.00

Appearance .....Passes Test
Gradient Elution Test (a.u.):
254 nm .....max. 0.002
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.1
at Emission Maximum for Impurities .....max. 0.2
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1.0 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 25 ppb
Largest Response on ESI-Negative Mode (as 4-Nitrophenol) .....max. 25 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....max. 10
Calcium (Ca) .....max. 20
Chromium (Cr) .....max. 5
Cobalt (Co) .....max. 5
Copper (Cu) .....max. 5
Iron (Fe) .....max. 5
Lead (Pb) .....max. 5
Lithium (Li) .....max. 5
Magnesium (Mg) .....max. 10
Manganese (Mn) .....max. 5
Nickel (Ni) .....max. 5
Potassium (K) .....max. 10
Sodium (Na) .....max. 20
Tin (Sn) .....max. 5
Zinc (Zn) .....max. 5
Filtered through a 0.1 micron filter.

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,10039

Purified Water
USP

cGMP

4216-07	Hedpak	19 L	bks	Inquire
4216-09	Poly Drum	200 L	bul	Inquire

H_2O FW: 18.02

Meets USP Requirements
Oxidizable Substances .....Passes Test
Water Conductivity (at 25°C) uS/cm .....max. 5

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,10039

For more information on the J.T.Baker line of application-optimized LC/MS Reagents, see page 27.

Water

Water, Sterile
ULTRAPURE BIOREAGENT
For Molecular Biology Use

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4221-02	Poly	1 L	upr	48.50	

H_2O FW: 18.02
DNase Activity .....None Detected
RNase Activity .....None Detected
Protease Activity .....None Detected
Sterilized with diethylpyrocarbonate (DEPC) for nucleic acid applications
CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg MERCK INDEX: 14,10039

Water for Injection Quality Water
cGMP
Biotech Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4212-07	Poly Drum	19 L	bks	Inquire	
4212-09		200 L	bul	Inquire	

H_2O FW: 18.02
Bacterial Endotoxin (EU/mL) .....max. 0.25
Sterility .....Passes Test
Oxidizable Substances .....Passes Test
Water Conductivity (at 25°C) uS/cm .....max. 5
Water for Injection Quality Water, packaged in bulk and available commercially, meets the requirements of the tests for bacterial endotoxin for Water for Injection and the requirements of all tests for Sterile Purified Water. This product is not intended for injection into humans or animals. If used in the preparation of parenteral solutions, further downstream processing and final sterilization are required.
CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg

Water-0.15% Formic Acid
BAKER ANALYZED LC/MS Reagent
For use in Liquid Chromatography and Mass Spectrometry

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9838-02	Glass	1 L	cbs	42.55	
		6 x 1 L	cbs	28.35	170.10
9838-03	Glass	4 L	cbs	91.00	
		4 x 4 L	cbs	60.65	242.60
9838-23	NOWPak	20 L	npk	914.05	
9838-70	Poly Drum	170 L	cbs	Inquire	

Appearance .....Passes Test
Formic Acid 0.145-0.155%
Gradient Elution Test (a.u.):
254 nm .....max. 0.01
Residue after Evaporation .....max. 1.0 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....max. 50
* Calcium (Ca) .....max. 50
Iron (Fe) .....max. 50
Magnesium (Mg) .....max. 50
Potassium (K) .....max. 50
* Sodium (Na) .....max. 50
* May change over time due to extraction from glass container.
DENSITY: 1 L = 1.00 kg

Water-0.1% Formic Acid
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9834-02	Glass	1 L	cbs	47.70	
		6 x 1 L	cbs	31.80	190.80
9834-03	Glass	4 L	cbs	102.00	
		4 x 4 L	cbs	68.00	272.00
9834-23	NOWPak	20 L	npk	874.25	
9834-70	Poly Drum	170 L	cbs	Inquire	

Appearance .....Passes Test
Formic Acid 0.095-0.105%
Gradient Elution Test (a.u.):
254 nm .....max. 0.01
Residue after Evaporation .....max. 1.0 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....max. 50
* Calcium (Ca) .....max. 50
Iron (Fe) .....max. 50
Magnesium (Mg) .....max. 50
Potassium (K) .....max. 50
* Sodium (Na) .....max. 50
* May change over time due to extraction from glass container.
DENSITY: 1 L = 1.00 kg

Water-0.1% Formic Acid
BAKER ANALYZED Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9826-03	Glass	4 L	spr	76.75	
		4 x 4 L	spr	61.40	245.60
9826-07	Poly Pail	19 L	spr	189.95	

DENSITY: 1 L = 1.00 kg

Water-0.05% Formic Acid
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
9837-02	Glass	1 L	cbs	42.55	
		6 x 1 L	cbs	28.35	170.10
9837-03	Glass	4 L	cbs	91.00	
		4 x 4 L	cbs	60.65	242.60
9837-23	NOWPak	20 L	npk	914.05	
9837-70	Poly Drum	170 L	cbs	Inquire	

Appearance .....Passes Test
Formic Acid 0.045-0.055%
Gradient Elution Test (a.u.):
254 nm .....max. 0.01
Residue after Evaporation .....max. 1.0 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) .....max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) .....max. 50
* Calcium (Ca) .....max. 50
Iron (Fe) .....max. 50
Magnesium (Mg) .....max. 50
Potassium (K) .....max. 50

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silicon (Si) ..... Actual Value Reported
* Sodium (Na) ..... max. 50
* May change over time due to extraction from glass container.
DENSITY: 1 L = 1.00 kg

Water-0.15% Trifluoroacetic Acid
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9840-02	Glass	1 L	cbs	42.55	
		6 x 1 L	cbs	28.35	170.10
9840-03	Glass	4 L	cbs	91.00	
		4 x 4 L	cbs	60.65	242.60
9840-23	NOWPak	20 L	npk	914.05	
9840-70	Poly Drum	170 L	cbs	Inquire	

Appearance ..... Passes Test
Trifluoroacetic Acid 0.145-0.155%
Gradient Elution Test (a.u.):
254 nm ..... max. 0.01
Residue after Evaporation ..... max. 1.0 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) ..... max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) ..... max. 50
* Calcium (Ca) ..... max. 50
Iron (Fe) ..... max. 50
Magnesium (Mg) ..... max. 50
Potassium (K) ..... max. 50
Silicon (Si) ..... Actual Value Reported
* Sodium (Na) ..... max. 50
* May change over time due to extraction from glass container.

Water-0.1% Trifluoroacetic Acid
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9836-02	Glass	1 L	cbs	45.60	
		6 x 1 L	cbs	30.40	182.40
9836-03	Glass	4 L	cbs	97.35	
		4 x 4 L	cbs	64.90	259.60
9836-23	NOWPak	20 L	npk	914.05	
9836-70	Poly Drum	170 L	cbs	Inquire	

Appearance ..... Passes Test
Trifluoroacetic Acid 0.095-0.105%
Gradient Elution Test (a.u.):
254 nm ..... max. 0.01
Residue after Evaporation ..... max. 1.0 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) ..... max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) ..... max. 50
* Calcium (Ca) ..... max. 50
Iron (Fe) ..... max. 50
Magnesium (Mg) ..... max. 50
Potassium (K) ..... max. 50
* Sodium (Na) ..... max. 50
* May change over time due to extraction from glass container.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water-0.05% Trifluoroacetic Acid
BAKER ANALYZED LC/MS Reagent
For Use in Liquid Chromatography and Mass Spectrometry

9839-02	Glass	1 L	cbs	42.55	
		6 x 1 L	cbs	28.35	170.10
9839-03	Glass	4 L	cbs	91.00	
		4 x 4 L	cbs	60.65	242.60
9839-23	NOWPak	20 L	npk	914.05	
9839-70	Poly Drum	170 L	cbs	Inquire	

Appearance ..... Passes Test
Trifluoroacetic Acid 0.045-0.055%
Gradient Elution Test (a.u.):
254 nm ..... max. 0.01
Residue after Evaporation ..... max. 1.0 ppm
LC/MS Suitability:
Largest Response on ESI-Positive Mode (as Reserpine) ..... max. 50 ppb
Trace Impurities (in ppb):
Aluminum (Al) ..... max. 50
* Calcium (Ca) ..... max. 50
Iron (Fe) ..... max. 50
Magnesium (Mg) ..... max. 50
Potassium (K) ..... max. 50
Silicon (Si) ..... Actual Value Reported
* Sodium (Na) ..... max. 50
* May change over time due to extraction from glass container.
Filtered through a 0.2 micron filter.

Water Hardness Indicators
See Calcon, Calmagite, Eriochrome Black T

Wide Mouth SPE Columns
See Analytical Chromatography Section, p. 22-45

WIDE-PORE Columns and Sorbents
See Analytical Chromatography Section, p. 22-45

Wolframophosphoric Acid
See Phosphotungstic Acid, n-Hydrate

Wood's Alloy, Sticks
BAKER ANALYZED Reagent

2684-01	Poly	500 g	non	276.95	

Bismuth (Bi) 49.0-51.0%
Lead (Pb) 24.5-25.5%
Tin (Sn) 12.0-13.0%
Cadmium (Cd) 12.0-13.0%
Melting Point ..... 70.0-74.0 °C.

Wright's Stain

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Wright's Stain
BAKER ANALYZED Reagent, Certified Stain
Certified for Use in Blood Staining

X492-03	Glass	25 g	non	77.75	

Certified by the Biological Stain Commission
Biological Test .....Passes Test
CAS: 68988-92-1

Wurster's Blue
See N,N,N',N'-Tetramethyl-p-phenylenediamine Dihydrochloride

Xylenes
BAKER ANALYZED ACS Reagent
(contains ethylbenzene)

9490-01	Glass	500 mL	cso	50.35	
		12 x 500 mL	cso	33.55	402.60
9490-22	Al SAFETAINER	1 L	cso	91.00	
		6 x 1 L	cso	60.65	363.90
9490-03	Glass	4 L	cso	175.65	
		4 x 4 L	cso	117.10	468.40
9490-05	Al SAFETAINER	4 L	cso	202.45	
		4 x 4 L	cso	134.95	539.80
9490-33	Poly Coated	4 L	cso	193.90	
		4 x 4 L	cso	129.25	517.00
9490-07	Steel Pail	20 L	sbk	373.40	
9490-R	Steel Drum	398 lb	bul	Inquire	

$C_6H_4(CH_3)_2$ FW: 106.17

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay ($C_6H_4(CH_3)_2$) (by GC) .....min. 98.5%
Ethylbenzene ($C_6H_5C_2H_5$) .....max. 25%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.002%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (H_2O) .....max. 0.02%
Product Information (not specifications):
Boiling Point (typical) .....140.5°C.

CAS: 1330-20-7 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,10081
IMO: 3:1307 FLASH POINT: 29°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Xylenes
PHOTREX Reagent
For Spectrophotometry

9516-01	Glass	500 mL	non	68.10	
9516-03	Glass	4 L	cso	224.40	
		4 x 4 L	cso	149.60	598.40

Available in the CYCLE-TAINER solvent delivery system. For information, call 1-800-JTBAKER.

$C_6H_4(CH_3)_2$ FW: 106.17

Meets ACS Specifications
Assay ($C_6H_4(CH_3)_2$) (by GC) .....min. 98.5%
Ethylbenzene ($C_6H_5C_2H_5$) .....max. 25%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (H_2O) .....max. 0.02%
Ultraviolet Absorbance (1.00-cm cell vs. water):
400-380 nm .....max. 0.01
330 nm .....max. 0.05
300 nm .....max. 0.30
295 nm .....max. 1.00
Product Information (not specifications):
Boiling Point (typical) .....140.5°C.

CAS: 1330-20-7 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,10081
IMO: 3:1307 FLASH POINT: 29°C

Solvent Spill Cleanup Products available. See pp. 378.

Xylenes
BAKER
For Histological Use

X516-09	Al SAFETAINER	4 L	cor	162.30	
		4 x 4 L	cor	108.20	432.80
X516-01	Steel Pail	20 L	sbo	298.80	
X516-07	Steel Drum	200 L	bul	Inquire	

$C_6H_4(CH_3)_2$ FW: 106.17

Assay (total of p, m, o-xylene and ethylbenzene) .....min. 98.5%
Color (APHA) .....max. 10
Ethylbenzene ($C_6H_5C_2H_5$) .....max. 25%
Residue after Evaporation .....max. 0.002%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (by KF, coulometric) .....max. 0.02%

CAS: 1330-20-7 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,10081
IMO: 3:1307 FLASH POINT: 29°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

m-Xylene
BAKER

X523-06	Glass	500 mL	non	93.45	

$C_6H_4(CH_3)_2$ FW: 106.17

Assay ($C_6H_4(CH_3)_2$) (by GC) .....min. 98%

CAS: 108-38-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,10081
IMO: 3:1307 FLASH POINT: 25°C

Solvent Spill Cleanup Products available. See pp. 378.

p-Xylene
BAKER ANALYZED Reagent
For Liquid Scintillation Counting

9498-01	Glass S/S	500 mL	spr	81.45	
9498-03	Glass	4 L	spr	491.80	

$C_6H_4(CH_3)_2$ FW: 106.17

Counting Efficiency for ^3H in Prepared "Cocktail" .....Actual Value Reported
Melting Point .....12-15 °C.
Residue after Evaporation .....max. 0.002%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Free Acid .....Passes Test
Ultraviolet Absorbance (1.00-cm cell vs. water):
420 nm .....max. 0.01
380 nm .....max. 0.01

CAS: 106-42-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,10081
IMO: 3:1307 FLASH POINT: 27.2°C

Solvent Spill Cleanup Products available. See pp. 378.

p-Xylene
BAKER

X528-07	Glass	500 mL	non	63.95	

$C_6H_4(CH_3)_2$ FW: 106.17

Melting Point .....12-15 °C.

CAS: 106-42-3 DENSITY: 1 L = 0.86 kg MERCK INDEX: 14,10081
IMO: 3:1307 FLASH POINT: 27.2°C

Solvent Spill Cleanup Products available. See pp. 378.

Xylenol Orange
BAKER

X584-01	Glass	5 g	bio	103.90	
X584-02	Glass	10 g	bio	182.35	

$C_{31}H_{28}N_2Na_4O_{13}S$ FW: 760.60

Sensitivity as Metal Indicator .....Passes Test
CAS: 3618-43-7

D-Xylopyranose
See D-Xylose

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

D-(+)-Xylose
BAKER ANALYZED Biochemical Reagent
(D-xylopyranose)

X666-05	Glass	100 g	bio	155.85	

$C_5H_{10}O_5$ FW: 150.13

Specific Rotation, $[\alpha]_D^{20}$(dried basis, c = 4 in H_2O) .....+18.2 - +19.4 °
Homogeneity by TLC .....No Extraneous Spots
Homogeneity by GLC (trimethylsilylation) .....Actual Value Reported
Ash (sulfated) .....max. 0.05%
Loss on Drying at 105°C .....max. 0.1%
Arsenic (As) .....max. 0.00005%
Heavy Metals (as Cu) .....max. 0.001%
Iron (Fe) .....max. 0.0005%
Keep material refrigerated between 2-8°C (36-46°F).

CAS: 58-86-6 MERCK INDEX: 14,10087

D-Xylose
BAKER

X667-05	Glass	100 g	non	110.35	

$C_5H_{10}O_5$ FW: 150.13

Specific Rotation $[\alpha]_D^{20}$(c = 4 in H_2O) .....+17 - +20 °

CAS: 58-86-6 MERCK INDEX: 14,10087

Yttrium, Atomic Spectral and Plasma Standards
See Additional Information in Analytical Standards Section, p. 94-98

Yttrium, 10,000 µg/mL (1.00% w/v)
BAKER INSTRA-ANALYZED Reagent
(Y_2O_3 in 5% HNO_3)
Plasma Standard

5755-04		100 mL	spr	112.60	

Y AW: 88.91

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Yttrium, 1000 µg/mL (0.10%)
BAKER INSTRA-ANALYZED Reagent
(Y_2O_3 in 5% HNO_3)
Plasma Standard

5790-04		100 mL	spr	72.00	

Y AW: 88.91

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Zinc

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Zinc, Granular (20 Mesh)
BAKER ANALYZED ACS Reagent

4244-01	Poly	500 g	csa	126.85	
		4 x 500 g	csa	84.55	338.20
4244-05	Poly	2.5 kg	csa	482.40	
		4 x 2.5 kg	csa	321.60	1286.40
4244-07	Poly Pail	12 kg	bks	Inquire	

Zn AW: 65.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (Zn) (by EDTA titrn) ..... min. 99.8%
Iron (Fe) ..... max. 0.01%
Lead (Pb) ..... max. 0.01%
Suitability for Arsenic Determination ..... Passes Test
Trace Impurities (in ppm):
Arsenic (As) ..... max. 0.1
Mesh:
On U.S. No. 16 Sieve ..... max. 5%
Thru U.S. No. 35 Sieve ..... max. 30%
CAS: 7440-66-6 MERCK INDEX: 14,10127

Zinc, Granular (30 Mesh)
BAKER ANALYZED ACS Reagent

4248-01	Poly	500 g	non	106.80	
4248-05	Poly	2.5 kg	non	411.95	

Zn AW: 65.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (Zn) (by EDTA titrn) ..... min. 99.8%
Iron (Fe) ..... max. 0.01%
Lead (Pb) ..... max. 0.01%
Suitability for Arsenic Determination ..... Passes Test
Trace Impurities (in ppm):
Arsenic (As) ..... max. 0.1
Mesh:
on U.S. No. 30 Sieve ..... max. 5%
Thru U.S. No. 50 Sieve ..... max. 30%
CAS: 7440-66-6 MERCK INDEX: 14,10127

Zinc, Granular (40 Mesh)
BAKER ANALYZED ACS Reagent

4252-01	Poly	500 g	non	118.75	

Zn AW: 65.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (Zn) (by EDTA titrn) ..... min. 99.8%
Iron (Fe) ..... max. 0.01%
Lead (Pb) ..... max. 0.01%
Suitability for Arsenic Determination ..... Passes Test
Trace Impurities (in ppm):
Arsenic (As) ..... max. 0.1
Mesh:
On U.S. No. 40 Sieve ..... max. 5%
Thru U.S. No. 70 Sieve ..... max. 30%
CAS: 7440-66-6 MERCK INDEX: 14,10127

Zinc, Mossy
BAKER ANALYZED ACS Reagent

4260-01	Poly	500 g	non	102.30	
4260-05	Poly	2.5 kg	csa	353.65	
		4 x 2.5 kg	csa	235.75	943.00

Zn AW: 65.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (Zn) (by EDTA titrn) ..... min. 99.8%
Iron (Fe) ..... max. 0.01%
Lead (Pb) ..... max. 0.01%
Suitability for Arsenic Determination ..... Passes Test
Trace Impurities (in ppm):
Arsenic (As) ..... max. 0.1
CAS: 7440-66-6 MERCK INDEX: 14,10127

Zinc, Powder
Purified

4282-01	Poly	500 g	non	46.85	
4282-07	Lined Fiber Dr	12 kg	bks	Inquire	

Zn AW: 65.39

Assay (Zn) ..... min. 98.0%
CAS: 7440-66-6 MERCK INDEX: 14,10127

Zinc, Shot
BAKER ANALYZED ACS Reagent

4270-01	Poly	500 g	non	68.40	

Zn AW: 65.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (Zn) (by EDTA titrn) ..... min. 99.8%
Iron (Fe) ..... max. 0.01%
Lead (Pb) ..... max. 0.01%
Suitability for Arsenic Determination ..... Passes Test
Trace Impurities (in ppm):
Arsenic (As) ..... max. 0.1
CAS: 7440-66-6 MERCK INDEX: 14,10127

Zinc, Sticks
BAKER ANALYZED ACS Reagent

4274-01	Poly	500 g	non	143.15	

Zn AW: 65.39

Meets ACS Specifications
Meets Reagent Specifications for testing USP/NF monographs
Assay (Zn) (by EDTA titrn) ..... min. 99.8%
Iron (Fe) ..... max. 0.01%
Lead (Pb) ..... max. 0.01%
Suitability for Arsenic Determination ..... Passes Test
Trace Impurities (in ppm):
Arsenic (As) ..... max. 0.1
CAS: 7440-66-6 MERCK INDEX: 14,10127

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Zinc, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Zinc, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(Zn metal in 5% HNO_3)
Plasma Standard

5756-04		100 mL	spr	112.60	

Zn AW: 65.39

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Zinc, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Zn metal in 5% HNO_3)
Plasma Standard

5791-04		100 mL	spr	72.00	

Zn AW: 65.39

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Zinc, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Zn metal in 5% HNO_3)

6474-04	Poly	150 mL	spr	35.90	
		4 x 150 mL	spr	29.90	119.60

Zn AW: 65.39

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Zinc Acetate, Dihydrate, Crystal

BAKER ANALYZED ACS Reagent

4296-01	Poly	500 g	csa	77.80	
		4 x 500 g	csa	51.85	207.40
4296-05	Poly	2.5 kg	non	176.20	
4296-07	Poly Pail	12 kg	bks	Inquire	
4296-09	Lined Fiber Dr	100 lb	bul	Inquire	
4296-R	Lined Fiber Dr	250 lb	bul	Inquire	

$(CH_3COO)_2Zn{\cdot}2H_2O$ FW: 219.51

Meets ACS Specifications

Assay ($(CH_3COO)_2Zn{\cdot}2H_2O$) 99.0-101.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 6.0-7.0
Sulfate (SO_4) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Lead (Pb) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Iron (Fe) ..... max. 5

CAS: 5970-45-6 MERCK INDEX: 14,10128

Zinc Bromide, Granular

BAKER ANALYZED Reagent

4308-01	Glass	500 g	non	233.75	
4308-07	Poly Pail	12 kg	bks	Inquire	

$ZnBr_2$ FW: 225.18

Alkalies and Alkaline Earths ..... max. 0.2%
Bromide (Br) 69.5-71.0%
Insoluble in HCl ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Lead (Pb) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.01%

CAS: 7699-45-8 MERCK INDEX: 14,10129 IMO: 8:1759

Zinc Carbonate, Powder

BAKER ANALYZED Reagent

4312-01	Poly	500 g	csa	202.50	
		4 x 500 g	csa	135.00	540.00

Assay (as ZnO) ..... min. 70.0%
Insoluble in H_2SO_4 ..... max. 0.02%
Chloride (Cl) ..... max. 0.002%
Nitrate (NO_3) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.01%
Calcium (Ca) ..... Actual Value Reported
Iron (Fe) ..... max. 0.002%
Lead (Pb) ..... max. 0.005%
Silicon (Si) ..... Actual Value Reported
Sodium (Na) ..... Actual Value Reported
Substances Not Precipitated by $(NH_4)_2S$ (as SO_4) ..... max. 0.40%
Average Particle Diameter, µm (APD) ..... Actual Value Reported
Specific Surface Area, m^2/g ..... Actual Value Reported
Bulk Density (g/cc) ..... Actual Value Reported
Mesh (Wet Screen Analysis):
On U.S. No. 325 Sieve ..... Actual Value Reported

CAS: 3486-35-9 MERCK INDEX: 14,10131

Zinc Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Zinc Chloride, Granular
USP

cGMP

4320-07	Poly Pail	12 kg	bks	Inquire	
4320-R	Poly Drum	110 lb	bul	Inquire	

$ZnCl_2$ FW: 136.30

Meets USP Specifications

Identification ..... Passes Test
Oxychloride ..... Passes Test
Sulfate (SO_4) ..... max. 0.03%
Alkalies and Alkaline Earths ..... max. 1.0%
Ammonium Salts ..... Passes Test
Lead (Pb) ..... max. 0.005%
Assay ($ZnCl_2$) 97.0-100.5%

Preserve in Tight Containers

CAS: 7646-85-7 MERCK INDEX: 14,10132 IMO: 8:2331

Zinc Chloride, Granular
BAKER ANALYZED ACS Reagent

4322-01	Poly	500 g	csa	148.50	
		4 x 500 g	csa	99.00	396.00

$ZnCl_2$ FW: 136.30

Meets ACS Specifications

Assay ($ZnCl_2$) ..... min. 97.0%
Oxychloride ..... Passes Test
Insoluble Matter ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.01%
Ammonium (NH_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.06%
Iron (Fe) ..... max. 0.001%
Lead (Pb) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.01%
Potassium (K) ..... max. 0.02%
Sodium (Na) ..... max. 0.05%

CAS: 7646-85-7 MERCK INDEX: 14,10132 IMO: 8:2331

Zinc Chloride, Granular, USP
Multi-Compendial
Endotoxin Tested

cGMP

4326-01	Poly	500 g	rnc	165.30	
4326-05	Poly	2.5 kg	rss	670.00	
		4 x 2.5 kg	rss	446.65	1786.60
4326-07	Poly Pail	12 kg	bks	Inquire	

$ZnCl_2$ FW: 136.30

Meets USP Requirements

Identification ..... Passes Test
Oxychloride ..... Passes Test
Sulfate (SO_4) ..... max. 0.03%
Alkalies and Alkaline Earths ..... max. 1.0%
Ammonium Salts ..... Passes Test
Lead (Pb) ..... max. 0.005%
Assay ($ZnCl_2$) 97.0-100.5%
Endotoxin Concentration (EU/g) ..... max. 10

Meets BP/Ph.Eur. Chemical Specifications

Assay ($ZnCl_2$) 95.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
pH 4.6-5.5
Oxychloride ..... Passes Test
Sulfate (SO_4) ..... max. 200 ppm
Aluminum, Calcium, Heavy Metals, Iron and Magnesium ..... Passes Test
Ammonium (NH_4) ..... max. 400 ppm

Meets JP Chemical Specifications

Assay ($ZnCl_2$) 97.0-101.0%
Identification ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Sulfate (SO_4) ..... max. 0.010%
Ammonium (NH_4) ..... Passes Test
Heavy Metals (as Pb) ..... max. 50 ppm
Alkalies and Alkaline Earths ..... max. 1.00%
Arsenic (As) ..... max. 5 ppm
Oxychloride ..... Passes Test

CAS: 7646-85-7 MERCK INDEX: 14,10132 IMO: 8:2331

Zinc Nitrate, 6-Hydrate Crystal
BAKER ANALYZED Reagent

4344-01	Poly	500 g	csa	88.05	
		4 x 500 g	csa	58.70	234.80
4344-05	Poly	2.5 kg	non	267.75	
4344-07	Poly Pail	12 kg	bks	Inquire	
4344-09	Lined Fiber Dr	100 lb	bul	Inquire	

$Zn(NO_3)_2 \cdot 6H_2O$ FW: 297.47

Assay ($Zn(NO_3)_2 \cdot 6H_2O$) (by EDTA titrn) 99.0-101.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 3.5-5.5
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.005%
Lead (Pb) ..... max. 0.005%

Trace Impurities (in ppm):

Copper (Cu) ..... max. 5
Iron (Fe) ..... max. 5

IMPORTANT: Store below 24°C (75°F). Ship in refrigerated trucks only.

CAS: 10196-18-6 MERCK INDEX: 14,10144 IMO: 5.1:1514

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Zinc Oxide, Powder
BAKER ANALYZED ACS Reagent

4358-01	Poly	500 g	csa	66.00	
		4 x 500 g	csa	44.00	176.00
4358-05	Poly	2 kg	csa	186.25	
		4 x 2 kg	csa	124.15	496.60
4358-07	Lined Fiber Dr	12 kg	bks	Inquire	
4358-R		100 lb	bul	Inquire	

ZnO FW: 81.39

Meets ACS Specifications

Assay (ZnO) ..... min. 99.0%
Insoluble in Dilute H_2SO_4 ..... max. 0.01%
Alkalinity ..... Passes Test
Nitrate (NO_3) ..... max. 0.003%
Sulfur Compounds (as SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Lead (Pb) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Iron (Fe) ..... max. 5
Manganese (Mn) ..... max. 5

CAS: 1314-13-2 MERCK INDEX: 14,10147

Zinc Stearate
USP cGMP

4375-01	Poly	500 g	rnc	54.40	
4375-05	Poly Pail	2 kg	rnc	153.45	

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Alkalies and Alkaline Earths ..... max. 1.0%
Arsenic (As) ..... max. 1.5 ppm
Lead (Pb) ..... max. 0.001%
Assay (as ZnO) 12.5-14.0%
Particulate Matter ..... Passes Test

CAS: 557-05-1 MERCK INDEX: 14,10158 FLASH POINT: 279°C

Zinc Sulfate, 7-Hydrate, Crystal
BAKER ANALYZED ACS Reagent

4382-04	Poly	125 g	csa	47.20	
		4 x 125 g	csa	31.45	125.80
4382-01	Poly	500 g	csa	77.55	
		4 x 500 g	csa	51.70	206.80
4382-05	Poly	2.5 kg	csa	263.50	
		4 x 2.5 kg	csa	175.65	702.60
4382-R	Lined Fiber Dr	300 lb	bul	Inquire	

$ZnSO_4 \cdot 7H_2O$ FW: 287.56

Meets ACS Specifications

Assay ($ZnSO_4 \cdot 7H_2O$) 99.0-103.0%
Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 4.4-6.0
Nitrate (NO_3) ..... max. 0.002%
Ammonium (NH_4) ..... max. 0.001%
Calcium (Ca) ..... max. 0.005%
Lead (Pb) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Trace Impurities (in ppm):
Chloride (Cl) ..... max. 5
Iron (Fe) ..... max. 5
Manganese (Mn) ..... max. 2

CAS: 7446-20-0 MERCK INDEX: 14,10159

Zinc Sulfate, 7-Hydrate Granular
USP, FCC cGMP

4384-01	Poly	500 g	rnc	78.85	
4384-07	Poly Pail	12 kg	bks	Inquire	

$ZnSO_4 \cdot 7H_2O$ FW: 287.56

Meets USP & FCC Requirements

Assay ($ZnSO_4 \cdot 7H_2O$) 99.0-108.7%
Assay (dried basis) 55.6-61.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity ..... Passes Test
Alkalies and Alkaline Earths ..... max. 0.5%
Arsenic (As) ..... max. 3 ppm
Cadmium (Cd) ..... max 2 mg/kg
Lead (Pb) (FCC) ..... max 4 mg/kg
Lead (Pb) (USP) ..... max. 0.002%
Selenium (Se) ..... max. 0.003%
Mercury (Hg) ..... max 5 mg/kg

CAS: 7446-20-0 MERCK INDEX: 14,10159

Zinc Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Zinc Sulfate, 7-Hydrate Granular, USP

cGMP

Multi-Compendial

4383-01	Poly	500 g	rnc	86.70	

$ZnSO_4 \cdot 7H_2O$ FW: 287.56

Meets USP Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity ..... Passes Test
Alkalies and Alkaline Earths ..... max. 0.9%
Arsenic (As) ..... max. 14 ppm
Lead (Pb) ..... max. 0.002%
Assay ($ZnSO_4 \cdot 7H_2O$) 99.0-108.7%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
pH 4.4-5.6
Chloride (Cl) ..... max. 300 ppm
Iron (Fe) ..... max. 100 ppm
Assay ($ZnSO_4 \cdot 7H_2O$) (dried basis) 99.0-104.0%

CAS: 7446-20-0 MERCK INDEX: 14,10159

Zirconium, Atomic Spectral and Plasma Standards

See Additional Information in Analytical Standards Section, p. 94-98

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Zirconium, 10,000 µg/mL (1.00% w/v)

BAKER INSTRA-ANALYZED Reagent
(zirconium oxychloride in 5% HCl)
Plasma Standard

5757-04		100 mL	spr	123.90	

Zr AW: 91.22

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Zirconium, 1000 µg/mL (0.10% w/v)

BAKER INSTRA-ANALYZED Reagent
(Zirconium Oxychloride in 5% HCl)
Plasma Standard

5792-04		100 mL	spr	69.65	

Zr AW: 91.22

IMO: 8:3264

Acid Spill Cleanup Products available. See pp. 378.

Macron Fine Chemicals Brand Alphabetical Product Listing

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetic Acid, 36%
NF cGMP

2488-44	Glass	2.5 L	fa	200.95	
		4 x 2.5 L	fa	160.75	643.00

CH_3COOH FW: 60.05

Meets NF Requirements

Assay (CH_3COOH) 36.0-37.0%
Chloride (Cl) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Identification ..... Passes Test
Nonvolatile Residue ..... max. 0.005%
Readily Oxidizable Substances ..... Passes Test
Sulfate (SO_4) ..... Passes Test

Product Information (not specifications):
Appearance (clear, colorless liquid)
Preserve in tight containers, and store at room temperature

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg IMO: 8:2790
FLASH POINT: ~72.5°C

Acetic Acid, Glacial
AR (ACS)

V193-05	Poly	500 mL	ur	31.10	
		12 x 500 mL	ur	24.85	298.20
V193-14	Glass	500 mL	ra	54.75	
		6 x 500 mL	ra	32.20	193.20
V193-46	Glass	2.5 L	ra	91.05	
		6 x 2.5 L	ra	53.55	321.30
V193-18	Poly	2.5 L	ur	56.75	
		6 x 2.5 L	ur	42.55	255.30
V193-45	Poly	4 L	ur	64.90	
		4 x 4 L	ur	51.90	207.60
V193-23	Glass Carboy	56 lb	bp	Inquire	
V193-27	Poly Drum	450 lb	bp	Inquire	

CH_3COOH FW: 60.05

Meets ACS Specifications

Assay (by GC, corrected for water) ..... min. 99.7%
Acetic Anhydride ($(CH_3CO)_2O$) ..... max. 0.01%
Chloride (Cl) ..... max. 0.4 ppm
Color (APHA) ..... max. 10
Dilution Test ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.00005%
Residue after Evaporation ..... max. 8 ppm
Substances Reducing Dichromate ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 0.4 ppm
Titrable Base (meq/g) ..... max. 0.0004
Trace Impurities (in ppm):
Aluminum (Al) ..... max. 0.3
Arsenic (As) ..... max. 0.05
Boron (B) ..... max. 0.2
Calcium (Ca) ..... max. 0.3
Chromium (Cr) ..... max. 0.2
Copper (Cu) ..... max. 0.1
Gold (Au) ..... max. 0.3
Iron (Fe) ..... max. 0.2
Lead (Pb) ..... max. 0.3
Magnesium (Mg) ..... max. 0.3
Manganese (Mn) ..... max. 0.3
Nickel (Ni) ..... max. 0.1
Potassium (K) ..... max. 0.3
Sodium (Na) ..... max. 0.3
Tin (Sn) ..... max. 0.3
Titanium (Ti) ..... max. 0.3
Zinc (Zn) ..... max. 0.3

Product Information (not specifications):
Appearance (clear, colorless liquid)
IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg IMO: 8:2789
FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial
AR Select (ACS)
For Trace Element Analysis

8817-14	Glass	500 mL	as	77.20	
		6 x 500 mL	as	48.25	289.50
8817-46	SAFEMOR	2.5 L	as	141.20	
		6 x 2.5 L	as	88.25	529.50

CH_3COOH FW: 60.05

Meets ACS Specifications

Assay (CH_3COOH) 99.5-100.5%
Assay (by GC, corrected for water) ..... min. 99.7%
Acetic Anhydride ($(CH_3CO)_2O$) ..... max. 0.01%
Arsenic and Antimony (as As) ..... max. 0.005 ppm
Chloride (Cl) ..... max. 0.0001%
Color (APHA) ..... max. 10
Dilution Test ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.00005%
Residue after Evaporation ..... max. 0.001%
Substances Reducing Dichromate ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 0.0001%
Titrable Base (meq/g) ..... max. 0.0004
Trace Impurities (in ppb):
Determined by Flame Photometry & ICP
Aluminum (Al) ..... max. 100
Barium (Ba) ..... max. 100
Beryllium (Be) ..... max. 10
Bismuth (Bi) ..... max. 10
Boron (B) ..... max. 50
Cadmium (Cd) ..... max. 100
Calcium (Ca) ..... max. 500
Chromium (Cr) ..... max. 100
Cobalt (Co) ..... max. 50
Copper (Cu) ..... max. 50
Gallium (Ga) ..... max. 500
Germanium (Ge) ..... max. 500
Gold (Au) ..... max. 500
Iron (Fe) ..... max. 100
Lead (Pb) ..... max. 500
Lithium (Li) ..... max. 50
Magnesium (Mg) ..... max. 100
Manganese (Mn) ..... max. 50
Mercury (Hg) ..... max. 500
Molybdenum (Mo) ..... max. 10

Acetic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nickel (Ni) ..... max. 50
Potassium (K) ..... max. 100
Silicon (Si) ..... max. 100
Silver (Ag) ..... max. 50
Sodium (Na) ..... max. 500
Strontium (Sr) ..... max. 100
Thallium (Tl) ..... max. 50
Tin (Sn) ..... max. 100
Vanadium (V) ..... max. 10
Zinc (Zn) ..... max. 100
Zirconium (Zr) ..... max. 10

Product Information (not specifications):
Appearance (clear, colorless liquid)
IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg IMO: 8:2789
FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial

ChromAR
Suitable for Liquid and Thin Layer Chromatography

V155-06	Glass	500 mL	sp	64.10	
		6 x 500 mL	sp	43.60	261.60

CH_3COOH FW: 60.05

Assay (by GC, corrected for water) ..... min. 99.7%
Acetic Anhydride ($(CH_3CO)_2O$) ..... max. 0.01%
Chloride (Cl) ..... max. 0.4 ppm
Color (APHA) ..... max. 10
Dilution Test ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.00005%
Identification ..... Passes Test
Residue after Evaporation ..... max. 5 ppm
Substances Reducing Dichromate ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 0.4 ppm
Titrable Base (meq/g) ..... max. 0.0004
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.1%
Ultraviolet Absorbance (1.00-cm cell vs. water):
255 nm ..... max. 1.00
280 nm ..... max. 0.05
350 nm ..... max. 0.02
Trace Impurities (in ppm):
Copper (Cu) ..... max. 0.1
Iron (Fe) ..... max. 0.2
Nickel (Ni) ..... max. 0.1
Product Information (not specifications):
Appearance (clear, colorless liquid)
IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg IMO: 8:2789
FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetic Acid, Glacial

cGMP

USP, FCC, ACS

2504-14	Glass	500 mL	fa	72.10	
		6 x 500 mL	fa	42.40	254.40
2504-46	Glass	2.5 L	fa	152.25	
		6 x 2.5 L	fa	89.55	537.30
2504-44	Glass	4 x 2.5 L	fa	93.90	375.60
2504-21	Poly Pail	40 lb	bp	Inquire	
2504-23	Glass Carboy	56 lb	bp	Inquire	
2504-27	Poly Drum	450 lb	bp	Inquire	

CH_3COOH FW: 60.05

Meets USP, FCC & ACS Requirements

Assay (CH_3COOH) 99.7-100.5%
Assay (CH_3COOH) (by GC) ..... min. 99.7%
Acetic Anhydride ($(CH_3CO)_2O$) ..... max. 0.01%
Arsenic (As) ..... max. 3 ppm
Appearance ..... Passes Test
Chloride (Cl) ..... max. 1 ppm
Chloride (Cl) (USP) ..... Passes Test
Color (APHA) ..... max. 10
Congealing Temperature ..... min. 15.6 °C.
Copper (Cu) ..... max. 0.00001%
Dilution Test ..... Passes Test
Freezing Point ..... min. 16.0 °C.
Heavy Metals (as Pb) (ACS) ..... max. 0.5 ppm
Heavy Metals (as Pb) (USP) ..... max. 5 ppm
Identification ..... Passes Test
Iron (Fe) ..... max. 0.2 ppm
Lead (Pb) ..... max 0.5 mg/kg
Nickel (Ni) ..... max. 0.00001%
Nonvolatile Residue ..... max. 0.005%
Readily Oxidizable Substances ..... Passes Test
Residue after Evaporation ..... max. 0.001%
Solidification Point ..... min. 15.6 °C.
Substances Reducing Dichromate (mL) ..... max. 0.40
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 1 ppm
Sulfate (USP)(SO_4) ..... Passes Test
Titrable Base (meq/g) ..... max. 0.0004
IMPORTANT: Material will freeze if stored below 17°C (63°F).

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg IMO: 8:2789
FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid, Glacial

cGMP

USP, FCC, ACS

3121-04	SAFEMOR	500 mL	fa	86.00	
		6 x 500 mL	fa	50.60	303.60
3121-46	SAFEMOR	2.5 L	fa	161.75	
		6 x 2.5 L	fa	95.15	570.90

CH_3COOH FW: 60.05

Meets USP, FCC & ACS Requirements

Assay (by GC, corrected for water) ..... min. 99.7%
Assay (CH_3COOH) 99.7-100.5%
Color (APHA) ..... max. 10
Acetic Anhydride ($(CH_3CO)_2O$) ..... max. 0.01%
Chloride (Cl) ..... max. 1 ppm

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chloride (Cl) (USP) ..... Passes Test
Congealing Temperature ..... min. 15.6 °C.
Copper (Cu) ..... max. 0.00001%
Dilution Test ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.5 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Iron (Fe) ..... max. 0.2 ppm
Lead (Pb) ..... max 0.05 mg/kg
Nickel (Ni) ..... max. 0.00001%
Readily Oxidizable Substances ..... Passes Test
Residue after Evaporation ..... max. 0.001%
Solidification Point ..... min. 15.6 °C.
Substances Reducing Dichromate ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 1 ppm
Sulfate (SO_4) (USP) ..... Passes Test
Titrable Base (meq/g) ..... max. 0.0004
Limit of Nonvolatile Residue ..... max. 0.005%

Product Information (not specifications):
Appearance (clear, colorless liquid)
IMPORTANT: Material will freeze if stored below 17°C (63°F).
Preserve in tight containers, and store at room temperature

CAS: 64-19-7 DENSITY: 1 L = 1.05 kg IMO: 8:2789
FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Acetic Acid Ethyl Ester

See Ethyl Acetate

Acetic Anhydride
AR (ACS)

2420-02	Glass	150 mL	gs	49.25	
		12 x 150 mL	gs	39.80	477.60
2420-04	Glass	500 mL	gs	61.95	
		12 x 500 mL	gs	50.05	600.60
2420-08	Glass	4 L	gs	241.25	
		4 x 4 L	gs	194.95	779.80

$(CH_3CO)_2O$ FW: 102.09

Meets ACS Specifications

Assay ($(CH_3CO)_2O$) ..... min. 97.0%
Appearance (clear, colorless liquid) ..... Passes Test
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 2 ppm
Iron (Fe) ..... max. 5 ppm
Phosphate (PO_4) ..... max. 0.001%
Residue after Evaporation ..... max. 0.003%
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 5 ppm

CAS: 108-24-7 DENSITY: 1 L = 1.08 kg
IMO: 8:1715 FLASH POINT: 49°C

Acetic Oxide

See Acetic Anhydride

Acetoacetic Ester

See Ethyl Acetoacetate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetone
AR (ACS)
For Histological Use

2440-02	Poly	500 mL	ur	25.60	
		12 x 500 mL	ur	20.80	249.60
2440-06	Glass	1 L	gs	44.15	
		6 x 1 L	gs	35.65	213.90
2440-10	Glass	4 L	gs	117.00	
		4 x 4 L	gs	94.55	378.20
2440-16	Poly	4 L	ur	59.55	
		4 x 4 L	ur	48.40	193.60
2440-22	Steel Pail	20 L	ur	158.95	
2440-24	Steel Drum	350 lb	bp	Inquire	

CH_3COCH_3 FW: 58.08

Meets ACS Requirements

Assay (CH_3COCH_3) (by GC, corrected for water) ..... min. 99.5%
Aldehydes (as HCHO) ..... max. 0.002%
Color (APHA) ..... max. 10
Isopropyl Alcohol ($CH_3CHOHCH_3$)(by GC) ..... max. 0.05%
Methanol (CH_3OH)(by GC) ..... max. 0.05%
Residue after Evaporation ..... max. 0.001%
Solubility in H_2O ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0006
Water (H_2O)(by GC) ..... max. 0.5%

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg IMO: 3:1090
FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
AR (ACS)

2437-04	AR-CAN	950 mL	gs	56.70	
		6 x 950 mL	gs	45.80	274.80

CH_3COCH_3 FW: 58.08

Meets ACS Requirements

Assay (CH_3COCH_3) (by GC, corrected for water) ..... min. 99.5%
Aldehydes (as HCHO) ..... max. 0.002%
Color (APHA) ..... max. 10
Isopropyl Alcohol ($CH_3CHOHCH_3$)(by GC) ..... max. 0.05%
Methanol (CH_3OH)(by GC) ..... max. 0.05%
Residue after Evaporation ..... max. 0.001%
Solubility in H_2O ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0006
Water (H_2O)(by GC) ..... max. 0.5%

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg IMO: 3:1090
FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone

Acetone
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2443-10	SAFEMOR	4 L	gs	125.70	
		4 x 4 L	gs	101.55	406.20

CH_3COCH_3 FW: 58.08

Meets ACS Specifications

Assay (CH_3COCH_3) (by GC, corrected for water) .....min. 99.5%
Aldehydes (as HCHO) .....max. 0.002%
Color (APHA) .....max. 10
Isopropyl Alcohol ($CH_3CHOHCH_3$)(by GC) .....max. 0.05%
Methanol (CH_3OH)(by GC) .....max. 0.05%
Residue after Evaporation .....max. 0.001%
Solubility in H_2O .....Passes Test
Substances Reducing Permanganate .....Passes Test
Titrable Acid (meq/g) .....max. 0.0003
Titrable Base (meq/g) .....max. 0.0006
Water (H_2O)(by GC) .....max. 0.5%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg IMO: 3:1090
FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
H451-06	Glass	1 L	sp	71.15	
		6 x 1 L	sp	48.40	290.40
H451-10	Glass	4 L	sp	139.00	
		4 x 4 L	sp	94.55	378.20
H451-23	NOWPak	20 L	np	523.50	
H451-51	NOWPak	200 L	np	2558.05	

CH_3COCH_3 FW: 58.08

Meets ACS Specifications

Assay (CH_3COCH_3) (by GC, corrected for water) .....min. 99.5%
Aldehydes (as HCHO) .....max. 0.002%
Color (APHA) .....max. 10
Diacetone Alcohol .....Actual Value Reported
Isopropyl Alcohol ($CH_3CHOHCH_3$)(by GC) .....max. 0.05%
Methanol (CH_3OH)(by GC) .....max. 0.05%
Residue after Evaporation .....max. 0.0001%
Solubility in H_2O .....Passes Test
Substances Reducing Permanganate .....Passes Test
Titrable Acid (meq/g) .....max. 0.0003
Titrable Base (meq/g) .....max. 0.0006
Water (H_2O) .....max. 0.5%
Optical Absorbance (1-cm path vs water):
330 nm .....max. 1.00
340 nm .....max. 0.06
400-350 nm .....max. 0.01
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at Emission Maximum for Impurities .....max. 1.0
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol)
Single Impurity Peak (ng/mL) .....max. 5

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg IMO: 3:1090
FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2435-06	Glass	1 L	sp	50.35	
		6 x 1 L	sp	34.25	205.50
2435-10	Glass	4 L	sp	132.90	
		4 x 4 L	sp	90.40	361.60
2435-23	NOWPak	20 L	np	459.10	
2435-51	NOWPak	200 L	np	2389.55	

CH_3COCH_3 FW: 58.08

Meets ACS Specifications

Assay (CH_3COCH_3) (by GC, corrected for water) .....min. 99.5%
Aldehydes (as HCHO) .....max. 0.002%
Color (APHA) .....max. 10
Isopropyl Alcohol ($CH_3CHOHCH_3$)(by GC) .....max. 0.05%
Methanol (CH_3OH)(by GC) .....max. 0.05%
Residue after Evaporation .....max. 0.0005%
Solubility in H_2O .....Passes Test
Substances Reducing Permanganate .....Passes Test
Titrable Acid (meq/g) .....max. 0.0003
Titrable Base (meq/g) .....max. 0.0006
Water (H_2O)(by GC) .....max. 0.5%
Ultraviolet Absorbance (1.00-cm cell vs. water):
330 nm .....max. 1.00
340 nm .....max. 0.10
350 nm .....max. 0.01
375 nm .....max. 0.01
400 nm .....max. 0.01
Filtered through a 0.2 micron filter.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg IMO: 3:1090
FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
NF cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2432-04	Glass	500 mL	fg	32.75	
		12 x 500 mL	fg	26.20	314.40
2432-08	Glass	4 L	fg	152.50	
		4 x 4 L	fg	122.00	488.00
2432-19	Steel Pail	20 L	bs	Inquire	
2432-26	Steel Drum	200 L	bp	Inquire	
2432-27	Steel Drum	295 lb	bp	Inquire	

CH_3COCH_3 FW: 58.08

Meets NF Requirements

Assay (CH_3COCH_3) (anhydrous basis) .....min. 99.0%
Benzene .....max. 2 ppm
Identification A .....Passes Test
Identification B .....Passes Test
Nonvolatile Residue (w/v) .....max. 0.004%
Reaction .....Passes Test
Readily Oxidizable Substances .....Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water (H_2O) .....max. 0.5%
Specific Gravity at 25°C .....max. 0.789
Product Information (not specifications):
Appearance (transparent, colorless liquid)

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg IMO: 3:1090
FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetone
Lab Grade
For Histological Use

cGMP

H580-10	Poly	4 L	gs	123.10	
		4 x 4 L	gs	99.45	397.80
H580-19	Steel Pail	20 L	gs	287.40	

CH_3COCH_3 FW: 58.08

Assay (CH_3COCH_3) (by GC) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Water (H_2O)(by GC) .....max. 0.5%
Product Information (not specifications):
Appearance (transparent, colorless mobile and volatile liquid)

CAS: 67-64-1 DENSITY: 1 L = 0.79 kg
IMO: 3:1090 FLASH POINT: -20°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile
AR (ACS)

0043-04	Glass	500 mL	gs	86.65	
		12 x 500 mL	gs	70.00	840.00
0043-06	Glass	1 L	gs	159.75	
		6 x 1 L	gs	129.10	774.60
0043-08	Glass	4 L	gs	294.10	
		4 x 4 L	gs	237.65	950.60
0043-19	Steel Pail	20 L	sb	820.25	
0043-26	Steel Drum	350 lb	bp	Inquire	

CH_3CN FW: 41.05

Meets ACS Specifications
Assay (CH_3CN) (by GC, corrected for water) .....min. 99.5%
Appearance (clear, colorless liquid,
free of extraneous matter) .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.005%
Titrable Acid (µeq/g) .....max. 8
Titrable Base (µeq/g) .....max. 0.6
Water (H_2O)(by Karl Fischer titrn) .....max. 0.3%

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg IMO: 3:1648
FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Acetonitrile
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

H454-06	Glass	1 L	sp	147.25	
		6 x 1 L	sp	100.15	600.90
H454-10	Glass	4 L	sp	368.75	
		4 x 4 L	sp	250.85	1003.40
H454-23	NOWPak	20 L	np	1264.35	
H454-51	NOWPak	200 L	np	4598.85	

CH_3CN FW: 41.05

Meets ACS Specifications for Liquid Chromatography and UV Spectrophotometry
Assay (CH_3CN) (by GC, corrected for water) .....min. 99.9%
Color (APHA) .....max. 5
Extraction-Concentration Suitability
Absorbance .....Passes Test
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ....max. 5
Sum of the Peaks (µg/L) .....max. 10
GC-ECD Sensitive Impurities
(as Heptachlor Epoxide) Single Peak (ng/L) .....max. 5
Sum of the Peaks (ng/L) .....max. 10
Liquid Chromatography Suitability
Absorbance .....Passes Test
HPLC Gradient Elution (No Peak Greater than
25% of Full Scale)(0.005 au) .....Passes Test
Residue after Evaporation .....max. 0.0001%
Titrable Acid (µeq/g) .....max. 8
Titrable Base (µeq/g) .....max. 0.6
Water (H_2O)(by Karl Fischer titrn) .....max. 0.01%
Ultraviolet Absorbance (1.00-cm cell vs. water):
190 nm .....max. 1.00
195 nm .....max. 0.14
200 nm .....max. 0.05
205 nm .....max. 0.05
210 nm .....max. 0.04
220 nm .....max. 0.02
230 nm .....max. 0.01
254-400 nm .....max. 0.005
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at Emission Maximum for Impurities .....max. 1.0

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg IMO: 3:1648
FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

2856-06	Glass	1 L	sp	123.15	
		6 x 1 L	sp	83.75	502.50
2856-10	Glass	4 L	sp	327.25	
		4 x 4 L	sp	222.60	890.40
2856-23	NOWPak	20 L	np	1050.40	
2856-51	NOWPak	200 L	np	4225.80	

CH_3CN FW: 41.05

Meets ACS Specifications
Assay (CH_3CN) (by GC, corrected for water) .....min. 99.8%
Appearance (clear, colorless liquid) .....Passes Test

Acetonitrile

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0002%
Titrable Acid (µeq/g) ..... max. 8
Titrable Base (µeq/g) ..... max. 0.6
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.02%
HPLC Gradient Elution (No Peak Greater than
25% of Full Scale)(0.005 au) ..... Passes Test
Ultraviolet Absorbance (1.00-cm cell vs. water):
190 nm ..... max. 1.00
200 nm ..... max. 0.05
210 nm ..... max. 0.05
220 nm ..... max. 0.02
230 nm ..... max. 0.01
254-400 nm ..... max. 0.005
Filtered through a 0.2 micron filter.

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg IMO: 3:1648
FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

H076-10	SAFEMOR	4 L	sp	340.30	
		4 x 4 L	sp	231.50	926.00

CH_3CN FW: 41.05

Meets ACS Specifications
Assay (CH_3CN) (by GC, corrected for water) ..... min. 99.8%
Appearance (clear, colorless liquid) ..... Passes Test
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0002%
Titrable Acid (µeq/g) ..... max. 8
Titrable Base (µeq/g) ..... max. 0.6
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.02%
HPLC Gradient Elution (No Peak Greater than
25% of Full Scale)(0.005 au) ..... Passes Test
Ultraviolet Absorbance (1.00-cm cell vs. water):
190 nm ..... max. 1.00
200 nm ..... max. 0.05
210 nm ..... max. 0.05
220 nm ..... max. 0.02
230 nm ..... max. 0.01
254-400 nm ..... max. 0.005
Filtered through a 0.2 micron filter.

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg IMO: 3:1648
FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetonitrile, Low Water
GenAR
Suitable for Use in Biotechnology

V070-23	NOWPak	20 L	np	1272.15	

CH_3CN FW: 41.05

Assay (CH_3CN) (by GC, corrected for water) ..... min. 99.9%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0001%
Titrable Acid (µeq/g) ..... max. 8
Titrable Base (µeq/g) ..... max. 0.6
Water (H_2O)(by KF, coulometric) ..... max. 10 ppm
190 nm ..... max. 1.00
200 nm ..... max. 0.05
210 nm ..... max. 0.05
220 nm ..... max. 0.02
230 nm ..... max. 0.01
235-400 nm ..... max. 0.005
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 75-05-8 DENSITY: 1 L = 0.79 kg IMO: 3:1648
FLASH POINT: 2°C

Solvent Spill Cleanup Products available. See pp. 378.

Acetyl Oxide
See Acetic Anhydride

1,2,4-Acid
See 1-Amino-2-Naphthol-4-Sulfonic Acid

Acid Blue
See Aniline Blue/WS

Acid-Dichromate Cleaning Solution
Lab Grade

V582-46	SAFEMOR	2.5 L	ra	75.90	
		6 x 2.5 L	ra	60.70	364.20

Appearance ..... Passes Test
Phosphate (as Na_3PO_4) ..... max. 0.1%
Sulfuric Acid (w/w) 53-56%
Sodium Dichromate (w/w) 5.3-5.6%
IMO: 8:2922

Acid Fuchsin
Certified OR
Certified for Use in Histology, Andrade Indicator (C.I. 42685)

E071-03	Glass	25 g	so	46.65	

$C_{20}H_{17}N_3Na_2O_9S_3$ FW: 585.54

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum
(1.0 mg/200 mL in H_2O, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test
CAS: 3244-88-0 MERCK INDEX: 13,109

Acids
See Chemical Name, Example-Acid Nitric, See Nitric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Adipic Acid
OR

1801-59	Glass	500 g	so	58.75	

$HOCO(CH_2)_4COOH$ FW: 146.14

Melting Range .....151.5-154 °C.
Product Information (not specifications):
Appearance (white crystals or powder)
CAS: 124-04-9 FLASH POINT: 196°C

Agarose (Low Gel Temperature)
GenAR
Suitable for Use in Biotechnology and Electrophoresis

7720-04	POLYSTORMOR	100 g	ge	558.05	
		6 x 100 g	ge	501.20	3007.20

Ash .....max. 0.5%
Electroendosmosis (EEO)($-m_r$) .....max. 0.15
Gelling Temperature .....24-28 °C.
Moisture .....max. 10%
Sulfate (SO_4) .....max. 0.15%
Product Information (not specifications):
Appearance (fine, white or slightly tan granular powder)
CAS: 9012-36-6

Agarose (High Gel Temperature)
GenAR
Suitable for Use in Biotechnology and Electrophoresis

7735-04	POLYSTORMOR	100 g	ge	221.85	
		6 x 100 g	ge	199.25	1195.50

Ash .....max. 0.60%
Electroendosmosis (EEO)($-m_r$) .....max. 0.1
Gel Strength of 1% Gel (g/cm^2) .....min. 900
Gelling Temperature .....40.5-43.5 °C.
Melting Temperature of 1.5% w/w Solution .....85.5-88.5 °C.
Moisture .....max. 10%
Sulfate (SO_4) .....max. 0.2%
Product Information (not specifications):
Appearance (fine, white or slightly tan granular powder)
CAS: 9012-36-6

Alcohol Amyl
See Amyl Alcohol, Normal

Alcohol Butyl
See Butyl Alcohol

Alcohol Denatured
See Ethyl and Reagent Alcohol

Alcohol Ethyl
See Ethyl Alcohol

Alcohol Isopropyl
See Isopropyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Alcohol Methyl
See Methyl Alcohol

Alcohol Reagent
See Reagent Alcohol

Aluminum Ammonium Sulfate, 12-Hydrate, Crystal
AR

3212-12	POLYSTORMOR	500 g	gd	114.95	
		4 x 500 g	gd	91.95	367.80

$AlNH_4(SO_4)_2 \cdot 12H_2O$ FW: 453.32

Arsenic (As) .....max. 0.00005%
Chloride (Cl) .....max. 0.0005%
Heavy Metals (as Pb) .....max. 0.001%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.0005%
Solubility (20 in 150) .....Passes Test
Substances not Precipitated by NH_4OH .....max. 0.10%
Product Information (not specifications):
Appearance (colorless, transparent crystals)
CAS: 7784-26-1

Aluminum Potassium Sulfate, 12-Hydrate, Granular
AR (ACS)

3216-20	STAKMOR	12 kg	bs	Inquire	

$AlK(SO_4)_2 \cdot 12H_2O$ FW: 474.38

Meets ACS Specifications
Assay ($AlK(SO_4)_2 \cdot 12H_2O$) 98.0-102.0%
Ammonium (NH_4) .....max. 0.005%
Chloride (Cl) .....max. 5 ppm
Heavy Metals (as Pb) .....max. 0.001%
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.001%
Sodium (Na) .....max. 0.02%
Solubility .....Passes Test
Product Information (not specifications):
Appearance (white granules)
CAS: 7784-24-9

See the Academic section for research and chemical stockroom product information, starting on page 91.

Aluminum Sulfate Hydrated

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Aluminum Sulfate Hydrated, Crystal
AR (ACS)

3208-04	POLYSTORMOR	500 g	gd	151.10	
		12 x 500 g	gd	120.85	1450.20
3208-06	Poly	2.5 kg	gd	638.50	
		4 x 2.5 kg	gd	510.80	2043.20

$Al_2(SO_4)_3 \cdot 16H_2O$ FW: 630.40

Meets ACS Specifications

Assay ($Al_2(SO_4)_3 \cdot 16H_2O$) 98.0-102.0%
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.002%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Solubility (5 in 100) ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... Actual Value Reported

Product Information (not specifications):
Appearance (mixture of large and small crystals and white powder)

CAS: 7784-31-8

Amberlite Ion Exchange Resins
See Ion Exchange Resins

Amidosulfonic Acid
See Sulfamic Acid, 99%

Aminoacetic Acid
See Glycine

Aminobenzene
See Aniline

Aminoethanoic Acid
See Glycine

2-Amino-2-Hydroxymethyl-1,3-Propanediol
See Tris(Hydroxymethyl)Aminomethane

1-Amino-2-Naphthol-4-Sulfonic Acid
OR

1807-55	Glass	25 g	so	93.40	

$NH_2C_{10}H_5(OH)SO_3H$ FW: 239.25

Identification ..... Passes Test

Product Information (not specifications):
Appearance (purple powder)

CAS: 116-63-2

Aminophen
See Aniline

Ammonia Solution, Strong
NF
27% w/w; 26° Baume

cGMP

3248-14	Glass	500 mL	fa	53.50	
		6 x 500 mL	fa	42.80	256.80
3248-44	Glass	2.5 L	fa	68.35	
		4 x 2.5 L	fa	54.65	218.60
3248-08	Glass	7 lb	fa	85.00	
		4 x 7 lb	fa	68.00	272.00
3248-26	Lined Steel Dr	385 lb	bp	Inquire	

NH_4OH FW: 35.05

Meets NF Requirements

Assay (as NH_3) 27.0-31.0%
Heavy Metals (as Pb) ..... max. 0.0013%
Identification ..... Passes Test
Nonvolatile Matter ..... max. 0.05%
Readily Oxidizable Substances ..... Passes Test

Product Information (not specifications):
Appearance (colorless, transparent liquid)

CAS: 7664-41-7 DENSITY: 1 L = 0.90 kg IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonia Water
See Ammonium Hydroxide

Ammonium Acetate, Crystal
AR (ACS)

3272-02	POLYSTORMOR	125 g	gd	48.25	
		12 x 125 g	gd	38.60	463.20
3272-04	POLYSTORMOR	500 g	gd	91.40	
		12 x 500 g	gd	73.10	877.20
3272-06	Poly	2.5 kg	gd	267.45	
		4 x 2.5 kg	gd	213.95	855.80
3272-20	Lined Fiber Dr	12 kg	bs	Inquire	
3272-26		200 lb	bp	Inquire	

CH_3COONH_4 FW: 77.08

Meets ACS Requirements

Assay (CH_3COONH_4) ..... min. 97%
Appearance (colorless crystals) ..... Passes Test
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
Nitrate (NO_3) ..... max. 0.001%
pH of 5% Solution at 25°C 6.7-7.3
Residue after Ignition ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.001%

CAS: 631-61-8

Ammonium Alum
See Aluminum Ammonium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Carbonate
AR (ACS)

3352-04	Glass	500 g	gd	59.90	
		12 x 500 g	gd	47.90	574.80
3352-20	STAKMOR	12 kg	bs	Inquire	

Meets ACS Specifications

Assay (as NH_3) ..... min. 30%
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
Nonvolatile Matter ..... max. 0.01%
Sulfur Compounds (as SO_4) ..... max. 0.002%

CAS: 10361-29-2

Ammonium Chloride, Crystal
AR (ACS)

3384-12	POLYSTORMOR	500 g	gd	51.45	
		4 x 500 g	gd	41.15	164.60
3384-06	Poly	2.5 kg	gd	182.45	
		4 x 2.5 kg	gd	145.95	583.80
3384-20	Lined Fiber Dr	12 kg	bs	Inquire	

NH_4Cl FW: 53.49

Meets ACS Specifications

Assay (NH_4Cl) (by Ag titrn) ..... min. 99.5%
Calcium (Ca) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 2 ppm
Magnesium (Mg) ..... max. 5 ppm
pH of 5% Solution at 25°C 4.5-5.5
Phosphate (PO_4) ..... max. 2 ppm
Residue after Ignition ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.002%
Appearance (white crystals) ..... Passes Test

CAS: 12125-02-9

Ammonium Chloride, Granular
USP, FCC

cGMP

3364-12	POLYSTORMOR	500 g	fg	68.75	
		4 x 500 g	fg	55.00	220.00
3364-32		50 lb	bp	Inquire	
3364-19	Lined Fiber Dr	260 lb	bp	Inquire	

NH_4Cl FW: 53.49

Meets USP & FCC Requirements

Assay (NH_4Cl) (dried basis) 99.5-100.5%
Heavy Metals (as Pb) ..... max. 10 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Lead (Pb) ..... max 4 mg/kg
Loss on Drying ..... max. 0.5%
pH 4.6-6.0
Residue on Ignition ..... max. 0.1%
Thiocyanate (SCN) ..... Passes Test

Product Information (not specifications):
Appearance (white granules)

CAS: 12125-02-9

Ammonium Chloride-Hydroxide Buffer (APHA)
StandARd

H004-05	Poly	1 L	st	33.30	

pH 10.08-10.12

Product Information (not specifications):
Appearance (clear, colorless solution)

DENSITY: 1 L = 1.0 kg IMO: 8:2922

Ammonium Hydroxide
AR Select (ACS)
For Trace Element Analysis

6665-14	Glass	500 mL	as	40.90	
		6 x 500 mL	as	25.55	153.30
6665-18	Poly	2.5 L	ur	66.75	
		6 x 2.5 L	ur	50.05	300.30
6665-46	SAFEMOR	2.5 L	as	88.25	
		6 x 2.5 L	as	55.15	330.90

NH_4OH FW: 35.05

Meets ACS Specifications

Assay (as NH_3) 28.0-30.0%
Appearance ..... Passes Test
Arsenic (As) ..... Actual Value Reported
Carbon Dioxide (CO_2) ..... max. 0.002%
Chloride (Cl) ..... max. 0.5 ppm
Heavy Metals (as Pb) ..... max. 0.5 ppm
Nitrate (NO_3) ..... max. 2 ppm
Phosphate (PO_4) ..... max. 2 ppm
Pyridine ..... Passes Test
Residue after Ignition ..... max. 0.002%
Substances Reducing Permanganate ..... Passes Test
Specific Gravity ..... Actual Value Reported
Total Sulfur (as SO_4) ..... max. 2 ppm

Trace Impurities (in ppm):
Determined by Flame Photometry & ICP

Aluminum (Al) ..... max. 0.1
Barium (Ba) ..... max. 0.1
Beryllium (Be) ..... max. 0.01
Bismuth (Bi) ..... max. 0.01
Boron (B) ..... max. 0.05
Cadmium (Cd) ..... max. 0.1
Calcium (Ca) ..... max. 0.1
Chromium (Cr) ..... max. 0.05
Cobalt (Co) ..... max. 0.05
Copper (Cu) ..... max. 0.05
Gallium (Ga) ..... max. 0.5
Germanium (Ge) ..... max. 0.5
Gold (Au) ..... max. 0.5
Iron (Fe) ..... max. 0.1
Lead (Pb) ..... max. 0.2
Lithium (Li) ..... max. 0.05

Ammonium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium (Mg) ..... max. 0.1
Manganese (Mn) ..... max. 0.05
Mercury (Hg) ..... max. 0.5
Molybdenum (Mo) ..... max. 0.01
Nickel (Ni) ..... max. 0.5
Potassium (K) ..... max. 0.1
Silicon (Si) ..... max. 0.1
Silver (Ag) ..... max. 0.05
Sodium (Na) ..... max. 0.5
Strontium (Sr) ..... max. 0.1
Thallium (Tl) ..... max. 0.05
Tin (Sn) ..... max. 0.1
Vanadium (V) ..... max. 0.01
Zinc (Zn) ..... max. 0.1
Zirconium (Zr) ..... max. 0.01

CAS: 1336-21-6 DENSITY: 1 L = 0.9 kg IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonium Hydroxide (28.0-30.0 as NH_3)

AR (ACS)
(26° Baume)

3256-05	Poly	500 mL	ur	26.65	
		12 x 500 mL	ur	21.30	255.60
3256-14	Glass	500 mL	ra	43.00	
		6 x 500 mL	ra	25.30	151.80
3256-48	Deal-AR-Pak	6 x 2.5 L	ra	68.00	408.00
3256-45	Poly	4 L	ur	54.50	
		4 x 4 L	ur	43.60	174.40
3256-20	Lined Steel Dr	385 lb	bp	Inquire	

NH_4OH FW: 35.05

Meets ACS Requirements

Assay (as NH_3) 28.0-30.0%
Appearance ..... Passes Test
Carbon Dioxide (CO_2) ..... max. 0.002%
Chloride (Cl) ..... max. 0.5 ppm
Heavy Metals (as Pb) ..... max. 0.5 ppm
Nitrate (NO_3) ..... max. 2 ppm
Phosphate (PO_4) ..... max. 2 ppm
Residue after Ignition ..... max. 0.002%
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 2 ppm
Arsenic and Antimony (as As) ..... max. 3 ppm

Trace Impurities (in ppm):

Aluminum (Al) ..... max. 0.3
Boron (B) ..... max. 0.1
Calcium (Ca) ..... max. 0.3
Chromium (Cr) ..... max. 0.2
Copper (Cu) ..... max. 0.1
Gold (Au) ..... max. 0.3
Iron (Fe) ..... max. 0.2
Lead (Pb) ..... max. 0.2
Magnesium (Mg) ..... max. 0.3
Manganese (Mn) ..... max. 0.2
Nickel (Ni) ..... max. 0.1
Potassium (K) ..... max. 0.3
Sodium (Na) ..... max. 2.0
Tin (Sn) ..... max. 0.3
Titanium (Ti) ..... max. 0.3
Zinc (Zn) ..... max. 0.3

CAS: 1336-21-6 DENSITY: 1 L = 0.9 kg IMO: 8:2672

Caustic Spill Cleanup Products available. See pp. 378.

Ammonium Iodide, Granular

AR (ACS)

0920-12	Glass	500 g	gd	338.45	
		4 x 500 g	gd	270.75	1083.00

NH_4I FW: 144.94

Meets ACS Specifications

Assay (NH_4I) ..... min. 99.0%
Solubility (10 in 50) ..... Passes Test
Barium (Ba) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.05%
Chloride and Bromide (as Cl) ..... max. 0.005%
Phosphate (PO_4) ..... max. 0.001%
Residue after Ignition ..... max. 0.05%

Product Information (not specifications):
Appearance (fine, white to slightly yellow granules)

CAS: 12027-06-4

Ammonium Molybdate, 4-Hydrate, Crystal

AR (ACS)

3420-02	POLYSTORMOR	125 g	gd	117.40	
		12 x 125 g	gd	93.90	1126.80
3420-04	POLYSTORMOR	500 g	gd	268.50	
		12 x 500 g	gd	214.80	2577.60
3420-06	Poly	2.5 kg	gd	1102.75	
		4 x 2.5 kg	gd	882.20	3528.80
3420-20	STAKMOR	12 kg	bs	Inquire	
3420-19	Lined Fiber Dr	100 lb	bp	Inquire	

$(NH_4)_6Mo_7O_{24}{\cdot}4H_2O$ FW: 1235.86

Meets ACS Specifications

Assay (as MoO_3) 81.0-83.0%
Appearance ..... Passes Test
Arsenate, Phosphate and Silicate (as SiO_2) ..... max. 0.001%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.005%
Magnesium (Mg) ..... max. 0.005%
Nitrate (NO_3) ..... Passes Test
Potassium (K) ..... max. 0.01%
Phosphate (PO_4) ..... max. 0.0005%
Sodium (Na) ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.02

CAS: 12054-85-2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium Nitrate, Crystal
AR (ACS)

3436-12	POLYSTORMOR	500 g	gd	51.90	
		4 x 500 g	gd	41.50	166.00
3436-06	Poly	2.5 kg	gd	163.75	
		4 x 2.5 kg	gd	131.00	524.00
3436-20	STAKMOR	12 kg	bs	Inquire	

NH_4NO_3 FW: 80.04

Meets ACS Specifications

Assay (as NH_4NO_3) ..... min. 95.0%
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 2 ppm
Nitrite (NO_2) ..... Passes Test
pH of 5% Solution at 25°C 4.5-6.0
Phosphate (PO_4) ..... max. 5 ppm
Residue after Ignition ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.002%

CAS: 6484-52-2 IMO: 5.1:1942

Ammonium Peroxydisulfate
See Ammonium Persulfate

Ammonium Persulfate, Crystal
AR (ACS)
(ammonium peroxydisulfate)

3460-04	POLYSTORMOR	500 g	gd	54.25	
		12 x 500 g	gd	43.40	520.80
3460-06	Poly	2.5 kg	gd	216.00	
		4 x 2.5 kg	gd	172.80	691.20
3460-20	Lined Fiber Dr	12 kg	bs	Inquire	

$(NH_4)_2S_2O_8$ FW: 228.20

Meets ACS Specifications

Assay ($(NH_4)_2S_2O_8$) ..... min. 98.0%
Chloride and Chlorate (as Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.005%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Manganese (Mn) ..... max. 0.5 ppm
Residue after Ignition ..... max. 0.05%
Titrable Free Acid (meq/g) ..... max. 0.04

Product Information (not specifications):
Appearance (colorless or white to slightly yellow crystals)

CAS: 7727-54-0 IMO: 5.1:1444

Ammonium Phosphate, Monobasic, Granular
AR (ACS)

3476-20	STAKMOR	12 kg	bs	Inquire	

$NH_4H_2PO_4$ FW: 115.03

Meets ACS Specifications

Assay ($NH_4H_2PO_4$) ..... min. 98.0%
Calcium (Ca) ..... max. 0.001%
Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.0005%
Nitrate (NO_3) ..... max. 0.001%
pH of 5% Solution at 25°C 3.8-4.4
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.01%

Product Information (not specifications):
Appearance (small, white granules or colorless crystals)

CAS: 7722-76-1

Ammonium Phosphate, Dibasic, Crystal
AR (ACS)

3484-20	STAKMOR	12 kg	bs	Inquire	

$(NH_4)_2HPO_4$ FW: 132.06

Meets ACS Specifications

Assay ($(NH_4)_2HPO_4$) ..... min. 98.0%
Calcium (Ca) ..... max. 0.001%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.0005%
Nitrate (NO_3) ..... max. 0.003%
pH of 5% Solution at 25°C 7.7-8.1
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.01%

Product Information (not specifications):
Appearance (fine, colorless crystalline granules)

CAS: 7783-28-0

Ammonium Sulfate, Granular
AR (ACS)

3512-02	POLYSTORMOR	125 g	gd	51.20	
		12 x 125 g	gd	40.95	491.40
3512-12	POLYSTORMOR	500 g	gd	40.70	
		4 x 500 g	gd	32.55	130.20
3512-06	Poly	2.5 kg	gd	109.90	
		4 x 2.5 kg	gd	87.90	351.60
3512-20	STAKMOR	12 kg	bs	Inquire	
3512-88	Flowmor	12 kg	bs	Inquire	
3512-25	Poly Drum	100 lb	bp	Inquire	
3512-18	Poly Drum	210 lb	bp	Inquire	
3512-65	Flowmor	100 kg	bp	Inquire	
3512-28	Lined Fiber Dr	250 lb	bp	Inquire	

$(NH_4)_2SO_4$ FW: 132.14

Meets ACS Specifications

Assay ($(NH_4)_2SO_4$) (ACS) ..... min. 99.0%
Residue on Ignition ..... max. 0.005%

Ammonium Sulfide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

pH of 5% Solution at 25°C 5.0-6.0
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 3 ppm
Nitrate (NO_3) .....max. 0.001%
Phosphate (PO_4) .....max. 3 ppm
Heavy Metals (as Pb) .....max. 5 ppm
Iron (Fe) .....max. 5 ppm

CAS: 7783-20-2

Ammonium Sulfide Solution
AR

3524-04	Glass	500 mL	gs	128.85	
		12 x 500 mL	gs	104.10	1249.20
3524-12	Glass	2.5 L	gs	503.70	
		4 x 2.5 L	gs	407.00	1628.00

$(NH_4)_2S$ FW: 68.15

Assay (as $(NH_4)_2S$) 20.0-24.0%
Antimony (Sb) .....max. 0.0005%
Arsenic (As) .....max. 0.0001%
Carbonate (CO_3) .....max. 0.005%
Chloride (Cl) .....max. 0.005%
Residue after Ignition .....max. 0.04%
Product Information (not specifications):
Appearance (clear, yellow solution)

CAS: 12135-76-1 DENSITY: 1 L = 1.0 kg IMO: 8:2683
FLASH POINT: 22°C

Solvent Spill Cleanup Products available. See pp. 378.

Amyl Acetate
AR

3568-04	Glass	500 mL	gs	58.65	
		12 x 500 mL	gs	47.40	568.80
3568-08	Glass	4 L	gs	239.45	
		4 x 4 L	gs	193.50	774.00

$CH_3COOC_5H_{11}$ FW: 130.21

Acidity (as CH_3COOH) .....max. 0.01%
Boiling Range .....140.0-150.0 °C.
Nonvolatile Matter .....max. 0.01%
Specific Gravity at 25°/25°C 0.870-0.875
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 628-63-7 DENSITY: 1 L = 0.87 kg IMO: 3:1104
FLASH POINT: 25°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Amyl Alcohol, Normal
AR

2996-04	Glass	500 mL	gs	82.25	
		12 x 500 mL	gs	66.45	797.40
2996-08	Glass	4 L	gs	322.75	
		4 x 4 L	gs	260.80	1043.20

$CH_3(CH_2)_3CH_2OH$ FW: 88.15

Assay ($CH_3(CH_2)_3CH_2OH$) (by GC) .....min. 98.0%
Residue after Evaporation .....max. 0.003%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 71-41-0 DENSITY: 1 L = 0.81 kg IMO: 3:1105
FLASH POINT: 33°C

Solvent Spill Cleanup Products available. See pp. 378.

Aniline
AR (ACS)

3584-04	Glass	500 mL	gs	71.40	
		12 x 500 mL	gs	57.70	692.40
3584-08	Glass	4 L	gs	288.45	
		4 x 4 L	gs	233.10	932.40

$C_6H_5NH_2$ FW: 93.13

Meets ACS Specifications
Assay ($C_6H_5NH_2$) (by GC, corrected for water) .....min. 99.0%
Chlorobenzene (C_6H_5Cl) .....max. 0.01%
Color (APHA) .....max. 250
Hydrocarbons .....Passes Test
Nitrobenzene ($C_6H_5NO_2$) (Limit approx. 0.001%) .....Passes Test
Residue after Ignition .....max. 0.005%
Product Information (not specifications):
Appearance (colorless to yellow, oily liquid)

CAS: 62-53-3 DENSITY: 1 L = 1.022 kg IMO: 6.1:1547
FLASH POINT: 70°C

Solvent Spill Cleanup Products available. See pp. 378.

Aniline Blue/WS
Certified OR
Certified by Biological Stain Commission

H179-55	Glass	25 g	so	60.90	

$C_{32}H_{25}N_3Na_2O_9S_3$ FW: 737.74

Total Dye Content (mL/0.1N $TiCl_3$/gm) .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported

CAS: 28631-66-5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

p-Anisaldehyde (p-methoxybenzaldehyde)
OR

1998-58	Glass	250 g	so	317.85	

$CH_3OC_6H_4CHO$ FW: 136.15

Assay ($CH_3OC_6H_4CHO$) ..... min. 97.5%
Infrared Spectrum ..... Conforms to Reference Standard
Product Information (not specifications):
Appearance (clear, colorless to slightly yellow liquid)

CAS: 123-11-5 DENSITY: 1 L = 1.119 kg FLASH POINT: 121°C

Anone
See Cyclohexanone

Antimony Potassium Tartrate, Trihydrate, Powder
USP cGMP

2388-04	POLYSTORMOR	500 g	fg	190.20	
		12 x 500 g	fg	152.15	1825.80

$C_8H_4K_2O_{12}Sb_2 \cdot 3H_2O$ FW: 667.85

Meets USP Requirements
Assay ($C_8H_4K_2O_{12}Sb_2 \cdot 3H_2O$) 99.0-103.0%
Solubility (5 in 100) ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Arsenic (As) ..... max. 0.015%
Completeness of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Loss on Drying at 105°C ..... max. 2.7%
Lead (Pb) ..... max. 0.002%
Product Information (not specifications):
Appearance (white powder)

CAS: 28300-74-5 IMO: 6.1:1551

L-Ascorbic Acid
AR (ACS)

4407-02	Glass	100 g	gd	53.20	
		12 x 100 g	gd	42.55	510.60
4407-04	Glass	500 g	gd	239.15	
		12 x 500 g	gd	191.30	2295.60

$C_6H_8O_6$ FW: 176.13

Meets ACS Requirements
Assay ($C_6H_8O_6$) ..... min. 99.0%
Appearance (colorless or white to slightly yellow crystals) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.001%
Residue on Ignition ..... max. 0.1%
Specific Rotation, $[\alpha]^{25}_D$ (c = 10 in water) ..... +20.5 - +21.5°

CAS: 50-81-7

Ascorbic Acid
USP cGMP

1852-57	Glass	100 g	fg	80.40	
1852-10	Glass	500 g	fg	212.65	
		6 x 500 g	fg	170.10	1020.60

$C_6H_8O_6$ FW: 176.13

Meets USP Requirements
Appearance (fine, white to slightly yellow crystals) ..... Passes Test
Assay ($C_6H_8O_6$) 99.0-100.5%
Specific Rotation $[\alpha]^{25}_D$ ..... +20.5 - +21.5°
Residue on Ignition ..... max. 0.1%
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Solubility (10 in 100) ..... Passes Test

CAS: 50-81-7

Ascorbic Acid, Very Fine Powder
USP cGMP

8829-03	Glass	500 g	fg	256.40	

$C_6H_8O_6$ FW: 176.13

Meets USP Requirements
Assay ($C_6H_8O_6$) 99.0-100.5%
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Residue on Ignition ..... max. 0.1%
Solubility (10 in 100) ..... Passes Test
Specific Rotation, $[\alpha]^{25}_D$ (c = 10 in water) ..... +20.5 - +21.5°
Product Information (not specifications):
Appearance (fine, heavy, white to slightly yellow powder)

CAS: 50-81-7

Auramine O
Certified OR
Certified for Use in General Staining in Fluorescence Microscopy. (C.I. 41000)

E056-03	Glass	25 g	so	123.30	

$C_{17}H_{21}N_3 \cdot HCl$ FW: 303.84

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum
(1.0 mg/200 mL in H_2O, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 2465-27-2

Barbituric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Barbituric Acid
OR

2046-57	Glass	100 g	so	69.10	

$C_4H_4N_2O_3$ FW: 128.09

Assay ($C_4H_4N_2O_3$) ..... min. 99.0%

Product Information (not specifications):
Appearance (white to yellowish powder)

CAS: 67-52-7

Barium Acetate, Powder
AR (ACS)

3716-06	Poly	2.5 kg	gd	289.40	
		4 x 2.5 kg	gd	231.50	926.00

$Ba(C_2H_3O_2)_2$ FW: 255.42

Meets ACS Requirements

Assay ($(CH_3COO)_2Ba$) 99.0-102.0%
Calcium (Ca) ..... max. 0.05%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Loss on Drying at 105°C ..... max. 1.0%
Oxidizing Substances (as NO_3) ..... max. 0.005%
Potassium (K) ..... max. 0.003%
Sodium (Na) ..... max. 0.005%
Solubility (10 in 100) ..... Passes Test
Strontium (Sr) ..... max. 0.2%

Product Information (not specifications):
Appearance (white crystals or powder)

CAS: 543-80-6 IMO: 6.1:1564

Barium Carbonate, Powder
AR (ACS)

3736-20	STAKMOR	12 kg	bs	Inquire

$BaCO_3$ FW: 197.34

Meets ACS Requirements

Assay ($BaCO_3$) 99.0-101.0%
Calcium (Ca) ..... max. 0.05%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble in Dilute HCl ..... max. 0.015%
Iron (Fe) ..... max. 0.002%
Oxidizing Substances (as NO_3) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Strontium (Sr) ..... max. 0.7%
Sulfide (S) ..... max. 0.001%
Water-Soluble Titrable Base (meq/g) ..... max. 0.002

Product Information (not specifications):
Appearance (white powder)

CAS: 513-77-9 IMO: 6.1:1564

Barium Chloride, Dihydrate, Granular
AR (ACS)

3756-02	POLYSTORMOR	125 g	gd	46.60	
		12 x 125 g	gd	37.25	447.00
3756-12	POLYSTORMOR	500 g	gd	75.00	
		4 x 500 g	gd	60.00	240.00
3756-06	Poly	2.5 kg	gd	344.65	
		4 x 2.5 kg	gd	275.70	1102.80
3756-20	STAKMOR	12 kg	bs	Inquire	

$BaCl_2 \cdot 2H_2O$ FW: 244.27

Meets ACS Specifications

Assay ..... min. 99.0%
Calcium (Ca) ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.0002%
Loss on Drying at 150°C 14.0-16.0%
Oxidizing Substances (as NO_3) ..... max. 0.005%
Potassium (K) ..... max. 0.0025%
pH of 5% Solution at 25°C 5.2-8.2
Sodium (Na) ..... max. 0.005%
Solubility ..... Passes Test
Strontium (Sr) ..... max. 0.1%

Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 10326-27-9 IMO: 6.1:1564

Barium Sulfate
USP cGMP

8821-04	Glass	500 g	fg	143.15	
		12 x 500 g	fg	114.50	1374.00

$BaSO_4$ FW: 233.39

Meets USP Requirements

Assay ($BaSO_4$) 97.5-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
pH of(10% Aqueous Solution) 3.5-10.0
Acid-Soluble Substances ..... max. 0.3%
Soluble Barium Salts ..... max. 0.001%
Bulkiness (mL) ..... min. 11
Heavy Metals (as Pb) ..... max. 0.001%
Sulfide (µg/g) ..... max. 0.5

Product Information (not specifications):
Appearance (fine, white powder)

CAS: 7727-43-7

Basic Fuchsin Hydrochloride
Certified OR
Certified by Biological Stain Commission

H181-55	Glass	25 g	so	87.95	

$C_{20}H_{19}N_3 \cdot HCl$ FW: 337.85

Spectral Absorbance ..... Passes Test

Product Information (not specifications):
Appearance (dark green crystalline powder)

CAS: 632-99-5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Basic Fuchsin Hydrochloride

Certified OR
Certified for use in Histology (PAS, Feulgen, and Aldehyde) and Bacteriology (Staining in Media) (C.I. 42510)

E064-03	Glass	25 g	so	41.80	

$CH_3(NH_2)C_6H_3C(C_6H_4NH_2):C_6H_4:NH{\cdot}HCl$ FW: 337.85

Certified by the Biological Stain Commission

Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.2 mg/200 mL in 50% C_2H_5OH, 1-cm path vs water) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 632-99-5

Benzenecarbonyl Chloride
See Benzoyl Chloride

Benzenecarboxylic Acid
See Benzoic Acid

Benzene Chloride
See Chlorobenzene

1,3-Benzenediol
See Resorcinol

Benzenemethanol
See Benzyl Alcohol

Benzin, Petroleum
See Petroleum Ether

Benzoic Acid, Crystal

USP cGMP

0108-03	POLYSTORMOR	500 g	fg	133.65	
0108-08	Poly	2 kg	fg	395.50	
		4 x 2 kg	fg	316.40	1265.60
0108-25	Lined Fiber Dr	50 kg	bp	Inquire	

C_6H_5COOH FW: 122.12

Meets USP Requirements

Assay (C_6H_5COOH) (anhydrous basis) 99.5-100.5%
Congealing Range ..... 121-123 °C.
Heavy Metals (as Pb) ..... max. 10 ppm
Identification ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Readily Oxidizable Substances ..... Passes Test
Residue on Ignition ..... max. 0.05%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.7%

Product Information (not specifications):
Appearance (white crystals)

CAS: 65-85-0 FLASH POINT: 121°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Benzoyl Chloride

AR (ACS)

3868-04	Glass Single Shipper	500 mL	gs	207.55	
		12 x 500 mL	gs	167.70	2012.40

C_6H_5COCl FW: 140.57

Meets ACS Specifications

Assay (C_6H_5COCl) 98.0-100.5%
Appearance (clear, colorless liquid) ..... Passes Test
Freezing Point ..... 2.0 °C.
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Phosphorus Compounds (as P) ..... max. 0.002%
Residue after Ignition ..... max. 0.005%

CAS: 98-88-4 DENSITY: 1 L = 1.21 kg IMO: 8:1736
FLASH POINT: 72°C

Benzyl Alcohol

NF cGMP

1403-12	Glass	1 L	fg	141.45	
		6 x 1 L	fg	113.15	678.90
1403-10	Glass	4 L	fg	362.95	
		4 x 4 L	fg	290.35	1161.40
1403-19	Steel Pail	20 L	bs	Inquire	

$C_6H_5CH_2OH$ FW: 108.14

Meets NF Requirements

Assay ($C_6H_5CH_2OH$) 98.0-100.5%
Acidity ..... Passes Test
Clarity of Solution ..... Passes Test
Color of Solution ..... Passes Test
Identification ..... Passes Test
Nonvolatile Residue ..... max. 0.05%
Peroxide Value ..... max. 5
Refractive Index, η^{20}_D 1.538-1.541

Related Compounds:
Benzaldehyde ..... max. 0.15%
Benzene ..... max. 2 ppm
Cyclohexylmethanol ..... max. 0.10%
Ethylbenzene and dicyclohexyl ..... Passes Test
Total Other Peaks < R_T of Benzyl Alcohol ..... max. 0.04%
Total Peaks > R_T of Benzyl Alcohol ..... max. 0.3%
Solubility ..... Passes Test

This product is not intended for use in preparing parenteral dosage forms.

CAS: 100-51-6 DENSITY: 1 L = 1.05 kg FLASH POINT: 93°C

Solvent Spill Cleanup Products available. See pp. 378.

Benzyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Benzyl Alcohol
AR

1816-04	Glass	500 mL	gs	79.95	
		12 x 500 mL	gs	64.60	775.20

$C_6H_5CH_2OH$ FW: 108.14

Assay ($C_6H_5CH_2OH$) 97.0-100.5%
Residue on Ignition .....max. 0.005%
Solubility .....Passes Test
Specific Gravity at 25°/25°C 1.042-1.047
Identification .....Passes Test
Refractive Index, η^{20}_D 1.539-1.541
Acidity .....Passes Test
Nonvolatile Residue .....max. 0.05%
Halogenated Compounds and Halides (as Cl) .....max. 0.03%
Benzaldehyde .....max. 0.20%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 100-51-6 DENSITY: 1 L = 1.05 kg FLASH POINT: 93°C

Solvent Spill Cleanup Products available. See pp. 378.

BIS
GenAR
(N,N'-methylenesbisacrylamide)
Suitable for Use in Biotechnology

7731-02	POLYSTORMOR	25 g	ge	39.90	
		6 x 25 g	ge	35.85	215.10

$CH_2(NHCOCH{:}CH_2)_2$ FW: 154.17

Assay ($CH_2(NHCOCH{:}CH_2)_2$) .....min. 99.0%
Heavy Metals (as Pb) .....max. 0.0002%
Acidity .....max. 0.2%
Enzyme Activity:
DNase Activity .....Passes Test
RNase Activity .....Passes Test
Protease Activity .....Passes Test
Product Information (not specifications):
Appearance (fine, white crystalline powder)

CAS: 110-26-9

Bismarck Brown Y
Certified OR
Certified for Use in Histology and Bacteriology (Staining) (C.I. 21000)

E050-03	Glass	25 g	so	58.35	

$C_{18}H_{18}N_8{:}2HCl$ FW: 419.32

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum (2.0 mg/200 mL in 50% C_2H_5OH and 0.005 N HCl, 1-cm path) .....Actual Value Reported
Biological Test .....Passes Test

CAS: 10114-58-6 MERCK INDEX: 13,1253

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Bismuth Subcarbonate, Powder
Purified

0292-02	POLYSTORMOR	125 g	gd	235.15	
		12 x 125 g	gd	188.10	2257.20
0292-20	STAKMOR	12 kg	bs	Inquire	

$(BiO)_2CO_3$ FW: 509.97

Assay (Bi_2O_3) .....min. 90.0%
Alkalies and Alkaline Earths .....max. 0.5%
Arsenic (As) .....max. 0.0008%
Chloride (Cl) .....max. 0.07%
Copper (Cu) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Lead (Pb) .....Passes Test
Loss on Drying .....max. 2.0%
Nitrate (NO_3) .....max. 0.75%
Silver (Ag) .....Passes Test
Sulfate (SO_4) .....Passes Test
Suspension Test for Dirt .....Passes Test
Bulk (fl. oz/lb) 28-38
Product Information (not specifications):
Appearance (fine, white to pale-yellow powder)

CAS: 5892-10-4

Blue Vitriol
See Cupric Sulfate

Borax
See Sodium Borate

Boric Acid, Granular
AR (ACS)

2549-04	POLYSTORMOR	500 g	gd	62.45	
		12 x 500 g	gd	49.95	599.40
2549-06	Poly	2.5 kg	gd	242.15	
		4 x 2.5 kg	gd	193.70	774.80
2549-20	STAKMOR	12 kg	bs	Inquire	
2549-19	Poly Pail	12 kg	bs	Inquire	
2549-26	Lined Fiber Dr	15x10 kg	bp	Inquire	

H_3BO_3 FW: 61.83

Meets ACS Specifications
Assay (H_3BO_3) .....min. 99.5%
Appearance (white granules) .....Passes Test
Calcium (Ca) .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.001%
Insoluble in Methanol .....max. 0.005%
Iron (Fe) .....max. 0.001%
Nonvolatile with Methanol .....max. 0.05%
Phosphate (PO_4) .....max. 0.001%
Solubility .....Passes Test
Sulfate (SO_4) .....max. 0.01%

CAS: 10043-35-3

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Boric Acid, Granular
AR (ACS)

2552-20	Lined Fiber Dr	12 kg	bs	Inquire	

H_3BO_3 FW: 61.83

Meets ACS Specifications

Assay (H_3BO_3) ..... min. 99.5%
Appearance ..... Passes Test
Calcium (Ca) ..... max. 0.001%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble in Methanol ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Nonvolatile with Methanol ..... max. 0.05%
Phosphate (PO_4) ..... max. 0.001%
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.01%

CAS: 10043-35-3

Boric Acid, Granular
NF-GenAR
Suitable for Use in Biotechnology

cGMP

7779-06	Poly	2.5 kg	ge	264.75	
		4 x 2.5 kg	ge	211.80	847.20
7779-88	Poly Pail	12 kg	bs	Inquire	

H_3BO_3 FW: 61.83

Meets NF Requirements

Assay (H_3BO_3) (dried basis) 99.5-100.5%
Completeness of Solution ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Identification ..... Passes Test
Loss on Drying ..... max. 0.50%
Solubility in Alcohol ..... Passes Test
LAL Bacterial Endotoxins (EU/g) ..... max. 35

Meets BP/Ph.Eur. Chemical Specifications

Assay (H_3BO_3) 99.0-100.5%
Appearance of Solution ..... Passes Test
Heavy Metals (as Pb) ..... max. 15 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
pH of a 3.3% Solution 3.8-4.8
Organic Matter ..... Passes Test
Solubility in Alcohol ..... Passes Test
Sulfate (SO_4) ..... max. 450 ppm

Meets JP Chemical Specifications

Assay (H_3BO_3) (dried basis) 99.5-101.0%
Identification ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Arsenic (As) ..... max. 5 ppm
Loss on Drying ..... max. 0.5%

Product Information (not specifications):
Appearance (white, crystalline granules)
Preserve in well-closed containers.
Not for Internal Use

CAS: 10043-35-3

Boric Acid, Granular
NF

cGMP

1394-20	STAKMOR	12 kg	bs	Inquire	
1394-26	Lined Fiber Dr	330 lb	bp	Inquire	

H_3BO_3 FW: 61.83

Meets NF Requirements

Assay (H_3BO_3) 99.5-100.5%
Color of Solution ..... Passes Test
Completeness of Solution ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Identification ..... Passes Test
Loss on Drying ..... max. 0.50%
Solubility in Alcohol ..... Passes Test

Product Information (not specifications):
Appearance (white granules)
Not for Internal Use

CAS: 10043-35-3

Boron Trifluoride, 10-15% in Methanol

H182-57	Glass S/S	100 g	so	67.10	

BF_3 FW: 67.80

Assay (BF_3) (by titration) 10-15%

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7637-07-2 DENSITY: 1 L = 0.87 kg IMO: 3:3286
FLASH POINT: 11°C

Brocide
See Dichloroethane

5-Bromo-4-Chloro-3-Indolyl-Beta-D-Galatopyranoside
See X-Gal

Bromophenol Blue, Sodium Salt
GenAR
Suitable for Use in Biotechnology

7754-14	POLYSTORMOR	10 g	ge	35.70	
		6 x 10 g	ge	32.05	192.30

$C_{19}H_9Br_4NaO_5S$ FW: 691.97

Clarity of Solution ..... Passes Test
Visual Transition Interval:
pH ..... (Yellow) 3.0
pH ..... (Blue) 4.6

Product Information (not specifications):
Appearance (dark green or orange crystals)

CAS: 62625-28-9

Bromosuccinimide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N-Bromosuccinimide
OR

2109-57	POLYSTORMOR	100 g	so	76.35	

$C_4H_4BrNO_2$ FW: 177.99

Assay ($C_4H_4BrNO_2$) (by titration) .....min. 99%
Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (off-white to yellow powder)
CAS: 128-08-5

BuffAR pH 10.00 Reference Solution
StandARd

0032-04	Poly	500 mL	st	24.65	
		6 x 500 mL	st	19.70	118.20
0032-10	Poly	4 L	st	80.90	
		4 x 4 L	st	64.70	258.80
0032-19	Cubitainer	20 L	st	205.15	

pH at 25°C 9.99-10.01
Traceable to NIST
Product Information (not specifications):
Appearance (clear, colorless solution)
IMO: 8:3266

BuffAR pH 10.00 Reference Solution
StandARd
Color Coded Blue

0099-04	Poly	500 mL	st	26.40	
		6 x 500 mL	st	21.10	126.60
0099-10	Poly	4 L	st	78.85	
		4 x 4 L	st	63.05	252.20
0099-19	Cubitainer	20 L	st	218.10	

pH at 25°C 9.99-10.01
Traceable to NIST
Product Information (not specifications):
Appearance (clear, blue solution)

BuffAR pH 7.0 Reference Solution
StandARd

0031-04	Poly	500 mL	st	24.65	
		6 x 500 mL	st	19.70	118.20
0031-10	Poly	4 L	st	77.35	
		4 x 4 L	st	61.85	247.40
0031-19	Cubitainer	20 L	st	205.15	

pH at 25°C 6.96-7.04
Traceable to NIST
Product Information (not specifications):
Appearance (clear, colorless solution)

BuffAR pH 7.0 Reference Solution
StandARd
Color Coded Yellow

0098-04	Poly	500 mL	st	26.40	
		6 x 500 mL	st	21.10	126.60
0098-10	Poly	4 L	st	78.85	
		4 x 4 L	st	63.05	252.20
0098-19	Cubitainer	20 L	st	218.10	

pH at 25°C 6.96-7.04
Traceable to NIST
Product Information (not specifications):
Appearance (clear, yellow solution)

BuffAR pH 4.01 Reference Solution
StandARd

0029-04	Poly	500 mL	st	24.65	
		6 x 500 mL	st	19.70	118.20
0029-10	Poly	4 L	st	77.35	
		4 x 4 L	st	61.85	247.40
0029-19	Cubitainer	20 L	st	205.15	

pH at 25°C 4.00-4.02
Traceable to NIST
Product Information (not specifications):
Appearance (clear, colorless solution)

BuffAR pH 4.01 Reference Solution
StandARd
Color Coded Red

0097-04	Poly	500 mL	st	26.40	
		6 x 500 mL	st	21.10	126.60
0097-10	Poly	4 L	st	86.60	
		4 x 4 L	st	69.25	277.00
0097-19	Cubitainer	20 L	st	229.55	

pH at 25°C 4.00-4.02
Traceable to NIST
Product Information (not specifications):
Appearance (clear, red solution)

Butanedioic Acid
See Succinic Acid

1-Butanol
See Butyl Alcohol Normal

2-Butanone
See Methyl Ethyl Ketone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Butyl Alcohol, Normal
AR (ACS)

3000-04	Glass	500 mL	gs	46.40	
		12 x 500 mL	gs	37.50	450.00
3000-08	Glass	4 L	gs	161.00	
		4 x 4 L	gs	130.10	520.40
3000-19	Steel Pail	20 L	sb	426.55	
3000-26	Steel Drum	200 L	bp	Inquire	

$CH_3CH_2CH_2CH_2OH$ FW: 74.12

Meets ACS Specifications

Assay ($CH_3CH_2CH_2CH_2OH$) (by GC, corrected for water) .....min. 99.4%
Butyl Ether ($C_8H_{18}O$)(by GC) .....max. 0.2%
Carbonyl Compounds (as Butyraldehyde) .....max. 0.01%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.005%
Titrable Acid (as CH_3COOH) (meq/g) .....max. 0.0008
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 71-36-3 DENSITY: 1 L = 0.81 kg IMO: 3:1120
FLASH POINT: 37°C

Solvent Spill Cleanup Products available. See pp. 378.

iso-Butyl Alcohol
See Isobutyl Alcohol

n-Butyl Alcohol
Nanograde
Suitable for Pesticide Residue Analyses

2978-08	Glass	4 L	sp	174.35	
		4 x 4 L	sp	118.60	474.40

$CH_3CH_2CH_2CH_2OH$ FW: 74.12

Assay ($CH_3CH_2CH_2CH_2OH$) (by GC, corrected for water) .....min. 99.0%
Identification .....Passes Test
Nonvolatile Matter .....max. 0.0005%
Water (H_2O)(by Karl Fischer titrn) .....Actual Value Reported
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 20
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 71-36-3 DENSITY: 1 L = 0.81 kg IMO: 3:1120
FLASH POINT: 37°C

Solvent Spill Cleanup Products available. See pp. 378.

See Drug Development and Manufacturing section for more information about scale-up and process chromatography products, starting on page 64.

tert-Butyl Alcohol
AR (ACS)

2998-04	Poly	500 mL	gs	61.25	
		12 x 500 mL	gs	49.50	594.00
2998-08	Poly	4 L	gs	189.10	
		4 x 4 L	gs	152.80	611.20
2998-20	Poly Pail	5 gl	sb	467.60	

$(CH_3)_3COH$ FW: 74.12

Meets ACS Specifications

Assay ($(CH_3)_3COH$) (by GC) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.003%
Titrable Acid (meq/g) .....max. 0.001
Carbonyl Compounds:
Formaldehyde .....max. 0.01%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Boiling Range .....81.5°C - 83.0 °C
Freezing Point (typical) .....24 °C.
Specific Gravity at 25°/25°C 0.781-0.785
Product Information (not specifications):
Appearance (white, crystalline solid; colorless liquid above 25.5°C)

CAS: 75-65-0 DENSITY: 1 L = 0.78 kg IMO: 3:1120
FLASH POINT: 11°C

Solvent Spill Cleanup Products available. See pp. 378.

n-Butyl Carbinol
See Amyl Alcohol

Butyl Phosphate
See Tributyl Phosphate

Butyl Phthalate
See Dibutyl Phthalate

Caffeine Citrated, Powder
Purified cGMP

0646-02	POLYSTORMOR	125 g	gd	73.25	
		12 x 125 g	gd	58.60	703.20

$C_8H_{10}N_4O_2C_6H_8O_8$ FW: 386.32

Assay (Caffeine and Citric Acid) 98.5-101.0%
Assay for Caffeine ($C_8H_{10}N_4O_2$) (dried basis) 48.0-52.0%
Assay for Citric Acid ($C_6H_8O_7$) (dried basis) 48.0-52.0%
Appearance .....Passes Test
Heavy Metals (as Pb) .....max. 0.0015%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Identification D .....Passes Test
Loss on Drying .....max. 5.0%
Readily Carbonizable Substances .....Passes Test
Solubility (5 in 100) .....Passes Test

CAS: 69-22-7

Calamine

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calamine, Special
USP cGMP

4069-24	Fiber Drum	100 lb		Inquire	

ZnO & Fe_2O_3

Meets USP Requirements

Appearance ..... Passes Test
Assay (ZnO) 98.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Microbial Limits: ..... Passes Test
Staphylococcus aureus ..... None Detected
Pseudomonas aeruginosa ..... None Detected
Loss on Ignition ..... max. 2.0%
Acid-Insoluble Substances ..... max. 2.0%
Alkaline Substances ..... Passes Test
Arsenic (As) ..... max. 8 ppm
Calcium (Ca) ..... Passes Test
Calcium or Magnesium ..... Passes Test
Mesh:
Thru U.S. No. 140 Sieve ..... min. 100%
Lead (Pb) ..... Passes Test

CAS: 8011-96-9

Calcined Magnesia
See Magnesium Oxide

Calcium Acetate, Hydrated, Powder
AR (ACS)

4048-04	Poly	500 g	gd	123.30	
4048-05	STAKMOR	2.5 kg	gd	489.05	
4048-20	Lined Fiber Dr	12 kg	bs	Inquire	

$(CH_3COO)_2Ca{\cdot}nH_2O$ FW: 176.19

Meets ACS Specifications

Assay ($(CH_3COO)_2Ca{\cdot}H2O$)) ..... min. 99.0%
Alkalinity ..... Passes Test
Barium (Ba) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Sodium (Na) ..... max. 0.02%
Solubility ..... Passes Test
Strontium (Sr) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.01%
Titrable Acid (meq/g) ..... max. 0.035
Water (H_2O)(by Karl Fischer titrn) ..... max. 10.0%
Magnesium (Mg) ..... max. 0.05%
Potassium (K) ..... max. 0.01%
Product Information (not specifications):
Appearance (white powder)

CAS: 62-54-4

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Carbonate, Powder
AR

4072-20	Lined Fiber Dr	12 kg	bs	Inquire	

$CaCO_3$ FW: 100.09

Assay ($CaCO_3$) (dried basis) ..... min. 99.0%
Water-Soluble Titrable Base (meq/g) ..... max. 0.002
Ammonium (NH_4) ..... max. 0.003%
Ammonium Hydroxide Precipitate ..... max. 0.01%
Barium (Ba) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Fluoride (F) ..... max. 0.0015%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble in Dilute HCl ..... max. 0.01%
Iron (Fe) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.02%
Oxidizing Substances (as NO_3) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.1%
Strontium (Sr) ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.025%
Product Information (not specifications):
Appearance (white powder)

CAS: 471-34-1

Calcium Carbonate (Powder), Chelometric Standard
AR (ACS)

4071-02	Glass	125 g	gd	64.15	
		12 x 125 g	gd	51.30	615.60
4071-12	Glass	500 g	gd	113.25	
		4 x 500 g	gd	90.60	362.40
4071-05	Lined Fiber Dr	2.5 kg	gd	292.05	

$CaCO_3$ FW: 100.09

Meets ACS Specifications

Assay ($CaCO_3$) 99.95-100.05%
Chloride (Cl) ..... max. 0.001%
Appearance (fine, white powder) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Alkalinity ..... Passes Test
Ammonium (NH_4) ..... max. 0.003%
Insoluble in Dilute HCl ..... max. 0.01%
Insoluble in HCl ..... max. 0.005%
Oxidizing Substances (as NO_3) ..... max. 0.005%
Silica (SiO_2) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Fluoride (F) ..... max. 0.0015%
Barium (Ba) ..... max. 0.005%
Iron (Fe) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.01%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.01%
Silicon (Si) ..... Actual Value Reported
Strontium (Sr) ..... max. 0.1%

CAS: 471-34-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Carbonate, Precipitated Light Powder

cGMP

USP, FCC

4052-12	Poly	500 g	fg	225.50	
		4 x 500 g	fg	180.40	721.60
4052-20	Lined Fiber Dr	12 kg	bs	Inquire	
4052-24	Lined Fiber Dr	100 lb	bp	Inquire	

$CaCO_3$ FW: 100.09

Meets USP & FCC Requirements

Assay ($CaCO_3$) 98.0-100.5%
Identification ..... Passes Test
Loss on Drying ..... max. 2.0%
Acid-Insoluble Substances ..... max. 0.2%
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Lead (Pb) ..... max 3 mg/kg
Arsenic (As) ..... max. 0.0003%
Magnesium and Alkali Salts ..... max. 1.0%
Limit of Fluoride ..... max. 0.005%
Iron (Fe) ..... max. 0.1%
Mercury (Hg) ..... max. 0.5 ppm

Product Information (not specifications):
Appearance (fine, white crystalline powder)

CAS: 471-34-1

Calcium Carbonate

See also Marble Chips

Calcium Chloride, Dihydrate, Granular

cGMP

USP-GenAR
Intended For Use in Hemodialysis

7722-88	Poly Pail	12 kg	bs	Inquire	

$CaCl_2 \cdot 2H_2O$ FW: 147.01

Meets USP & FCC Requirements

Assay ($CaCl_2 \cdot 2H_2O$) 99.0-107.0%
Aluminum (Al)(µg/g) ..... max. 1
Arsenic (As)(mg/kg) ..... max 3
Fluoride (F) ..... max. 0.004%
Heavy Metals (as Pb) ..... max. 0.001%
Identification ..... Passes Test
Iron, Aluminum, and Phosphate ..... Passes Test
Lead (Pb)(mg/kg) ..... max 5
Magnesium and Alkali Salts ..... max. 1.0%
pH at 25°C (1 in 20) 4.5-9.2

Meets BP/Ph.Eur. Chemical Specifications

Assay ($CaCl_2 \cdot 2H_2O$) 97.0-103.0%
Acidity or Alkalinity ..... Passes Test
Aluminum (Al) ..... max. 1 ppm
Appearance of Solution ..... Passes Test
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 20 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Iron (Fe) ..... max. 10 ppm
Magnesium and Alkali Metals ..... max. 0.5%
Sulfate (SO_4) ..... max. 300 ppm
Endotoxin Concentration (EU/g) ..... max. 10

Meets JP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Assay ($CaCl_2 \cdot 2H_2O$) 96.7-103.3%
Arsenic (As) ..... max. 2 ppm
Barium (Ba) ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Heavy Metals ..... max. 10 ppm
Hypochlorite ..... Passes Test
Iron, Aluminum or Phosphate ..... Passes Test
pH 4.5-9.2
Sulfate (SO_4) ..... max. 0.024%

Preserve in Tight Containers

CAS: 10035-04-8

Calcium Chloride, Dihydrate, Granular

cGMP

USP, FCC
Suitable for Use in Hemodialysis

4616-04	Glass	500 g	fg	81.20	
		12 x 500 g	fg	64.95	779.40
4616-06	Glass	2.5 kg	fg	233.65	
		4 x 2.5 kg	fg	186.90	747.60
4616-20	STAKMOR	12 kg	bs	Inquire	
4616-88	Poly Pail	12 kg	bs	Inquire	

$CaCl_2 \cdot 2H_2O$ FW: 147.01

Meets USP & FCC Requirements

Assay ($CaCl_2 \cdot 2H_2O$) 99.0-107.0%
Aluminum (Al)(µg/g) ..... max. 1
Arsenic (As) ..... max 3 mg/kg
Fluoride (F) ..... max. 0.004%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Iron, Aluminum, and Phosphate ..... Passes Test
Lead (Pb) ..... max 5 mg/kg
Magnesium and Alkali Salts ..... max. 1.0%
pH at 25°C (1 in 20) 4.5-9.2
Solubility (10 in 50) ..... Passes Test

CAS: 10035-04-8

Calcium Chloride, Dihydrate, Powder

AR (ACS)

4160-12	POLYSTORMOR	500 g	gd	63.50	
		4 x 500 g	gd	50.80	203.20
4160-06	Poly	2.5 kg	gd	241.45	
		4 x 2.5 kg	gd	193.15	772.60
4160-20	STAKMOR	12 kg	bs	Inquire	

$CaCl_2 \cdot 2H_2O$ FW: 147.01

Meets ACS Specifications

Assay ($CaCl_2 \cdot 2H_2O$) 99.0-105.0%
Ammonium (NH_4) ..... max. 0.005%
Barium (Ba) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.005%

Calcium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Oxidizing Substances (as NO_3)				max. 0.003%	
pH of 5% Solution at 25°C				4.5-8.5	
Potassium (K)				max. 0.01%	
Sodium (Na)				max. 0.02%	
Solubility				Passes Test	
Strontium (Sr)				max. 0.1%	
Sulfate (SO_4)				max. 0.01%	
Product Information (not specifications):					
Appearance (coarse white powder or mixture with medium size granules)					
CAS: 10035-04-8					

Calcium Hydroxide, Powder
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4195-04	POLYSTORMOR	500 g	gd	82.40	
		12 x 500 g	gd	65.90	790.80
4195-05	STAKMOR	2.5 kg	gd	175.45	
4195-20	Lined Fiber Dr	12 kg	bs	Inquire	

$Ca(OH)_2$ FW: 74.09

Meets ACS Specifications

Assay ($Ca(OH)_2$)	min. 95.0%
Assay $CaCO_3$	max. 3%
Chloride (Cl)	max. 0.03%
Heavy Metals (as Pb)	max. 0.003%
Insoluble in HCl	max. 0.03%
Iron (Fe)	max. 0.05%
Magnesium (Mg)	max. 0.5%
Potassium (K)	max. 0.05%
Sodium (Na)	max. 0.05%
Strontium (Sr)	max. 0.05%
Sulfur Compounds (as SO_4)	max. 0.1%
Product Information (not specifications):	
Appearance (fine, white or yellowish-white powder)	
CAS: 1305-62-0	

Calcium Hydroxide, Powder
FCC FOOD GRADE

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4188-01	Glass	500 g	fg	72.70	
4188-05	Poly Pail	2.5 kg	fg	206.30	
4188-24	Lined Fiber Dr	50 lb	bp	Inquire	
4188-32		50 lb	bp	Inquire	
4188-25	Lined Fiber Dr	150 lb	bp	Inquire	
4188-40		1500 lb	bp	Inquire	

$Ca(OH)_2$ FW: 74.09

Meets FCC Requirements

Assay ($Ca(OH)_2$) (by EDTA titrn)	95.0-100.5%
Appearance	Passes Test
Identification A	Passes Test
Identification B	Passes Test
Carbonate (CO_3)	Passes Test
Acid-Insoluble Substances	max. 0.5%
Arsenic (As)	max. 3 ppm
Lead (Pb)	max. 2 ppm
Fluoride (F)	max. 0.005%
Magnesium and Alkali Salts	max. 4.8%
Mesh:	
Thru U.S. No. 325 Sieve	Actual Value Reported
CAS: 1305-62-0	

Calcium Indicator
See Hydroxy Naphthol Blue

Calcium Nitrate, 4-Hydrate, Crystal
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4236-04	POLYSTORMOR	500 g	gd	76.70	
		12 x 500 g	gd	61.35	736.20
4236-06	Poly	2.5 kg	gd	258.50	
		4 x 2.5 kg	gd	206.80	827.20
4236-20	STAKMOR	12 kg	bs	Inquire	

$Ca(NO_3)_2{\cdot}4H_2O$ FW: 236.15

Meets ACS Specifications

Assay ($Ca(NO_3)_2{\cdot}4H_2O$)	99.0-103.0%
pH of 5% Solution at 25°C	5.0-7.0
Insoluble Matter	max. 0.005%
Chloride (Cl)	max. 0.005%
Nitrite (NO_2)	max. 0.001%
Sulfate (SO_4)	max. 0.002%
Barium (Ba)	max. 0.005%
Heavy Metals (as Pb)	max. 5 ppm
Iron (Fe)	max. 5 ppm
Magnesium (Mg)	max. 0.05%
Potassium (K)	max. 0.005%
Sodium (Na)	max. 0.01%
Strontium (Sr)	max. 0.05%
Product Information (not specifications):	
Appearance (colorless, deliquescent crystals)	
CAS: 13477-34-4 IMO: 5.1:1454	

Calcium Phosphate, Dibasic, Powder
AR

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
4272-20	STAKMOR	12 kg	bs	Inquire	

$CaHPO_4$ FW: 136.06

Arsenic (As)	max. 0.0001%
Carbonate (CO_3)	Passes Test
Chloride (Cl)	max. 0.005%
Heavy Metals (as Pb)	max. 0.003%
Identification for Calcium	Passes Test
Identification for Phosphate	Passes Test
Insoluble in HCl	max. 0.01%
Iron (Fe)	max. 0.005%
Nitrate (NO_3)	max. 0.005%
Sulfate (SO_4)	max. 0.04%
Solubility	Passes Test
Bulk Density (g/mL)	min. 0.66
Product Information (not specifications):	
Appearance (white powder)	
CAS: 7757-93-9	

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium Phosphate, Dibasic, Anhydrous, Powder
cGMP
USP, FCC

4264-20	STAKMOR	12 kg	bs	Inquire	
4264-24	Lined Fiber Dr	100 lb	bp	Inquire	

$CaHPO_4$ FW: 136.06

Meets USP & FCC Requirements

Assay ($CaHPO_4$) 98.0-103.0%
Appearance ..... Passes Test
Solubility ..... Passes Test
Loss on Ignition 6.6-8.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acid-Insoluble Substances ..... max. 0.2%
Carbonate (CO_3) ..... Passes Test
Chloride (Cl) ..... max. 0.25%
Fluoride (F) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.5%
Arsenic (As) ..... max. 3 ppm
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%
Lead (Pb) ..... max. 2 ppm

CAS: 7757-93-9

Calcium Phosphate, Tribasic, Powder
cGMP
NF, FCC

4280-03	POLYSTORMOR	500 g	fg	340.50	
4280-24	Leverpack	100 lb	bp	Inquire	

$Ca_5(OH)(PO_4)_3$ FW: 502.31

Meets NF & FCC Requirements

Assay (Ca) 34.0-40.0%
Acid-Insoluble Substances ..... max. 0.2%
Arsenic (As) ..... max 3 mg/kg
Barium (Ba) ..... Passes Test
Carbonate (CO_3) ..... Passes Test
Chloride (Cl) ..... max. 0.14%
Dibasic Salt and Calcium Oxide (mL) 13.0-14.3
Fluoride (F) ..... max. 0.0075%
Heavy Metals (as Pb) ..... max. 0.003%
Identification A ..... Passes Test
Identification B ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Loss on Ignition ..... max. 8.0%
Nitrate (NO_3) ..... Passes Test
Sulfate (SO_4) ..... max. 0.8%
Water-Soluble Substances ..... max. 0.5%

Product Information (not specifications):
Appearance (white powder)

CAS: 12167-74-7

Calmagite Indicator
AR
(Calcium-Magnesium Indicator)

4283-34	Glass	30 g	gd	296.75	

Solubility in H_2O ..... Passes Test
Sensitivity ..... Passes Test

Product Information (not specifications):
Appearance (violet crystalline powder)

Carbamide
See Urea

Carbolic Acid
See Phenol

Carbon Disulfide
AR (ACS)

8831-03	Glass S/S	500 mL	so	221.15	

CS_2 FW: 76.13

Meets ACS Requirements

Assay (CS_2) (by GC, corrected for water) ..... min. 99.9%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.002%
Hydrogen Sulfide (H_2S) ..... Passes Test
Sulfur Dioxide (SO_2) ..... Passes Test
Water (by coulometry) ..... max. 0.05%
Benzene (C_6H_6) ..... max. 1 ppm

CAS: 75-15-0 DENSITY: 1 L = 1.26 kg IMO: 3:1131
FLASH POINT: -30°C

Solvent Spill Cleanup Products available. See pp. 378.

Caustic Potash
See Potassium Hydroxide

Caustic Soda
See Sodium Hydroxide

CDTA
See trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraacetic Acid

Ceric Ammonium Nitrate
AR (ACS)

2568-01	POLYSTORMOR	125 g	gd	80.20	
2568-04	POLYSTORMOR	500 g	gd	309.15	
		12 x 500 g	gd	247.30	2967.60
2568-05	Poly	2.5 kg	gd	957.95	

$(NH_4)_2Ce(NO_3)_6$ FW: 548.23

Meets ACS Specifications

Assay ($(NH_4)_2Ce(NO_3)_6$) ..... min. 98.5%
Insoluble in Dilute H_2SO_4 ..... max. 0.05%
Chloride (Cl) ..... max. 0.01%
Phosphate (PO_4) ..... max. 0.02%
Iron (Fe) ..... max. 0.005%

CAS: 16774-21-3 IMO: 5.1:1477

Ceric Ammonium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ceric Ammonium Sulfate, Dihydrate
AR

2571-04	POLYSTORMOR	500 g	gd	208.95	
		12 x 500 g	gd	167.15	2005.80

$Ce(NH_4)_4(SO_4)_4 \cdot 2H_2O$ FW: 632.56

Assay ($Ce(NH_4)_4(SO_4)_4 \cdot 2H_2O$) ..... min. 94.0%
Insoluble in Dilute H_2SO_4 ..... max. 0.10%
Iron (Fe) ..... max. 0.10%
Phosphate (PO_4) ..... max. 0.10%
Product Information (not specifications):
Appearance (yellow-orange crystals or powder)
CAS: 10378-47-9

Cesium Chloride, Preparative
GenAR
Suitable for Use in Biotechnology and Density Gradient Centrifugation

7764-12	POLYSTORMOR	1 kg	ge	447.40	
		4 x 1 kg	ge	401.85	1607.40
7764-65	Poly Pail	10 kg	ge	3814.60	

CsCl FW: 168.36

Assay (CsCl) ..... min. 99.0%
Loss on Drying at 105°C ..... max. 0.25%
Product Information (not specifications):
Appearance (fine, colorless crystalline granules)
CAS: 7647-17-8

Charcoal, Activated, Powder
USP

cGMP

4394-02	Glass	125 g	fg	65.45	
		12 x 125 g	fg	52.35	628.20
4394-12	Glass	500 g	fg	173.35	
		4 x 500 g	fg	138.65	554.60
4394-05	STAKMOR	2.5 kg	fg	368.55	
4394-21	Lined Fiber Dr	12 kg	bs	Inquire	

C AW: 12.01

Meets USP Requirements
Acid-Soluble Substances ..... max. 3.5%
Adsorptive power ..... Passes Test
Chloride (Cl) ..... max. 0.2%
Cyanogen Compounds ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.005%
Loss on Drying ..... max. 15.0%
Microbial Limit ..... Passes Test
Reaction ..... Passes Test
Residue on Ignition ..... max. 4.0%
Sulfate (SO_4) ..... max. 0.2%
Sulfide (S) ..... Passes Test
Uncarbonized Constituents ..... Passes Test
Product Information (not specifications):
Appearance (fine black powder)
CAS: 7440-44-0

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

CHEM-SOLV
(Laboratory Glassware Cleaner)

2157-04	Poly	1 qt	ur	83.90	
		6 x 1 qt	ur	67.10	402.60

Specific Gravity at 25°/25°C ..... max. 1.23
Foam Property ..... Passes Test
Product Information (not specifications):
Appearance (clear to slightly turbid, amber solution)
DENSITY: 1 L = 1.23 kg IMO: 3:2924 FLASH POINT: 39°C

Chloramine-T, Trihydrate
OR
(N-chloro-p-toluenesulfonamide, sodium salt)

0614-58	Glass	250 g	so	59.85	

$1\text{-}CH_3C_6H_4\text{-}4\text{-}SO_2NClNa \cdot 3H_2O$ FW: 281.70

Assay ($C_7H_7ClNNaO_2S \cdot 3H_2O$) ..... min. 97.5%
Infrared Spectrum ..... Conforms to Reference Standard
Product Information (not specifications):
Appearance (off-white powder)
CAS: 7080-50-4 FLASH POINT: 192°C

Chlorobenzene
AR (ACS)

4419-04	Glass	500 mL	gs	41.85	
		12 x 500 mL	gs	33.80	405.60
4419-08	Glass	4 L	gs	227.55	
		4 x 4 L	gs	183.85	735.40

C_6H_5Cl FW: 112.56

Meets ACS Specifications
Assay (C_6H_5Cl) (by GC, corrected for water) ..... min. 99.5%
Color (APHA) ..... max. 30
Residue after Evaporation ..... max. 0.02%
Titrable Acid (meq/g) ..... max. 0.004
CAS: 108-90-7 DENSITY: 1 L = 1.11 kg IMO: 3:1134
FLASH POINT: 28°C

Solvent Spill Cleanup Products available. See pp. 378.

Chlorobenzene
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

4426-08	Glass	4 L	sp	274.75	
		4 x 4 L	sp	186.90	747.60

C_6H_5Cl FW: 112.56

Meets ACS Specifications
Assay (C_6H_5Cl) (by GC, corrected for water) ..... min. 99.5%
Color (APHA) ..... max. 30
Residue after Evaporation ..... max. 2 ppm

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Titrable Acid (meq/g) .....max. 0.004%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.03%
Ultraviolet Absorbance (1.00-cm cell vs. water):
288 nm .....max. 1.00
300 nm .....max. 0.05
325 nm .....max. 0.04
350 nm .....max. 0.02
400 nm .....max. 0.005
Filtered through a 0.2 micron filter.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 108-90-7 DENSITY: 1 L = 1.11 kg IMO: 3:1134
FLASH POINT: 28°C

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
AR (ACS)

4440-04	Glass	500 mL	gs	47.00	
		12 x 500 mL	gs	37.95	455.40
4440-10	Glass	1 L	gs	61.20	
		6 x 1 L	gs	49.45	296.70
4440-08	Glass	4 L	gs	224.20	
		4 x 4 L	gs	181.15	724.60
4440-19	Lined Steel Dr	20 L	sb	539.20	
4440-24	Lined Steel Dr	650 lb	bp	Inquire	

$CHCl_3$ FW: 119.38

Meets ACS Specifications
Appearance (clear, colorless liquid) .....Passes Test
Assay ($CHCl_3$) (by GC) .....min. 99.8%
Acetone, Aldehydes (as $(CH_3)_2CO$) .....Passes Test
Acid and Chloride .....Passes Test
Color (APHA) .....max. 10
Free Chlorine .....Passes Test
Lead (Pb) .....max. 0.05 ppm
Residue after Evaporation .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
Suitability for Use in Dithizone Tests .....Passes Test

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
AR (ACS)

4441-10	SAFEMOR	4 L	gs	232.50	
		4 x 4 L	gs	187.85	751.40

$CHCl_3$ FW: 119.38

Meets ACS Specifications
Assay ($CHCl_3$) (by GC) .....min. 99.8%
Acetone, Aldehydes (as $(CH_3)_2CO$) .....Passes Test
Acid and Chloride .....Passes Test
Color (APHA) .....max. 10
Free Chlorine .....Passes Test
Lead (Pb) .....max. 0.05 ppm
Residue after Evaporation .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
Suitability for Use in Dithizone Tests .....Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V551-10	Glass	4 L	sp	150.85	
		4 x 4 L	sp	102.60	410.40

$CHCl_3$ FW: 119.38

Meets ACS Specifications for Liquid Chromatography and UV Spectrophotometry
Assay ($CHCl_3$) (by GC) .....min. 99.8%
Stabilizer (amylene)(w/w) .....100-200 ppm
Color (APHA) .....max. 10
Residue after Evaporation .....max. 2 ppm
Water (H_2O)(by KF, coulometric) .....max. 0.02%
Acetone, Aldehydes (as $(CH_3)_2CO$) (Approx. 0.005%) .....Passes Test
Free Chlorine (as Cl) .....Passes Test
Lead (Pb) .....max. 0.05 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Ultraviolet Absorbance (1.00-cm cell vs. water):
245 nm .....max. 1.00
255 nm .....max. 0.25
260 nm .....max. 0.15
270 nm .....max. 0.05
275-400 nm .....max. 0.01
Liquid Chromatography Suitability
Absorbance .....Passes Test
Titrable Acid (µeq/g) .....max. 0.3
Acid and Chloride .....Passes Test
Suitability for Use in Dithizone Tests .....Passes Test
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at Emission Maximum for Impurities .....max. 1.0
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 5
Sum of the Peaks (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ....max. 5
Sum of the Peaks (µg/L) .....max. 10
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

See the Academic section for research and chemical stockroom information, starting on page 91.

Chloroform

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chloroform
ChromAR
(ethyl alcohol stabilized)
Suitable for Liquid Chromatography and UV-Spectrophotometry

H407-10	Glass	4 L	sp	172.50	
		4 x 4 L	sp	117.35	469.40

$CHCl_3$ FW: 119.38

Meets ACS Specifications

Assay ($CHCl_3$ including stabilizer) (by GC) ..... min. 99.9%
Residue after Evaporation ..... max. 0.0003%
Water (H_2O)(by KF, coulometric) ..... max. 0.03%
Optical Absorbance (1-cm path vs water):
245 nm ..... max. 1.00
255 nm ..... max. 0.15
260 nm ..... max. 0.05
270 nm ..... max. 0.02
290-400 nm ..... max. 0.01
Acetone, Aldehydes (as $(CH_3)_2CO$) ..... Passes Test
Acid and Chloride ..... Passes Test
Color (APHA) ..... max. 10
Free Chlorine ..... Passes Test
Lead (Pb) ..... max. 0.05 ppm
Substances Darkened by H_2SO_4 ..... Passes Test
Suitability for Use in Dithizone Tests ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
ChromAR
(Hydrocarbon Stabilized)
Suitable for Liquid Chromatography (ACS) and UV Spectrophotometry (ACS)

4443-06	Glass	1 L	sp	63.00	
		6 x 1 L	sp	42.85	257.10
4443-10	Glass	4 L	sp	152.55	
		4 x 4 L	sp	103.75	415.00

$CHCl_3$ FW: 119.38

Meets ACS Specifications

Assay ($CHCl_3$) (by GC, corrected for water) ..... min. 99.8%
Acetone, Aldehydes (as $(CH_3)_2CO$) ..... Passes Test
Acid and Chloride ..... Passes Test
Color (APHA) ..... max. 10
Free Chlorine ..... Passes Test
Lead (Pb) ..... max. 0.05 ppm
Residue after Evaporation ..... max. 0.0003%
Substances Darkened by H_2SO_4 ..... Passes Test
Suitability for Use in Dithizone Tests ..... Passes Test
Water (H_2O) ..... max. 0.02%
Ultraviolet Absorbance (1.00-cm cell vs. water): ..... Passes Test
245 nm ..... max. 1.00
254 nm ..... max. 0.15
255 nm ..... max. 0.25
260 nm ..... max. 0.15
265 nm ..... max. 0.05
270 nm ..... max. 0.05
280 nm ..... max. 0.01
300 nm ..... max. 0.01
350 nm ..... max. 0.005
350-400 nm ..... max. 0.01
Absorbance ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
Purified

4432-04	Glass	500 mL	gs	41.30	
		12 x 500 mL	gs	33.35	400.20
4432-10	Glass	1 L	gs	65.40	
		6 x 1 L	gs	52.85	317.10
4432-08	Glass	4 L	gs	245.05	
		4 x 4 L	gs	198.00	792.00
4432-28	Lined Steel Dr	20 L	bs	Inquire	

$CHCl_3$ FW: 119.38

Acid and Phosgene ..... Passes Test
Aldehydes and Ketones (as HCHO) ..... Passes Test
Chlorinated Decomposition Products and Chloride ..... Passes Test
Free Chlorine ..... Passes Test
Nonvolatile Residue (w/v) ..... max. 0.002%
Readily Carbonizable Substances ..... Passes Test
Specific Gravity at 25°/25°C 1.476-1.480
Water (H_2O) ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)
Filtered through a 0.2 micron filter.

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroform
Technical

4444-10	Glass	4 L	gs	218.55	
		4 x 4 L	gs	176.60	706.40

$CHCl_3$ FW: 119.38

Chloride Ion and Free Chlorine ..... Passes Test
Nonvolatile Residue (w/v) ..... max. 0.0014%
Water (H_2O) ..... Passes Test
Specific Gravity at 25°/25°C 1.474-1.482
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-66-3 DENSITY: 1 L = 1.48 kg IMO: 6.1:1888

Solvent Spill Cleanup Products available. See pp. 378.

Chloroplatinic Acid
See Platinum Chloride

N-Chloro-p-toluenesulfonamide, Sodium Salt
See Chloramine-T, Trihydrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chromic Acid

See Chromium Trioxide

Chromium Trioxide, Crystal

AR (ACS)

2576-05	Glass	2.5 kg	gd	759.10	
2576-23		100 lb	bp	Inquire	

CrO_3 FW: 99.99

Meets ACS Specifications

Assay (CrO_3) (by iodometry) ..... min. 98.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.005%
Aluminum (Al) ..... max. 0.02%
Barium (Ba) ..... max. 0.01%
Iron (Fe) ..... max. 0.02%
Sodium (Na) ..... max. 0.2%

Product Information (not specifications):
Appearance (fine, dark purple-red, hygroscopic crystals)

CAS: 1333-82-0 IMO: 5.1:1463

Citric Acid, Monohydrate, Granular

AR (ACS)

0627-12	POLYSTORMOR	500 g	gd	66.20	
		4 x 500 g	gd	52.95	211.80
0627-06	Poly	2.5 kg	gd	229.85	
		4 x 2.5 kg	gd	183.85	735.40
0627-20	STAKMOR	12 kg	bs	Inquire	

$C_6H_8O_7 \cdot H_2O$ FW: 210.14

Meets ACS Requirements

Assay ($C_6H_8O_7 \cdot H_2O$) (by titration) 99.0-102.0%
Insoluble Matter ..... max. 0.005%
Residue after Ignition ..... max. 0.02%
Chloride (Cl) ..... max. 0.001%
Oxalate (C_2O_4) ..... Passes Test
Phosphate (PO_4) ..... max. 0.001%
Sulfur Compounds (as SO_4) ..... max. 0.002%
Iron (Fe) ..... max. 3 ppm
Lead (Pb) ..... max. 2 ppm
Substances Carbonizable by Hot H_2SO_4 ..... Passes Test

Product Information (not specifications):
Appearance (fine, colorless granules)

CAS: 5949-29-1

Live Chat and Customer Support
www.avantormaterials.com

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Citric Acid, Monohydrate, Granular

cGMP

USP-GenAR
Suitable for Use in Biotechnology

7788-06	Poly Pail	2.5 kg	ge	290.45	
		4 x 2.5 kg	ge	232.35	929.40
7788-88	Poly Pail	12 kg	bs	Inquire	

$C_6H_8O_7 \cdot H_2O$ FW: 210.14

Meets USP Requirements

Assay (as $C_6H_8O_7$) (calculated on anhydrous basis) 99.5-100.5%
Clarity of Solution ..... Passes Test
Color of Solution ..... Passes Test
Identification ..... Passes Test
Water (H_2O) 7.5-9.0%
Residue on Ignition ..... max. 0.1%
Readily Carbonizable Substances ..... Passes Test
Oxalic Acid ..... max. 0.036%
Sulfate (SO_4) ..... max. 0.015%
Heavy Metals (as Pb) ..... max. 0.001%

Meets BP/Ph.Eur. Chemical Specifications

Assay (as $C_6H_8O_7$) (calculated on anhydrous basis) 99.5-100.5%
Identification B ..... Passes Test
Identification E ..... Passes Test
Oxalic Acid ..... max. 360 ppm
Sulfate (SO_4) ..... max. 150 ppm
Ash (sulfated) ..... max. 0.1%
Appearance of Solution ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Readily Carbonizable Substances ..... Passes Test
Water (H_2O) 7.5-9.0%
Endotoxin Concentration (IU/mg) ..... max. 0.5

Product Information (not specifications):
Appearance (white to colorless crystals, granules or white crystalline powder; efflorescent)
Preserve in Tight Containers
Must be subjected to further processing during the preparation of injectable dosage forms.

CAS: 5949-29-1

Citric Acid, Monohydrate, Granular

cGMP

USP

0616-12	Glass	500 g	fg	79.90	
		4 x 500 g	fg	63.90	255.60
0616-06	Poly Pail	2.5 kg	fg	249.35	
		4 x 2.5 kg	fg	199.45	797.80
0616-20	STAKMOR	12 kg	bs	Inquire	
0616-88	Poly Pail	12 kg	bs	Inquire	

$C_6H_8O_7 \cdot H_2O$ FW: 210.14

Meets USP Requirements

Assay (as $C_6H_8O_7$) (calculated on anhydrous basis) 99.5-100.5%
Clarity of Solution ..... Passes Test
Color of Solution ..... Passes Test
Identification ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) 7.5-9.0%
Residue on Ignition ..... max. 0.1%
Readily Carbonizable Substances ..... Passes Test
Sulfate (SO_4) ..... max. 0.015%
Heavy Metals (as Pb) ..... max. 0.001%
Limit of Oxalic Acid ..... max. 0.036%

Cobalt Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Solubility (5 in 50) ..... Passes Test
Preserve in Tight Containers
Must be subjected to further processing during the preparation of injectable dosage forms.
CAS: 5949-29-1

Cobalt Chloride, 6-Hydrate, Crystal
AR (ACS)

4532-02	POLYSTORMOR	125 g	gd	112.20	
		12 x 125 g	gd	89.75	1077.00
4532-04	POLYSTORMOR	500 g	gd	265.85	
		12 x 500 g	gd	212.65	2551.80
4532-06	Poly	2.5 kg	gd	1087.10	
		4 x 2.5 kg	gd	869.65	3478.60

$CoCl_2 \cdot 6H_2O$ FW: 237.93

Meets ACS Specifications
Assay ($CoCl_2 \cdot 6H_2O$) (by EDTA titrn) 98.0-102.0%
Appearance (rose-red crystals) ..... Passes Test
Solubility (10 in 100) ..... Passes Test
Copper (Cu) ..... max. 0.002%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.005%
Nickel (Ni) ..... max. 0.1%
Nitrate (NO_3) ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.01%
Zinc (Zn) ..... max. 0.03%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Calcium (Ca) ..... max. 0.005%
CAS: 7791-13-1 IMO: 6.1:3288

Collodion
USP cGMP

4560-02	Glass	120 mL	fg	37.70	
		12 x 120 mL	fg	30.15	361.80
4560-04	Glass	500 mL	fg	74.50	
		12 x 500 mL	fg	59.60	715.20
4560-08	Glass	4 L	fg	326.40	
		4 x 4 L	fg	261.10	1044.40

Meets USP Requirements
Assay (pyroxylin) ..... min. 5.0%
Acidity ..... Passes Test
Alcohol Content 22.0-26.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Gravity at 25°/25°C 0.765-0.775
Product Information (not specifications):
Appearance (clear or opalescent, colorless to slightly yellowish syrupy liquid which may contain some flocculent residue)
DENSITY: 1 L = 0.77 kg IMO: 3:2059

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Collodion, Flexible
USP cGMP

4580-02	Glass	150 mL	fg	47.25	
		12 x 150 mL	fg	37.80	453.60
4580-04	Glass	500 mL	fg	74.20	
		12 x 500 mL	fg	59.35	712.20
4580-10	Glass	4 L	fg	334.45	
		4 x 4 L	fg	267.55	1070.20

Meets USP Requirements
Alcohol Content 21.0-25.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Gravity at 25°/25°C 0.770-0.790
Product Information (not specifications):
Appearance (clear or opalescent, colorless to slightly yellowish syrupy liquid which may contain some flocculent residue)
DENSITY: 1 L = 0.78 kg IMO: 3:2059

Solvent Spill Cleanup Products available. See pp. 378.

Copper Metal Shot, 3-14 Mesh
AR (ACS)

4649-04	POLYSTORMOR	500 g	gd	152.35	
		12 x 500 g	gd	121.85	1462.20

Cu AW: 63.54

Meets ACS Specifications
Assay (Cu) ..... min. 99.90%
Appearance (lustrous, orange metallic granules) ..... Passes Test
Arsenic (As) ..... max. 0.0005%
Iron (Fe) ..... max. 0.005%
Lead (Pb) ..... max. 0.005%
Manganese (Mn) ..... max. 0.001%
Antimony and Tin (as Sn) ..... max. 0.01%
Insoluble in HNO_3 ..... max. 0.02%
Phosphorus (P) ..... max. 0.001%
Silver (Ag) ..... max. 0.002%
CAS: 7440-50-8

Copper Salts
See Cupric and Cuprous

Corrosive Sublimate
See Mercuric Chloride

Crystal Violet
Certified OR
Certified for Use in: Histology; Cytology; Bacteriology (Staining) (C.I. 42555)

E062-03	Glass	25 g	so	38.25	

$[(CH_3)_2NC_6H_4]_2C{:}C_6H_4{:}N(CH_3)_2Cl$ FW: 407.99

Certified by the Biological Stain Commission
Biological Test ..... Passes Test
CAS: 548-62-9 MERCK INDEX: 13,4406

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cupric Chloride, Dihydrate, Crystal
AR (ACS)

4824-20	STAKMOR	12 kg	bs	Inquire	

$CuCl_2 \cdot 2H_2O$ FW: 170.48

Meets ACS Specifications

Assay ($CuCl_2 \cdot 2H_2O$) (by iodometry) ..... min. 99.0%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.015%
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Nickel (Ni) ..... max. 0.01%
Potassium (K) ..... max. 0.01%
Calcium (Ca) ..... max. 0.005%

Product Information (not specifications):
Appearance (blue-green crystals)

CAS: 10125-13-0 IMO: 8:2802

Cupric Nitrate, 2.5-Hydrate, Crystal
AR (ACS)

4828-06	Poly	2.5 kg	gd	659.00	
		4 x 2.5 kg	gd	527.20	2108.80

$Cu(NO_3)_2 \cdot 2.5H_2O$ FW: 232.59

Meets ACS Specifications

Assay ($Cu(NO_3)_2 \cdot 2.5H_2O$) (by iodometry) 98.0-102.0%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.002%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.005%
Lead (Pb) ..... max. 0.001%
Nickel (Ni) ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.01%
Solubility ..... Passes Test

Product Information (not specifications):
Appearance (fine, bright blue crystals)

CAS: 19004-19-4 IMO: 5.1:1477

Cupric Oxide, Black Powder
AR (ACS)

4832-08	Glass	1.5 kg	gd	937.95	
		4 x 1.5 kg	gd	750.35	3001.40

CuO FW: 79.55

Meets ACS Specifications

Assay (CuO) (by EDTA titrn) ..... min. 99.0%
Insoluble in Dilute HCl ..... max. 0.02%
Carbon Compounds (as C) ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Nitrogen Compounds (as N) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.02%
Calcium (Ca) ..... max. 0.01%
Iron (Fe) ..... max. 0.05%
Potassium (K) ..... max. 0.02%
Sodium (Na) ..... max. 0.05%

Product Information (not specifications):
Appearance (fine, dull gray-black powder)

CAS: 1317-38-0

Cupric Sulfate, 5-Hydrate, Fine Crystal
AR (ACS)

4844-02	POLYSTORMOR	125 g	gd	45.20	
		12 x 125 g	gd	36.15	433.80
4844-04	POLYSTORMOR	500 g	gd	98.00	
		12 x 500 g	gd	78.40	940.80
4844-06	Poly	2.5 kg	gd	327.85	
		4 x 2.5 kg	gd	262.25	1049.00
4844-20	STAKMOR	12 kg	bs	Inquire	

$CuSO_4 \cdot 5H_2O$ FW: 249.68

Meets ACS Specifications

Assay ($CuSO_4 \cdot 5H_2O$) (by iodometry) 98.0-102.0%
Appearance (blue, crystalline granules) ..... Passes Test
Solubility (5 in 50) ..... Passes Test
Chloride (Cl) ..... max. 0.001%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.003%
Nitrogen Compounds (as N) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Nickel (Ni) ..... max. 0.005%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%

CAS: 7758-99-8 IMO: 6.1:3288

Cupric Sulfate, 5-Hydrate, Large Crystal
AR (ACS)

4840-06	Poly	2.5 kg	gd	319.15	
		4 x 2.5 kg	gd	255.30	1021.20

$CuSO_4 \cdot 5H_2O$ FW: 249.68

Meets ACS Specifications

Assay ($CuSO_4 \cdot 5H_2O$) (by iodometry) 98.0-102.0%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.003%
Nickel (Ni) ..... max. 0.005%
Nitrogen Compounds (as N) ..... max. 0.002%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.02%

Product Information (not specifications):
Appearance (large, blue crystals)

CAS: 7758-99-8 IMO: 6.1:3288

Cupric Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cupric Sulfate, 5-Hydrate

cGMP

USP-GenAR
Suitable for Use in Biotechnology

7790-04	Glass	500 g	ge	177.70	
		12 x 500 g	ge	142.15	1705.80
7790-06	Glass	2.5 kg	ge	564.10	
		4 x 2.5 kg	ge	451.25	1805.00
7790-88	Poly Pail	12 kg	bs	Inquire	

$CuSO_4 \cdot 5H_2O$ FW: 249.68

Meets USP Requirements

Assay (as $CuSO_4$) 98.5-100.5%
Calcium (Ca) .....max. 0.005%
Solubility (5 in 50) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Iron (Fe) .....max. 0.003%
Loss on Drying 33.0-36.5%
Nickel (Ni) .....max. 0.005%
Potassium (K) .....max. 0.01%
Sodium (Na) .....max. 0.02%
Endotoxin Concentration (EU/g) .....max. 10

Meets BP/Ph.Eur. Chemical Specifications

Assay 99.0-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Appearance of Solution .....Passes Test
Chloride (Cl) .....max. 100 ppm
Iron (Fe) .....max. 100 ppm
Lead (Pb) .....max. 50 ppm
Loss on Drying 35.0-36.5%

Product Information (not specifications):
Appearance (blue, crystalline powder)
Preserve in tight containers. Store at 25°C, excursions permitted between 15°C and 30°C

CAS: 7758-99-8 IMO: 6.1:3288

Cupric Sulfate, 5-Hydrate, Granular

cGMP

USP

4752-10	Glass	500 g	fg	167.40	
		4 x 500 g	fg	133.90	535.60
4752-12	Glass	2.5 kg	fg	494.10	
		4 x 2.5 kg	fg	395.25	1581.00

$CuSO_4 \cdot 5H_2O$ FW: 249.68

Meets USP Requirements

Assay ($CuSO_4 \cdot 5H_2O$) (dried basis) 98.5-100.5%
Calcium (Ca) .....max. 0.005%
Solubility (5 in 50) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Iron (Fe) .....max. 0.003%
Nickel (Ni) .....max. 0.005%
Loss on Drying 33.0-36.5%
Potassium (K) .....max. 0.01%
Sodium (Na) .....max. 0.02%

Product Information (not specifications):
Appearance (blue, crystalline granules)
Preserve in tight containers. Store at 25°C, excursions permitted between 15°C and 30°C

CAS: 7758-99-8 IMO: 6.1:3288

Cuprous Chloride, Powder

AR (ACS)

4860-03	POLYSTORMOR	500 g	gd	224.05	

CuCl FW: 99.00

Meets ACS Specifications

Assay (CuCl) .....min. 90.0%
Insoluble in Acid .....max. 0.02%
Sulfate (SO_4) .....max. 0.1%
Calcium (Ca) .....max. 0.01%
Iron (Fe) .....max. 0.005%
Potassium (K) .....max. 0.02%
Sodium (Na) .....max. 0.05%

CAS: 7758-89-6 IMO: 8:2802

Cyanide

See Sodium Cyanide

Cyanomethane

See Acetonitrile

Cyclohexane

AR (ACS)

4878-02	Poly	500 mL	ur	48.95	
		12 x 500 mL	ur	39.55	474.60
4878-16	Poly	4 L	ur	181.30	
		4 x 4 L	ur	146.50	586.00
4878-22	Steel Pail	20 L	ur	393.30	

C_6H_{12} FW: 84.16

Meets ACS Specifications

Assay (C_6H_{12}) (by GC, corrected for water) .....min. 99.0%
Appearance .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
Water (H_2O)(by KF, coulometric) .....max. 0.02%

CAS: 110-82-7 DENSITY: 1 L = 0.78 kg IMO: 3:1145
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Cyclohexane
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V552-10	Glass	4 L	sp	187.60	
		4 x 4 L	sp	127.60	510.40

C_6H_{12} FW: 84.16

Meets ACS Specifications

Appearance ..... Passes Test
Assay (C_6H_{12}) (by GC, corrected for water) ..... min. 99.0%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 2 ppm
Substances Darkened by H_2SO_4 ..... Passes Test
Water (H_2O)(by KF, coulometric) ..... max. 0.01%
Ultraviolet Absorbance (1.00-cm cell vs. water):
200 nm ..... max. 1.00
210 nm ..... max. 0.60
220 nm ..... max. 0.25
230 nm ..... max. 0.15
240 nm ..... max. 0.08
250 nm ..... max. 0.03
260 nm ..... max. 0.02
254-400 nm ..... max. 0.01
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at Emission Maximum for Impurities ..... max. 1.0
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) ..... max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ... max. 10

CAS: 110-82-7 DENSITY: 1 L = 0.78 kg IMO: 3:1145
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Cyclohexanol
AR

4882-16	Poly	4 L	ur	198.65	
		4 x 4 L	ur	160.50	642.00

$C_6H_{12}O$ FW: 100.16

Assay (by GC) ..... min. 98%
Identification (by IR) ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid when molten)

CAS: 108-93-0 DENSITY: 1 L = 0.96 kg FLASH POINT: 63°C

Solvent Spill Cleanup Products available. See pp. 378.

Cyclohexanone
AR (ACS)

4872-04	Glass	500 mL	gs	102.15	
		12 x 500 mL	gs	82.55	990.60
4872-08	Glass	4 L	gs	176.00	
		4 x 4 L	gs	142.20	568.80

$C_6H_{10}O$ FW: 98.14

Meets ACS Specifications

Assay ($C_6H_{10}O$) (by GC, corrected for water) ..... min. 99.8%
Appearance (clear, colorless liquid) ..... Passes Test
Color (APHA) ..... max. 10
Acidity (as CH_3COOH) ..... max. 0.010%
Residue after Evaporation ..... max. 0.05%
Specific Gravity at 25°/25°C 0.940-0.950
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%

CAS: 108-94-1 DENSITY: 1 L = 0.94 kg IMO: 3:1915
FLASH POINT: 43.9°C

Solvent Spill Cleanup Products available. See pp. 378.

Decalcifying Solution, Krajian
Certified OR
(100 g/L Sodium Citrate, dihydrate, and 250 mL/L Formic Acid (88%) in water)
For Decalcification of Bones

E068-02	Poly	1 L	so	67.25	

Total Acidity, Normality 5.7-6.1
Sodium Citrate ($Na_3C_6H_5O_7 \cdot 2H_2O$), (g/L) 95-105

IMO: 8:3412 FLASH POINT: 50°C

Dessicants, Indicating

See Silica Gel, Indicating, Grade 42 (6-16 Mesh)

Dextrose, Anhydrous, Granular
USP-GenAR
Suitable for Use in Biotechnology

cGMP

7730-06	Poly	2.5 kg	ge	195.95	
		4 x 2.5 kg	ge	156.75	627.00
7730-88	Poly Pail	12 kg	bs	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Meets USP Requirements

Acidity ..... Passes Test
Arsenic (As) ..... max. 1 ppm
Chloride (Cl) ..... max. 0.018%
Color of Solution ..... Passes Test
Dextrin ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Identification ..... Passes Test
Residue on Ignition ..... max. 0.1%
Soluble Starch, Sulfites ..... Passes Test
Specific Rotation $[\alpha]^{25}_D$ (calculated on dried basis) ..... +52.6 - +53.2°
Sulfate (SO_4) ..... max. 0.025%
Water (H_2O) ..... max. 0.5%

Meets BP/Ph.Eur. Chemical Specifications

Acidity or Alkalinity ..... Passes Test
Arsenic (As) ..... max. 1 ppm
Barium (Ba) ..... Passes Test
Calcium (Ca) ..... max. 200 ppm
Chloride (Cl) ..... max. 125 ppm
Foreign Sugars, Soluble Starch, and Dextrins ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Lead (Pb) ..... max. 0.5 ppm
Specific Rotation $[\alpha]^{20}_D$(calculated on anhydrous basis) .... +52.5 - +53.3°
Ash (sulfated) ..... max. 0.1%
Sulfate (SO_4) ..... max. 200 ppm
Sulfite (SO_3) ..... max. 15 ppm
Water (H_2O) ..... max. 1.0%
Appearance of Solution ..... Passes Test

Dextrose

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Endotoxin Concentration (EU/g) ..... max. 5.0

Meets JP Chemical Specifications

Assay ($C_6H_{12}O_6$) (dried basis) 99.5-101.0%
Identification ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Acidity ..... Passes Test
Chloride (Cl) ..... max. 0.018%
Sulfate (SO_4) ..... max. 0.024%
Heavy Metals (as Pb) ..... max. 4 ppm
Arsenic (As) ..... max. 1.3 ppm
Dextrin ..... Passes Test
Soluble Starch, Sulfites ..... Passes Test
Loss on Drying at 105°C ..... max. 1.0%
Residue after Ignition ..... max. 0.10%

Product Information (not specifications):
Appearance (white, granular powder)

CAS: 50-99-7

Dextrose, Anhydrous, Granular

USP cGMP

4908-04	POLYSTORMOR	500 g	fg	60.45	
		12 x 500 g	fg	48.35	580.20
4908-06	Poly	2.5 kg	fg	170.10	
		4 x 2.5 kg	fg	136.05	544.20
4908-20	STAKMOR	12 kg	bs	Inquire	
4908-88	Poly Pail	12 kg	bs	Inquire	
4908-24	Poly Drum	100 lb	bp	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Meets USP Requirements

Acidity (mL) ..... max. 0.30
Arsenic (As) ..... max. 1 ppm
Chloride (Cl) ..... max. 0.018%
Color of Aqueous Solution ..... Passes Test
Dextrin ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 2.5
Heavy Metals (as Pb) ..... max. 0.0005%
Identification ..... Passes Test
Residue on Ignition ..... max. 0.1%
Solubility ..... Passes Test
Soluble Starch, Sulfites ..... Passes Test
Specific Rotation $[\alpha]^{25}_D$ ..... +52.6 - +53.2°
Sulfate (SO_4) ..... max. 0.025%
Water (H_2O) ..... max. 0.5%

Product Information (not specifications):
Appearance (white, granular powder)
Odorless

CAS: 50-99-7

Dextrose, Anhydrous

See also D-Glucose, Anhydrous

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

trans-1,2-Diaminocyclohexane-N,N,N′,N′-tetraacetic Acid, Monohydrate

(DCYTA)

2357-55	Glass	25 g	so	73.40	
2357-57	Glass	100 g	so	162.65	

$C_{14}H_{22}N_2O_8.H_2O$ FW: 364.36

Assay ($C_{14}H_{22}N_2O_8.H_2O$) ..... min. 98%

CAS: 13291-61-7

Dibutyl Phthalate

OR

1829-61		1 kg	so	60.85	

$C_6H_4(COOCH_2CH_2CH_2CH_3)2$ FW: 278.35

Identification ..... Passes Test

Product Information (not specifications):
Appearance (oily liquid)

CAS: 84-74-2 DENSITY: 1 L = 1.05 kg IMO: 9:3082
FLASH POINT: 157°C

1,2-Dichloroethane

AR (ACS)

4966-04	Glass	500 mL	gs	31.75	
		12 x 500 mL	gs	25.65	307.80
4966-10	Glass	4 L	gs	119.45	
		4 x 4 L	gs	96.50	386.00

$C_2H_4Cl_2$ FW: 98.96

Meets ACS Requirements

Assay ($C_2H_4Cl_2$) (by GC, corrected for water) ..... min. 99.0%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.002%
Titrable Acid (meq/g) ..... max. 0.0003
Water (H_2O)(by KF, coulometric) ..... max. 0.03%

CAS: 107-06-2 DENSITY: 1 L = 1.24 kg IMO: 3:1184
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

2,6-Dichloroindophenol, Sodium Salt

AR (ACS)

3054-51	Glass	1 g	gd	73.10	
3054-54	Glass	10 g	gd	302.65	

$O:C_6H_2Cl_2:NC_6H_4ONa$ FW: 290.08

Meets ACS Specifications

Loss on Drying at 120°C ..... max. 12.0%
Interfering Dyes ..... Passes Test

Product Information (not specifications):
Appearance (dark green powder)

CAS: 620-45-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Dichloromethane
AR (ACS)
(methylene chloride)

4881-04	Glass	500 mL	gs	43.10	
		12 x 500 mL	gs	34.80	417.60
4881-06	Glass	1 L	gs	56.20	
		6 x 1 L	gs	45.40	272.40
4881-08	Glass	4 L	gs	207.25	
		4 x 4 L	gs	167.45	669.80
4881-19	Steel Pail	20 L	sb	Inquire	
4881-26	Steel Drum	200 L	bp	Inquire	

CH_2Cl_2 FW: 84.93

Meets ACS Specifications

Assay (CH_2Cl_2) (by GC) ..... min. 99.5%
Appearance (clear, colorless liquid) ..... Passes Test
Color (APHA) ..... max. 10
Free Halogens ..... Passes Test
Residue after Evaporation ..... max. 0.002%
Titrable Acid (meq/g) ..... max. 0.0003
Water (H_2O)(by coulometry) ..... max. 0.02%

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg IMO: 6.1:1593

Dichloromethane
AR (ACS)
(methylene chloride)

4883-09	Al Bottle	4 L	gs	229.50	
		4 x 4 L	gs	185.45	741.80

CH_2Cl_2 FW: 84.93

Meets ACS Specifications

Assay (CH_2Cl_2) (by GC, corrected for water) ..... min. 99.5%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Free Halogens ..... Passes Test
Residue after Evaporation ..... max. 0.002%
Titrable Acid (meq/g) ..... max. 0.0003
Water (H_2O)(by coulometry) ..... max. 0.02%

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg IMO: 6.1:1593

Dichloromethane
AR (ACS)
(methylene chloride)

4884-10	SAFEMOR	4 L	gs	213.85	
		4 x 4 L	gs	172.80	691.20

CH_2Cl_2 FW: 84.93

Meets ACS Specifications

Assay (CH_2Cl_2) (by GC, corrected for water) ..... min. 99.5%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Free Halogens ..... Passes Test
Residue after Evaporation ..... max. 0.002%
Titrable Acid (meq/g) ..... max. 0.0003
Water (H_2O)(by coulometry) ..... max. 0.02%

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg IMO: 6.1:1593

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Dichloromethane
UltimAR
(Stabilized)
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

H485-06	Glass	1 L	sp	63.75	
		6 x 1 L	sp	43.35	260.10
H485-10	Glass	4 L	sp	142.15	
		4 x 4 L	sp	96.70	386.80
H485-51	NOWPak	200 L	np	1963.20	

CH_2Cl_2 FW: 84.93

Meets ACS Specifications for Liquid Chromatography and UV Spectrophotometry

Appearance ..... Passes Test
Assay (CH_2Cl_2 including stabilizer) ..... min. 99.9%
Color (APHA) ..... max. 10
Free Halogens ..... Passes Test
Residue after Evaporation ..... max. 0.0001%
Titrable Acid (meq/g) ..... max. 0.0003
Water (H_2O)(by coulometry) ..... max. 0.01%
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at Emission Maximum for Impurities ..... max. 1.0
Ultraviolet Absorbance (1.00-cm cell vs. water):
233 nm ..... max. 1.00
235 nm ..... max. 1.0
240 nm ..... max. 0.10
250 nm ..... max. 0.10
260 nm ..... max. 0.04
280 nm ..... max. 0.005
300-400 nm ..... max. 0.003
Extraction-Concentration Suitability
Absorbance ..... Passes Test
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) ..... max. 5
Sum of the Peaks (ng/L) ..... max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ..... max. 5
Sum of the Peaks (µg/L) ..... max. 10
Preservative
Methanol (CH_3OH) ..... min. 400 ppm
Amylenes ..... min. 8 ppm

CAS: 75-09-2 DENSITY: 1 L = 1.318 kg IMO: 6.1:1593

Dichloromethane
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

4879-06	Glass	1 L	sp	45.65	
		6 x 1 L	sp	31.05	186.30
4879-10	Glass	4 L	sp	120.10	
		4 x 4 L	sp	81.70	326.80
4879-G4	Glass	4 L	sp	138.35	
		4 x 4 L	sp	94.10	376.40
4879-51	NOWPak	200 L	np	1697.75	

CH_2Cl_2 FW: 84.93

Meets ACS Specifications

Assay (CH_2Cl_2) (by GC, corrected for water) ..... min. 99.9%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0003%
Titrable Acid (meq/g) ..... max. 0.0003

Dichloromethane

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Free Halogens .....Passes Test
Water (H_2O)(by coulometry) .....max. 0.01%
Ultraviolet Absorbance (1.00-cm cell vs. water):
233 nm .....max. 1.00
235 nm .....max. 1.0
240 nm .....max. 0.12
250 nm .....max. 0.10
254 nm .....max. 0.01
260 nm .....max. 0.04
280 nm .....max. 0.005
300 nm .....max. 0.005
340-400 nm .....max. 0.01
350-400 nm .....max. 0.003
Liquid Chromatography Suitability
Absorbance .....Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 75-09-2 DENSITY: 1 L = 1.318 kg IMO: 6.1:1593

Dichloromethane

ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

H077-10	SAFEMOR	4 L	sp	134.10	
		4 x 4 L	sp	91.20	364.80

CH_2Cl_2 FW: 84.93

Meets ACS Specifications
Assay (CH_2Cl_2) (by GC, corrected for water) .....min. 99.9%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0003%
Titrable Acid (meq/g) .....max. 0.0003
Free Halogens .....Passes Test
Water (H_2O)(by coulometry) .....max. 0.01%
Ultraviolet Absorbance (1.00-cm cell vs. water):
233 nm .....max. 1.00
235 nm .....max. 1.0
240 nm .....max. 0.12
250 nm .....max. 0.10
254 nm .....max. 0.01
260 nm .....max. 0.04
280 nm .....max. 0.005
300 nm .....max. 0.005
340-400 nm .....max. 0.01
350-400 nm .....max. 0.003
Liquid Chromatography Suitability
Absorbance .....Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)
Filtered through a 0.2 micron filter.
CAS: 75-09-2 DENSITY: 1 L = 1.318 kg IMO: 6.1:1593

Dichromate, Acid Cleaning Solution
See Acid-Dichromate Cleaning Solution

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Diethylamine

OR

1832-01	Glass	500 mL	so	69.90	

$(C_2H_5)_2NH$ FW: 73.14

Assay ($(C_2H_5)_2NH$) (by GC) .....min. 97.5%
Color (APHA) .....max. 15
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 109-89-7 DENSITY: 1 L = 0.707 kg IMO: 3:1154
FLASH POINT: -28°C

1,4-Diethylene Dioxide
See Dioxane

Diethylene Oxide
See Tetrahydrofuran

Diethylene Oximide
See Morpholine

Diethylenetriaminepentaacetic Acid

OR

E117-57	Glass	100 g	so	188.05	

$C_{14}H_{23}N_3O_{10}$ FW: 393.35

Assay ($C_{14}H_{23}N_3O_{10}$) .....min. 98%
CAS: 67-43-6

Diethyl Ether
See Ether

Diisopropylamine

OR

2385-59	Glass	500 g	so	57.80	
2385-62		2 kg	so	151.40	

$((CH_3)_2CH)_2NH$ FW: 101.19

Assay ($((CH_3)_2CH)_2NH$) (by GC) .....min. 98.5%
Color (APHA) .....max. 15
Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (clear, colorless to pale yellow solution)
CAS: 108-18-9 DENSITY: 1 L = 0.722 kg IMO: 3:1158
FLASH POINT: 2°C

Diisopropyl Ether
See Isopropyl Ether

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N,N-Dimethylacetamide
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

5407-08	Glass	4 L	sp	293.65	
		4 x 4 L	sp	199.75	799.00

$CH_3CON(CH_3)_2$ FW: 87.12

Meets ACS Specifications

Assay ($CH_3CON(CH_3)_2$) (by GC) .....min. 99.0%
Residue after Evaporation .....max. 5 ppm
Water (H_2O)(by Karl Fischer titrn) .....max. 0.03%
Optical Absorbance (1-cm path vs water):
270 nm .....max. 1.00
280 nm .....max. 0.30
290 nm .....max. 0.15
310 nm .....max. 0.05
320 nm .....max. 0.03
360-400 nm .....max. 0.01
Filtered through a 0.2 micron filter.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 127-19-5 DENSITY: 1 L = 0.94 kg FLASH POINT: 66°C

Solvent Spill Cleanup Products available. See pp. 378.

p-(Dimethylamino)benzaldehyde
AR (ACS)
(Ehrlich's Reagent)

1836-55	Glass	25 g	gd	69.35	
1836-57	Glass	100 g	gd	141.75	

$(CH_3)_2NC_6H_4CHO$ FW: 149.19

Meets ACS Specifications

Solubility in Alcohol .....Passes Test
Appearance (white to yellowish-white crystals or crystalline powder) .....Passes Test
Color of HCl Solution .....Passes Test
Melting Point .....73-75 °C.
Residue after Ignition .....max. 0.1%
Solubility in HCl .....Passes Test
Color of Alcohol Solution (APHA) .....max. 60

CAS: 100-10-7

Dimethylbenzene
See Xylene or Xylenes

Dimethyl Carbinol
See Isopropyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N,N-Dimethylformamide
AR (ACS)

4929-04	Glass	500 mL	gs	65.55	
		12 x 500 mL	gs	52.95	635.40
4929-06	Glass	1 L	gs	90.90	
		6 x 1 L	gs	73.45	440.70
4929-08	Glass	4 L	gs	301.05	
		4 x 4 L	gs	243.25	973.00
4929-19	Steel Pail	20 L	sb	718.45	
4929-24	Steel Drum	430 lb	bp	Inquire	

$HCON(CH_3)_2$ FW: 73.09

Meets ACS Specifications

Assay ($HCON(CH_3)_2$) (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 15
Residue after Evaporation .....max. 0.005%
Titrable Acid (meq/g) .....max. 0.0005
Titrable Base (meq/g) .....max. 0.003
Water (H_2O) .....max. 0.15%

CAS: 68-12-2 DENSITY: 1 L = 0.949 kg IMO: 3:2265
FLASH POINT: 58°C

Solvent Spill Cleanup Products available. See pp. 378.

N,N-Dimethylformamide
GenAR
Suitable for Use in Biotechnology

V265-23	NOWPak	20 L	np	693.60	

$HCON(CH_3)_2$ FW: 73.09

Assay ($HCON(CH_3)_2$) (by GC, corrected for water) .....min. 99.8%
Appearance .....Passes Test
Color (APHA) .....max. 15
Residue after Evaporation .....max. 5 ppm
Titrable Acid (meq/g) .....max. 0.0005
Titrable Base (meq/g) .....max. 0.003
Water (by coulometry) .....max. 100 ppm
Optical Absorbance (1-cm path vs water): .....Passes Test
270 nm .....max. 1.00
275 nm .....max. 0.30
295 nm .....max. 0.10
310 nm .....max. 0.05
340 nm .....max. 0.01
400 nm .....max. 0.01
Amines (as dimethylamine) .....max. 5 ppm

CAS: 68-12-2 DENSITY: 1 L = 0.949 kg IMO: 3:2265
FLASH POINT: 58°C

Solvent Spill Cleanup Products available. See pp. 378.

Dimethylformamide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

N,N-Dimethylformamide
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

5356-08	Glass	4 L	sp	318.65	
		4 x 4 L	sp	216.75	867.00
5356-51	NOWPak	200 L	np	3415.90	

$HCON(CH_3)_2$ FW: 73.09

Meets ACS Specifications

Assay ($HCON(CH_3)_2$) (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 15
Residue after Evaporation .....max. 5 ppm
Titrable Acid (meq/g) .....max. 0.0005
Titrable Base (meq/g) .....max. 0.003
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Optical Absorbance (1-cm path vs water):
270 nm .....max. 1.00
275 nm .....max. 0.30
295 nm .....max. 0.10
310 nm .....max. 0.05
340-400 nm .....max. 0.01
Filtered through a 0.2 micron filter.

CAS: 68-12-2 DENSITY: 1 L = 0.949 kg IMO: 3:2265
FLASH POINT: 58°C

Solvent Spill Cleanup Products available. See pp. 378.

Dimethyl Ketone
See Acetone

Dimethyl Sulfoxide
AR (ACS)

4948-02	Poly	500 mL	ur	81.30	
		12 x 500 mL	ur	65.70	788.40
4948-16	Poly	4 L	ur	335.50	
		4 x 4 L	ur	271.10	1084.40

$(CH_3)_2SO$ FW: 78.13

Meets ACS Specifications

Assay ($(CH_3)_2SO$) (by GC, corrected for water) .....min. 99.9%
Appearance (clear, colorless liquid) .....Passes Test
Residue after Evaporation .....max. 0.01%
Titrable Acid (meq/g) .....max. 0.001
Water (H_2O)(by coulometry) .....max. 0.1%

CAS: 67-68-5 DENSITY: 1 L = 1.10 kg FLASH POINT: 89°C

See the Histopathology section for more information about stains and buffers, starting on page 87.

Dimethyl Sulfoxide
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

2969-63	Glass	2 L	sp	315.20	
		4 x 2 L	sp	214.40	857.60
2969-08	Glass	4 L	sp	459.85	
		4 x 4 L	sp	312.80	1251.20

$(CH_3)_2SO$ FW: 78.13

Meets ACS Specifications

Assay ($(CH_3)_2SO$) (by GC, corrected for water) .....min. 99.9%
Residue after Evaporation .....max. 5 ppm
Titrable Acid (meq/g) .....max. 0.001
Water (H_2O)(by KF, coulometric) .....max. 0.05%
Optical Absorbance (1-cm path vs water):
270 nm .....max. 0.40
290 nm .....max. 0.18
310 nm .....max. 0.06
330 nm .....max. 0.02
350-400 nm .....max. 0.01
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-68-5 DENSITY: 1 L = 1.10 kg FLASH POINT: 89°C

2.4-Dinitrophenylhydrazine
OR

2412-57	Glass	100 g	so	191.85	

$(NO_2)_2C_6H_3NHNH_2$ FW: 198.14

Appearance .....Passes Test
Melting Point Range .....198-202 °C.
Infrared Spectrum .....Conforms to Reference Standard

CAS: 119-26-6 IMO: 4.1:1325

Dioxane
AR (ACS)

4937-04	Glass	500 mL	gs	71.30	
		12 x 500 mL	gs	57.60	691.20
4937-08	Glass	4 L	gs	271.75	
		4 x 4 L	gs	219.60	878.40

$C_4H_8O_2$ FW: 88.11

Meets ACS Specifications

Assay ($C_4H_8O_2$) (by GC, corrected for water) .....min. 99.0%
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.01%
Color (APHA) .....max. 20
Freezing Point .....min. 11.0 °C.
Peroxide (as H_2O_2) .....max. 0.005%
Residue after Evaporation .....max. 0.005%
Solubility in H_2O .....Passes Test
Titrable Acid (meq/g) .....max. 0.0016
Water (H_2O)(by coulometry) .....max. 0.05%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 123-91-1 DENSITY: 1 L = 1.03 kg IMO: 3:1165
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Disodium Ethylenediaminetetraacetate
See (Ethylenedinitrilo)Tetraacetic Acid

Distilled Water
See Water

Dithiocarbonic Anhydride
See Carbon Disulfide

DMF
See N,N-Dimethylformamide

Dodecyl Sodium Sulfate
OR
(sodium lauryl sulfate)

1894-57	Glass	100 g	so	40.25	

$CH_3(CH_2)_{11}OSO_3Na$ FW: 288.38

Product Information (not specifications):
Appearance (white or cream-colored flakes)

CAS: 151-21-3 IMO: 4.1:1325

DRIERITE, Indicating (6 Mesh)

3371-04	500 g	sg	64.25	
	12 x 500 g	sg	51.40	616.80

DRIERITE, Indicating is Calcium Sulfate, Anhydrous. It is impregnated with cobalt chloride making the material blue when dry and changing to rose-red upon absorbtion of moisture. The material is an all-purpose drying agent. As a desiccant, it is capable of absorbing about 6.6% by weight of moisture and 10-14% by weight of moisture in gases.

DRIERITE-Registered Trademark of W.A. Hammond Drierite Company.

CAS: 7778-18-9

DRIERITE, Indicating (8 Mesh)

3378-04	500 g	sg	75.85	
	12 x 500 g	sg	60.65	727.80

DRIERITE, Indicating is Calcium Sulfate, Anhydrous. It is impregnated with cobalt chloride making the material blue when dry and changing to rose-red upon absorbtion of moisture. The material is an all-purpose drying agent. As a desiccant, it is capable of absorbing about 6.6% by weight of moisture and 10-14% by weight of moisture in gases.

DRIERITE-Registered Trademark of W.A. Hammond Drierite Company.

CAS: 7778-18-9

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Edetate Disodium
cGMP
USP-GenAR
(EDTA, disodium salt, dihydrate)
Suitable for Use in Biotechnology

7727-04	POLYSTORMOR	500 g	ge	233.95	
		12 x 500 g	ge	187.15	2245.80
7727-06	Poly	2.5 kg	ge	471.40	
		4 x 2.5 kg	ge	377.10	1508.40
7727-88	Poly Pail	12 kg	bs	Inquire	

$C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$ FW: 372.24

Meets USP, FCC & NF Requirements

Assay (anhydrous basis) 99.0-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Lead (Pb) .....max 10 mg/kg
pH (1 in 20) 4.0-5.5
pH (1 in 100) 4.3-4.7
Loss on Drying (by wt) 8.7-11.4%
Calcium (Ca) .....Passes Test
Heavy Metals .....max. 0.005%
Limit of Nitrilotriacetic Acid (by wt) .....max. 0.1%

Meets BP/Ph.Eur. Chemical Specifications

Appearance of Solution .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Identification D .....Passes Test
Impurity A .....max. 0.1%
Iron (Fe) .....max. 80 ppm
Heavy Metals (as Pb) .....max. 20 ppm
Assay ($C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$) 98.5-101.0%
pH (1 in 20) 4.0-5.5
Endotoxin Concentration (EU/g) .....max. 5

Product Information (not specifications):
Appearance (white, crystalline powder)

CAS: 6381-92-6

Edetate Disodium
cGMP
USP
(EDTA, disodium salt, dihydrate)

1395-04	POLYSTORMOR	500 g	fg	208.90	
		4 x 500 g	fg	167.10	668.40
1395-06	Poly	2.5 kg	fg	420.35	
		4 x 2.5 kg	fg	336.25	1345.00
1395-20	Lined Fiber Dr	12 kg	bs	Inquire	
1395-88	Poly Pail	12 kg	bs	Inquire	
1395-23		100 lb	bp	Inquire	

$C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$ FW: 372.24

Meets USP Requirements

Assay ($C_{10}H_{14}N_2Na_2O_8$) (anhydrous basis) 99.0-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
pH (1 in 20) 4.0-6.0
Loss on Drying 8.7-11.4%

EDTA

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Calcium (Ca) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.005%
Limit of Nitrilotriacetic Acid ..... max. 0.1%
Product Information (not specifications):
Appearance (white, crystalline powder)
CAS: 6381-92-6

EDTA
See also (Ethylenedinitrilo)Tetraacetic Acid

EDTA Titrant, 0.1 Molar (M/10) Volumetric Solution
StandARd

H100-05	Poly	1 L	st	35.05	
H100-07	Poly	4 L	st	113.90	

Molarity 0.095-0.105
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 139-33-3 DENSITY: 1 L = 1.0 kg

EDTA Titrant (Disodium), 0.0575 Molar Volumetric Solution
StandARd

H109-05	Poly	1 L	st	32.20	
H109-07	Poly	4 L	st	92.90	

Molarity 0.0570-0.0580
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 139-33-3 DENSITY: 1 L = 1.0 kg

EDTA Titrant, 0.05 Molar (M/20) Volumetric Solution
StandARd

H115-05	Poly	1 L	st	28.35	
H115-07	Poly	4 L	st	78.95	

Molarity 0.0495-0.0505
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 139-33-3 DENSITY: 1 L = 1.0 kg

EDTA Titrant, 0.01 Molar (M/100) Volumetric Solution (APHA)
StandARd
(For Calcium Hardness)

H105-05	Poly	1 L	st	22.85	
H105-07	Poly	4 L	st	75.40	

Molarity 0.0095-0.0105
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 139-33-3 DENSITY: 1 L = 1.0 kg

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ehrlich's Reagent
See p-(Dimethylamino)benzaldehyde

Eosin B
Certified OR
Certified for Use in Histology (C.I. 45400)

E061-03	Glass	25 g	so	51.15	

$C_{20}H_6Br_2N_2Na_2O_9$ FW: 624.05

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 0.01% Na_2CO_3,1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test
CAS: 548-24-3

Eosin Y (Yellowish)
Certified OR
(2',4',5',7'-tetrabromofluorescein)

0460-55	Glass	25 g	so	56.75	
0460-57	Glass	100 g	so	130.20	

$C_{20}H_6Br_4Na_2O_5$ FW: 691.86

Certified by the Biological Stain Commission.
CAS: 17372-87-1

Epsom Salts
See Magnesium Sulfate

Erythrosin B
Certified OR
Certified for Use in Histology (C.I. 45430)

E053-03	Glass	25 g	so	55.50	

$C_{20}H_6I_4Na_2O_5$ FW: 879.87

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 0.01% Na_2CO_3,1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test
CAS: 16423-68-0 MERCK INDEX: 13,3727

Ethanedioic Acid
See Oxalic Acid

1,2-Ethanediol
See Ethylene Glycol

Ethanenitrile
See Acetonitrile

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ethanol

See Ethyl Alcohol

Ether
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V326-10	Glass	4 L	sp	227.85	
		4 x 4 L	sp	155.00	620.00

$(C_2H_5)_2O$ FW: 74.12

Assay ($(C_2H_5)_2O$) (by GC, exclusive of preservative, corrected for water) ..... min. 99.5%
Color (APHA) ..... max. 10
Diethyl Ether Interferences:
Suitability for U.S. EPA Method 8151A ..... Passes Test
Ethanol (v/v) 1.5-2.5%
Peroxide (as H_2O_2)(at time of packaging) ..... max. 0.0005%
Residue after Evaporation ..... max. 0.0005%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Optical Absorbance (1-cm path vs water):
215 nm ..... max. 1.00
230 nm ..... max. 0.30
254 nm ..... max. 0.08
280 nm ..... max. 0.01
300 nm ..... max. 0.005

CAS: 60-29-7 DENSITY: 1 L = 0.71 kg IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether
ChromAR
(Contains Ethanol as a Preservative)
Suitable for Liquid Chromatography and UV-Spectrophotometry

2854-08	Al Bottle	1 L	sp	89.75	
		6 x 1 L	sp	61.05	366.30
2854-10	Al Bottle	3.75 L	sp	236.55	
		4 x 3.75 L	sp	160.90	643.60

$(C_2H_5)_2O$ FW: 74.12

Assay ($(C_2H_5)_2O$) (by GC, exclusive of preservative, corrected for water) ..... min. 99.5%
Alcohol (C_2H_5OH)(by GC) (preservative)(v/v) 1.5-2.5%
Color (APHA) ..... max. 10
Peroxide (as H_2O_2)(at time of packaging) ..... max. 0.0005%
Optical Absorbance (1-cm path vs water):
215 nm ..... max. 1.00
230 nm ..... max. 0.30
254 nm ..... max. 0.08
280 nm ..... max. 0.01
300 nm ..... max. 0.005
Residue after Evaporation ..... max. 0.0005%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 60-29-7 DENSITY: 1 L = 0.71 kg IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ether
USP
(Contains BHT as a Preservative)

0812-10	Al Bottle	500 g	fg	96.60	
		6 x 500 g	fg	77.25	463.50
0812-16	Al Bottle	2.5 kg	fg	388.95	
		4 x 2.5 kg	fg	311.15	1244.60
0812-25	Steel Drum	320 lb	bp	Inquire	

$(C_2H_5)_2O$ FW: 74.12

Meets USP Requirements
Specific Gravity at 25°/25°C 0.713-0.716
Acidity ..... Passes Test
Aldehydes ..... Passes Test
Low-Boiling Hydrocarbons ..... max. 0.2%
Nonvolatile Residue ..... max. 0.003%
Peroxide (as H_2O_2) ..... max. 0.3 ppm
Preservative (C_2H_5OH), (w/w) 1.5-3.5%
Preservative (H_2O), (w/w) ..... max. 0.5%
Preservative (BHT) ..... min. 7 ppm
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.5%

CAS: 60-29-7 DENSITY: 1 L = 0.71 kg IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether

See also Ethyl Ether

Ether, For Anesthesia
USP
(Contains BHT as a Preservative)

0804-10	Al Bottle	6 x 500 g	fg	73.65	441.90
0804-16	Al Bottle	4 x 2.5 kg	fg	269.10	1076.40

$(C_2H_5)_2O$ FW: 74.12

Meets USP Requirements
Specific Gravity at 25°/25°C 0.713-0.716
Acidity (as CH_3COOH) ..... max. 0.003%
Aldehydes ..... Passes Test
Ethanol ..... Actual Value Reported
Low-Boiling Hydrocarbons ..... max. 0.2%
Nonvolatile Residue ..... max. 0.003%
Peroxide (as H_2O_2) ..... max. 0.3 ppm
Preservative (BHT) ..... min. 0.00005%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.2%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 60-29-7 DENSITY: 1 L = 0.71 kg IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ether Acetic

See Ethyl Acetate

Ether Anhydrous

See Ethyl Ether Anhydrous

Ether Isopropyl

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ether Isopropyl

See Isopropyl Ether

Ether Methanol Solvent

AR

0805-21	Lined Steel Dr	12.5 kg	sb	933.65	

Carbonyl Compounds (as HCHO) .....max. 0.001%
Methanol (CH_3OH)(v/v) 2.38-2.62%
Peroxide (as H_2O_2) .....max. 0.0001%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.03%
Product Information (not specifications):
Appearance (clear, colorless solution)

DENSITY: 1 L = 0.7 kg IMO: 3:1993 FLASH POINT: -45°C

Ether Petroleum

See Petroleum Ether

Ethyl Acetate

AR (ACS)

4992-04	Glass	500 mL	gs	35.15	
		12 x 500 mL	gs	28.40	340.80
4992-06	Glass	1 L	gs	55.75	
		6 x 1 L	gs	45.05	270.30
4992-08	Glass	4 L	gs	186.40	
		4 x 4 L	gs	150.60	602.40
4992-19	Steel Pail	20 L	bs	Inquire	
4992-26	Steel Drum	200 L	bp	Inquire	

$CH_3COOC_2H_5$ FW: 88.11

Meets ACS Specifications

Assay ($CH_3COOC_2H_5$) (by GC, corrected for water) .....min. 99.5%
Appearance (clear, colorless liquid) .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.003%
Solubility in H_2O .....Passes Test
Substances Darkened by H_2SO_4 .....Passes Test
Titrable Acid (meq/g) .....max. 0.0009
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg IMO: 3:1173
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetate

AR (ACS)

4988-09	Al Bottle	4 L	gs	209.25	
		4 x 4 L	gs	169.10	676.40

$CH_3COOC_2H_5$ FW: 88.11

Meets ACS Specifications

Assay ($CH_3COOC_2H_5$) (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.003%
Solubility in H_2O .....Passes Test
Substances Darkened by H_2SO_4 .....Passes Test
Titrable Acid (meq/g) .....max. 0.0009
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg IMO: 3:1173
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetate

UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V553-10	Glass	4 L	sp	137.15	
		4 x 4 L	sp	93.30	373.20

$CH_3COOCH_2CH_3$ FW: 88.11

Meets ACS Specifications for Liquid Chromatography and UV Spectrophotometry

Assay ($CH_3COOCH_2CH_3$) (by GC, corrected for water) .....min. 99.6%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Titrable Acid (µeq/g) .....max. 0.8
Water (H_2O)(by KF, coulometric) .....max. 0.04%
Ultraviolet Absorbance (1.00-cm cell vs. water):
255 nm .....max. 1.00
257 nm .....max. 0.50
263 nm .....max. 0.10
265 nm .....max. 0.05
275 nm .....max. 0.05
280 nm .....max. 0.02
330-400 nm .....max. 0.01
Substances Darkened by H_2SO_4 .....Passes Test
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at Emission Maximum for Impurities .....max. 1.0
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ....max. 5

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg IMO: 3:1173
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetate

ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

3442-06	Glass	1 L	sp	48.40	
		6 x 1 L	sp	32.90	197.40
3442-10	Glass	4 L	sp	124.50	
		4 x 4 L	sp	84.70	338.80
3442-51	NOWPak	200 L	np	2238.10	

$CH_3COOC_2H_5$ FW: 88.11

Meets ACS Specifications

Assay ($CH_3COOC_2H_5$) (by GC, corrected for water) .....min. 99.5%
Color (APHA) .....max. 10
Infrared Absorbance .....Passes Test
Residue after Evaporation .....max. 0.0005%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Substances Darkened by H_2SO_4 ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0009
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
255 nm ..... max. 1.00
257 nm ..... max. 0.50
263 nm ..... max. 0.10
265 nm ..... max. 0.05
275 nm ..... max. 0.04
300-330 nm ..... max. 0.01
330-400 nm ..... max. 0.01
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg IMO: 3:1173
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetate
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

H078-10	SAFEMOR	4 L	sp	144.65	
		4 x 4 L	sp	98.40	393.60

$CH_3COOC_2H_5$ FW: 88.11

Meets ACS Specifications
Assay ($CH_3COOC_2H_5$) (by GC, corrected for water) ..... min. 99.5%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0005%
Substances Darkened by H_2SO_4 ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0009
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
255 nm ..... max. 1.00
257 nm ..... max. 0.50
263 nm ..... max. 0.10
265 nm ..... max. 0.05
275 nm ..... max. 0.04
300-330 nm ..... max. 0.01
350-400 nm ..... max. 0.005
Filtered through a 0.2 micron filter.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 141-78-6 DENSITY: 1 L = 0.902 kg IMO: 3:1173
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Acetoacetate
OR

2424-62	3 kg	so	225.15	

$CH_3COCH_2COOC_2H_5$ FW: 130.14

Assay ($CH_3COCH_2COOC_2H_5$) (by GC) ..... min. 97.5%
Color (APHA) ..... max. 15
Infrared Spectrum ..... Conforms to Reference Standard
Refractive Index, η^{20}_D ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 141-97-9 DENSITY: 1 L = 1.03 kg IMO: 3:1993
FLASH POINT: 57°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Alcohol, Completely Denatured
(Made from Completely Denatured Alcohol Formula 19)

7018-16	Poly	4 L	gs	125.75	
		4 x 4 L	gs	101.60	406.40
7018-19	Lined Steel Dr	20 L	sb	283.90	

Identification (by GLC) ..... Passes Test
Residue after Evaporation (w/v) ..... max. 0.003%
CDA Formula 19 consists of 4 volumes of methyl isobutyl ketone, 1 volume of kerosene, and 100 volumes of 190 proof ethanol.
Product Information (not specifications):
Appearance (clear, colorless liquid)

DENSITY: 1 L = 0.80 kg IMO: 3:1993 FLASH POINT: 13°C

Ethyl Alcohol, Completely Denatured
(Made from Completely Denatured Alcohol Formula 19)

3791-10	SAFEMOR	4 L	gs	144.20	
		4 x 4 L	gs	116.50	466.00

Identification (by GLC) ..... Passes Test
Residue after Evaporation (w/v) ..... max. 0.003%
CDA Formula 19 consists of 4 volumes of methyl isobutyl ketone, 1 volume of kerosene, and 100 volumes of 190 proof ethanol.
Product Information (not specifications):
Appearance (clear, colorless solution)

DENSITY: 1 L = 0.80 kg IMO: 3:1993 FLASH POINT: 13°C

Ethylbenzene
OR

2427-62	3 kg	so	96.05	

$C_6H_5C_2H_5$ FW: 106.17

Assay ($C_6H_5C_2H_5$) ..... min. 98.5%
Color (APHA) ..... max. 20
Infrared Spectrum ..... Conforms to Reference Standard
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 100-41-4 DENSITY: 1 L = 0.867 kg IMO: 3:1175
FLASH POINT: 21°C

Ethylenediamine
OR

1844-59	500 g	so	78.70	

$H_2NCH_2CH_2NH_2$ FW: 60.10

Assay ($H_2NCH_2CH_2NH_2$) ..... min. 99%
Color (APHA) ..... max. 15
Boiling Range ..... 113-120 °C.
Solubility (25 in 100) ..... Passes Test
Specific Gravity at 25°/25°C 0.893-0.906
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 107-15-3 DENSITY: 1 L = 0.89 kg IMO: 8:1604
FLASH POINT: 40°C

Ethylene Dichloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ethylene Dichloride
See 1,2-Dichloroethane

(Ethylenedinitrilo)Tetraacetic Acid, Powder
AR (ACS)

2580-02	POLYSTORMOR	125 g	gd	83.90	
		12 x 125 g	gd	67.10	805.20
2580-12	POLYSTORMOR	500 g	gd	171.00	
		4 x 500 g	gd	136.80	547.20

$C_{10}H_{16}N_2O_8$ FW: 292.25

Meets ACS Specifications

Assay ($C_{10}H_{16}N_2O_8$) 99.4-100.6%
Calcium (Ca) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.001%
Insoluble in Dilute NH_4OH .....max. 0.005%
Iron (Fe) .....max. 0.005%
Magnesium (Mg) .....max. 5 ppm
Nitriloacetic Acid .....max. 0.1%
Residue after Ignition .....max. 0.2%
Product Information (not specifications):
Appearance (white, crystalline powder)

CAS: 60-00-4

(Ethylenedinitrilo)Tetraacetic Acid, Disodium Salt, Dihydrate
AR (ACS)

4931-02	POLYSTORMOR	125 g	gd	75.65	
		12 x 125 g	gd	60.50	726.00
4931-04	POLYSTORMOR	500 g	gd	167.00	
		12 x 500 g	gd	133.60	1603.20
4931-20	STAKMOR	12 kg	bs	Inquire	

$C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$ FW: 372.24

Meets ACS Requirements

Assay ($C_{10}H_{14}N_2Na_2O_8{\cdot}2H_2O$) 99.0-101.0%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Heavy Metals (as Pb) .....max. 0.005%
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.01%
Nitrilotriacetic Acid (by polarography) .....max. 0.1%
pH of 5% Solution at 25°C 4.0-6.0
Product Information (not specifications):
Appearance (fine, white crystalline powder)

CAS: 6381-92-6

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ethylene Glycol
AR

5001-02	Poly	500 mL	ur	35.95	
		12 x 500 mL	ur	29.05	348.60
5001-16	Poly	4 L	ur	113.35	
		4 x 4 L	ur	91.60	366.40
5001-19	Poly Pail	5 gl	sb	462.85	

$HO(CH_2)_2OH$ FW: 62.07

Acidity (as CH_3COOH) .....max. 0.010%
Assay ($HO(CH_2)_2OH$) (by GC) .....min. 99.0%
Chloride (Cl) .....max. 0.0005%
Color (APHA) .....max. 15
Iron (Fe) .....max. 0.00002%
Residue after Ignition .....max. 0.005%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.20%
Specific Gravity at 25°/25°C 1.112-1.115
Boiling Range .....193-205 °C.
Product Information (not specifications):
Appearance (clear, colorless hygroscopic liquid)

CAS: 107-21-1 DENSITY: 1 L = 1.1 kg FLASH POINT: 111°C

Ethylene Glycol

5037-19	Poly Pail	5 gl	sb	477.15	

$HO(CH_2)_2OH$ FW: 62.07

Assay ($HO(CH_2)_2OH$) (by GC) .....min. 99%
Specific Gravity at 25°/25°C .....Actual Value Reported
Product Information (not specifications):
Appearance (clear, colorless hygroscopic liquid)

CAS: 107-21-1 DENSITY: 1 L = 1.1 kg FLASH POINT: 111°C

Ethylene Tetrachloride
See Tetrachloroethylene

Ethyl Ether
AR (ACS)
(Contains BHT as a Preservative)

0850-10	Al Bottle	500 g	gs	82.80	
		6 x 500 g	gs	66.90	401.40
0850-12	Al Bottle	2.5 kg	gs	310.20	
		4 x 2.5 kg	gs	250.65	1002.60
0850-14	Glass	4 L	gs	247.00	
		4 x 4 L	gs	199.60	798.40
0850-22	Steel Pail	12.5 kg	sb	496.55	

$(C_2H_5)_2O$ FW: 74.12

Meets ACS Specifications

Assay ($(C_2H_5)_2O$) (by GC, exclusive of preservative) .....min. 98.0%
Appearance (clear, colorless liquid) .....Passes Test
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.001%
Color (APHA) .....max. 10
Ethanol .....Actual Value Reported
Peroxide (as H_2O_2) .....max. 1 ppm
Preservative (BHT) .....min. 0.00005%
Residue after Evaporation .....max. 0.001%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Titrable Acid (µeq/g) ..... max. 0.2
Water (H_2O)(by Karl Fischer titrn) ..... Actual Value Reported
CAS: 60-29-7 DENSITY: 1 L = 0.71 kg IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Ether
See also Ether

Ethyl Ether, Anhydrous
AR (ACS)
(Contains BHT as a Preservative)

0848-10	Al Bottle	500 g	gs	76.80	
		6 x 500 g	gs	62.05	372.30
0848-12	Al Bottle	2.5 kg	gs	355.00	
		4 x 2.5 kg	gs	286.85	1147.40
0848-22	Steel Pail	12.5 kg	sb	586.05	
0848-24	Steel Drum	320 lb	bp	Inquire	

$(C_2H_5)_2O$ FW: 74.12

Meets ACS Specifications
Assay ($(C_2H_5)_2O$) (by GC) ..... min. 99.0%
Alcohol (C_2H_5OH) ..... Passes Test
Carbonyl Compounds (as HCHO) ..... max. 0.001%
Color (APHA) ..... max. 10
Peroxide (as H_2O_2) ..... max. 1 ppm
Preservative (BHT) ..... min. 0.00005%
Residue after Evaporation ..... max. 0.001%
Titrable Acid (meq/g) ..... max. 0.0002
Water (H_2O)(by KF, coulometric) ..... max. 0.01%
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 60-29-7 DENSITY: 1 L = 0.71 kg IMO: 3:1155
FLASH POINT: -45°C

Solvent Spill Cleanup Products available. See pp. 378.

Ethyl Methyl Ketone
See Methyl Ethyl Ketone

Fast Green FCF
Certified OR
Certified for Use in Histology and Cytology (C.I. 42053)

E055-03	Glass	25 g	so	55.15	

$C_{37}H_{34}N_2Na_2O_{10}S_3$ FW: 808.86

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (0.6 mg/200 mL in 50% C_2H_5OH, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test
CAS: 2353-45-9 MERCK INDEX: 13,3970

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Fehling's Solution A
StandARd
(cupric sulfate)

H118-05	Glass	1 L	st	27.05	

Assay ($CuSO_4 \cdot 5H_2O$)(g/mL) 0.069-0.073
Appearance (clear, blue solution) ..... Passes Test
Traceable to NIST
CAS: 7758-98-7 DENSITY: 1 L = 1.04 kg

Fehling's Solution B
StandARd
(alkaline tartrate)

H125-05	Poly	1 L	st	61.95	

Suitability ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless solution)
IMO: 8:3266

Ferric Ammonium Sulfate, 12-Hydrate, Crystal
AR (ACS)

5044-20	STAKMOR	12 kg	bs	Inquire	

$FeNH_4(SO_4)_2 \cdot 12H_2O$ FW: 482.20

Meets ACS Requirements
Assay ($FeNH_4(SO_4)_2 \cdot 12H_2O$) (by iodometry) 98.5-102.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Nitrate (NO_3) ..... max. 0.01%
Calcium (Ca) ..... max. 0.01%
Copper (Cu) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Zinc (Zn) ..... max. 0.003%
Ferrous Iron ..... Passes Test
CAS: 7783-83-7

Ferric Chloride, 6-Hydrate, Lumps
AR (ACS)

5029-04	POLYSTORMOR	500 g	gd	96.75	
		12 x 500 g	gd	77.40	928.80
5029-06	Poly	2.5 kg	gd	328.85	
		4 x 2.5 kg	gd	263.05	1052.20
5029-20	STAKMOR	12 kg	bs	Inquire	

$FeCl_3 \cdot 6H_2O$ FW: 270.30

Meets ACS Specifications
Assay ($FeCl_3 \cdot 6H_2O$) (by iodometry) 97.0-102.0%
Solubility ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Calcium (Ca)(by FES) ..... max. 0.01%

Ferric Nitrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Copper (Cu) ..... max. 0.003%
Insoluble Matter ..... max. 0.01%
Ferrous Iron ..... max. 0.002%
Magnesium (Mg) ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.01%
Phosphorus Compounds (as PO_4) ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.01%
Zinc (Zn) ..... max. 0.003%
Product Information (not specifications):
Appearance (brown-yellow crystalline lumps)
CAS: 10025-77-1 IMO: 8:3260

Ferric Nitrate, 9-Hydrate, Crystal
AR (ACS)

5032-16	STAKMOR	2.5 kg	gd	247.50	
5032-20	STAKMOR	12 kg	bs	Inquire	

$Fe(NO_3)_3 \cdot 9H_2O$ FW: 404.00

Meets ACS Specifications
Assay ($Fe(NO_3)_3 \cdot 9H_2O$) (by iodometry) 98.0-101.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.01%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.05%
Product Information (not specifications):
Appearance (pale violet crystals)
CAS: 7782-61-8 IMO: 5.1:1466

Ferric Sulfate, Powder
AR

5036-12	Glass	500 g	gd	180.75	
		4 x 500 g	gd	144.60	578.40
5036-05	STAKMOR	2.5 kg	gd	615.40	

$Fe_2(SO_4)_3 \cdot xH_2O$

Assay ($Fe_2(SO_4)_3$) ..... min. 73.0%
Solubility ..... Passes Test
Insoluble Matter ..... max. 0.020%
Chloride (Cl) ..... max. 0.005%
Ferrous Iron ..... max. 0.02%
Nitrate (NO_3) ..... max. 0.01%
Substances not Precipitated by NH_4OH ..... max. 0.10%
Mesh:
Thru U.S. No. 40 Sieve ..... min. 90%
Copper (Cu) ..... max. 0.005%
Zinc (Zn) ..... max. 0.005%
Product Information (not specifications):
Appearance (tan to light greenish-yellow powder)
CAS: 15244-10-7

Ferroin Indicator

H119-01	Glass	100 mL	st	45.60	
H119-03	Glass	500 mL	st	198.15	

Suitability ..... Passes Test
Product Information (not specifications):
Appearance (clear, dark red solution)
DENSITY: 1 L = 1.0 kg

Ferrous Ammonium Sulfate, 6-Hydrate, Crystal
AR (ACS)

5064-20	STAKMOR	12 kg	bs	Inquire	

$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$ FW: 392.13

Meets ACS Specifications
Assay ($Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$) (by $KMnO_4$ titrn) 98.5-101.5%
Appearance of Solution ..... Passes Test
Calcium (Ca) ..... max. 0.005%
Copper (Cu) ..... max. 0.003%
Ferric Ion (Fe^{3+}) ..... max. 0.01%
Insoluble Matter ..... max. 0.01%
Magnesium (Mg) ..... max. 0.002%
Manganese (Mn) ..... max. 0.01%
Phosphate (PO_4) ..... max. 0.003%
Potassium (K) ..... max. 0.002%
Sodium (Na) ..... max. 0.02%
Zinc (Zn) ..... max. 0.003%
Product Information (not specifications):
Appearance (blue-green crystals)
NOTE: Due to inherent oxidation, ferric ion (Fe^{3+}) content may increase on storage.
CAS: 7783-85-9

Ferrous Sulfate, Dried, Fine Powder
USP, FCC cGMP

5051-04	POLYSTORMOR	500 g	fg	90.60	
		12 x 500 g	fg	72.45	869.40
5051-24	Lined Fiber Dr	100 lb	bp	Inquire	
5051-30	Bag	50 kg	bp	Inquire	

$FeSO_4$ FW: 169.93

Meets USP & FCC Requirements
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Substances ..... max. 0.05%
Arsenic (As) ..... max. 3 ppm
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg) ..... max 1 mg/kg
Assay (as $FeSO_4$) 86.0-89.0%
CAS: 7720-78-7

Ferrous Sulfate, 7-Hydrate, Granular
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5056-12	POLYSTORMOR	500 g	gd	85.25	
		4 x 500 g	gd	68.20	272.80
5056-06	Poly	2.5 kg	gd	279.25	
		4 x 2.5 kg	gd	223.40	893.60
5056-20	STAKMOR	12 kg	bs	Inquire	
5056-26	Leverpack	250 lb	bp	Inquire	

$FeSO_4 \cdot 7H_2O$ FW: 278.02

Meets ACS Specifications

Assay ($FeSO_4 \cdot 7H_2O$) (by $KMnO_4$ titrn) 99.0-104.5%
Calcium (Ca) .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Copper (Cu) .....max. 0.005%
Ferric Ion (Fe^{3+}) .....max. 0.1%
Insoluble Matter .....max. 0.01%
Magnesium (Mg) .....max. 0.002%
Manganese (Mn) .....max. 0.05%
pH of 5% Solution at 25°C 3.0-5.0
Phosphate (PO_4) .....max. 0.001%
Potassium (K) .....max. 0.002%
Sodium (Na) .....max. 0.02%
Zinc (Zn) .....max. 0.005%

Product Information (not specifications):
Appearance (blue-green granules)
IMPORTANT: Store below 24°C (75°F).

CAS: 7782-63-0

Ferrous Sulfate, 7-Hydrate, Granular
USP, FCC

cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5572-04	POLYSTORMOR	500 g	fg	102.95	
		12 x 500 g	fg	82.35	988.20
5572-20	STAKMOR	12 kg	bs	Inquire	
5572-88	Poly Pail	12 kg	bs	Inquire	
5572-22	Fiber Drum	50 lb	bp	Inquire	
5572-26	Fiber Drum	250 lb	bp	Inquire	

$FeSO_4 \cdot 7H_2O$ FW: 278.02

Meets USP & FCC Requirements

Assay ($FeSO_4 \cdot 7H_2O$) 99.5-104.5%
Arsenic (As) .....max. 0.0003%
Identification A .....Passes Test
Identification B .....Passes Test
Insoluble Matter .....max. 0.05%
Lead (Pb)(FCC) .....max 2 mg/kg
Lead (Pb)(USP) .....max. 0.001%
Mercury (Hg) (FCC) .....max 1 mg/kg
Mercury (Hg) (USP) .....max 3 mg/kg
Mesh:
Thru U.S. No. 4 Sieve .....min. 100%
Thru U.S. No. 10 Sieve .....min. 90%
pH of 5% Solution at 25°C 3.0-3.5
Solubility .....Passes Test

Product Information (not specifications):
Appearance (pale, bluish-green crystalline granules)
IMPORTANT: Store below 24°C (75°F).

CAS: 7782-63-0

Florisil (60-100 Mesh)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
6875-04	POLYSTORMOR	500 g	sg	169.60	
		6 x 500 g	sg	115.35	692.10

Mesh:
On U.S. No. 60 Sieve .....max. 10%
Thru U.S. No. 100 Sieve .....max. 10%

Product Information (not specifications):
Appearance (fine, white crystalline powder). However, due to the high temperature involved in the activation process, some small charred particles may be visible within the product.

Florisil (60-100 Mesh)
Suitable for Use in Pesticide Residue Analysis

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
6877-08	Glass	500 g	sg	259.75	
		4 x 500 g	sg	176.70	706.80
6877-06	Glass	1 kg	sg	449.85	
		4 x 1 kg	sg	306.00	1224.00

GLC Interference .....Passes Test
Mesh:
On U.S. No. 60 Sieve .....max. 15%
Thru U.S. No. 60 Sieve .....min. 75%
On U.S. No. 100 Sieve .....min. 75%
Thru U.S. No. 100 Sieve .....max. 10%

Product Information (not specifications):
Appearance (fine, white crystalline powder)

CAS: 1343-88-0

Florisil (100-200 Mesh)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
6876-04	POLYSTORMOR	500 g	sg	182.20	
		6 x 500 g	sg	123.95	743.70

Mesh:
On U.S. No. 100 Sieve .....max. 15%
Thru U.S. No. 100 Sieve .....min. 75%
On U.S. No. 200 Sieve .....min. 75%
Thru U.S. No. 200 Sieve .....max. 10%

Product Information (not specifications):
Appearance (fine, white crystalline powder)

Formaldehyde Solution
AR (ACS)
Suitable for Histological Applications

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5016-02	Poly	500 mL	gs	49.00	
		12 x 500 mL	gs	39.60	475.20
5016-08	Poly	4 L	gs	126.10	
		4 x 4 L	gs	101.90	407.60
5016-19	Cubitainer	20 L	sb	353.25	
5016-26	Poly Drum	200 L	bp	Inquire	

HCHO FW: 30.03

Meets ACS Specifications

Assay (HCHO) (by acidimetry) 36.5-38.0%
Color (APHA) .....max. 10

Formaldehyde

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Iron (Fe) ..... max. 5 ppm
Methanol (CH_3OH) 10-15%
Residue after Ignition ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.002%
Titrable Acid (meq/g) ..... max. 0.006
Product Information (not specifications):
Appearance (clear, colorless solution)
Trioxymethylene precipitate can be formed at ppt levels upon standing below15°C (59°F). Nonhazardous polymerization may occur at low temperatures,forming paraformaldehyde, a white solid.

CAS: 50-00-0 DENSITY: 1 L = 1.08 kg IMO: 3:1198
FLASH POINT: 60°C

Formaldehyde Solution, 10% (w/v) in Aqueous Phosphate Buffer

StandARd
Suitable for Histological Applications

H121-05	Poly	1 L	st	25.55	
H121-08	Poly	4 L	st	44.00	
		4 x 4 L	st	35.20	140.80
H121-07	Cubitainer	4 L	st	41.90	
H121-09	Cubitainer	20 L	st	152.30	
H121-22	Poly Drum	200 L	bp	Inquire	

Assay (HCHO) 3.80-4.35%
pH 6.9-7.1
Product Information (not specifications):
Appearance (clear, colorless liquid)

DENSITY: 1 L = 1.0 kg FLASH POINT: 85°C

Formalin

See Formaldehyde Solution

Formamide

OR

1846-57	Glass	100 g	so	21.85	
1846-59	Glass Single Shipper	500 g	so	43.40	

$HCONH_2$ FW: 45.04

Assay ($HCONH_2$) ..... min. 98.0%
Color (APHA) ..... max. 75
Methanol (CH_3OH) ..... max. 0.9%
Product Information (not specifications):
Appearance (clear, colorless to pale yellow solution)

CAS: 75-12-7 DENSITY: 1 L = 1.13 kg FLASH POINT: 154°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Formamide

OR

3797-08	Glass	4 kg	gs	335.00	
		4 x 4 kg	gs	270.70	1082.80

$HCONH_2$ FW: 45.04

Assay ($HCONH_2$) ..... min. 98%
Color (APHA) ..... Actual Value Reported
Specific Gravity at 25°/25°C ..... Actual Value Reported
Product Information (not specifications):
Appearance (clear, colorless to pale yellow solution)

CAS: 75-12-7 DENSITY: 1 L = 1.13 kg FLASH POINT: 154°C

Solvent Spill Cleanup Products available. See pp. 378.

Formic Acid, 88%

AR (ACS)

2592-02	Poly	120 mL	ra	37.40	
		12 x 120 mL	ra	29.90	358.80
2592-04	Poly	500 mL	ra	63.20	
		12 x 500 mL	ra	50.55	606.60
2592-05	Poly	500 mL	ur	58.00	
		12 x 500 mL	ur	46.40	556.80
2592-18	Poly	2.5 L	ur	153.25	
		6 x 2.5 L	ur	114.95	689.70
2592-45	Poly	4 L	ur	175.20	
		4 x 4 L	ur	140.15	560.60
2592-19	Cubitainer	5 gl	ur	863.80	

HCOOH FW: 46.03

Meets ACS Specifications

Assay (HCOOH) ..... min. 88.0%
Acetic Acid (CH_3COOH) ..... max. 0.4%
Ammonium (NH_4) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Color (APHA) ..... max. 15
Dilution Test ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.0005%
Iron (Fe) ..... max. 0.0005%
Residue after Evaporation ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.002%
Sulfite (SO_3) ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 64-18-6 DENSITY: 1 L = 1.2 kg IMO: 8:1779
FLASH POINT: 50°C

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Fructose, Low Glucose
GenAR
Suitable for Use in Biotechnology

7756-12	POLYSTORMOR	500 g	ge	39.95	
		6 x 500 g	ge	35.90	215.40
7756-14	POLYSTORMOR	1 kg	ge	82.55	
		4 x 1 kg	ge	74.15	296.60
7756-65	STAKMOR	10 kg	ge	588.95	

$C_6H_{12}O_6$ FW: 180.16

Assay ($C_6H_{12}O_6$) 98.0-102.0%
Acidity ..... Passes Test
Arsenic (As) ..... max. 0.0001%
Calcium and Magnesium ..... max. 0.005%
Chloride (Cl) ..... max. 0.018%
Color of Solution ..... Passes Test
Glucose ..... max. 0.2%
Heavy Metals (as Pb) ..... max. 0.0005%
Identification ..... Passes Test
Loss on Drying ..... max. 0.5%
Residue on Ignition ..... max. 0.5%
Sulfate (SO_4) ..... max. 0.025%
Hydroxymethylfurfural ..... Passes Test
Product Information (not specifications):
Appearance (colorless crystals or white crystalline powder)

CAS: 57-48-7

Fumaric Acid
OR

0898-59	Glass	500 g	so	59.85	

HOCOCH:CHCOOH FW: 116.07

Assay (HOCOCH:CHCOOH) (anhydrous basis) ..... min. 99.5%
Product Information (not specifications):
Appearance (white granules or powder)

CAS: 110-17-8 FLASH POINT: 273°C

D(+)-Galactose, Anhydrous
OR

5094-59	Poly	500 g	so	192.25	

$C_6H_{12}O_6$ FW: 180.16

Melting Point ..... 168-172 °C.
Infrared Spectrum ..... Conforms to Reference Standard
Product Information (not specifications):
Appearance (white crystals)

CAS: 59-23-4

Gallic Acid, Monohydrate, Crystal
AR

3112-03	Glass	500 g	gd	149.65	
3112-20	Lined Fiber Dr	12 kg	bs	Inquire	
3112-24	Fiber Drum	50 kg	bp	Inquire	

$C_6H_2(OH)_3COOH{\cdot}H_2O$ FW: 188.14

Color of Solution (at 425 nm) ..... Actual Value Reported
Identification ..... Passes Test
Residue after Ignition ..... max. 0.1%
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.02%
Tannic Acid ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... max. 10%
Product Information (not specifications):
Appearance (white to yellowish-white powder or needle-like crystals)

CAS: 5995-86-8

Gelatin (Type B)
OR
Suitable for Culture Media

H219-59	POLYSTORMOR	500 g	so	83.40	

Identification A ..... Passes Test
Identification B ..... Passes Test
Sulfur Dioxide (SO_2) ..... max. 0.15%
Product Information (not specifications):
Appearance (off-white to tan flakes or powder)

CAS: 9000-70-8

Gentian Violet
Certified OR
(crystal violet)

E518-57	Glass	100 g	so	106.45	

$C_{25}H_{30}ClN_3$ FW: 407.99

Certified by the Biological Stain Commission.

CAS: 548-62-9

Giemsa Blood Staining Solution, Stock
Certified OR
(8.0 g/L Giemsa Stain, 500 mL/L glycerol and 500 mL/L methanol, absolute)
Prepared with Certified Stain

E052-03	Poly	500 mL	so	81.10	

Suitability for Blood Cell Staining ..... Passes Test
DENSITY: 1 L = 0.79 kg IMO: 3:1230 FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Giemsa Stain

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Giemsa Stain
Certified OR
Certified for Use in Blood Staining

E060-03	Glass	25 g	so	44.55	

Certified by the Biological Stain Commission
Biological Test .....Passes Test
CAS: 51811-82-6

Glacial Phosphoric Acid
See Phosphoric Acid, Meta

Glauber's Salt
See Sodium Sulfate

Glucose
See Dextrose Anhydrous

D-Glucose, Anhydrous, Granular
AR (ACS)

4912-12	POLYSTORMOR	500 g	gd	48.95	
		4 x 500 g	gd	39.15	156.60
4912-06	Poly	2.5 kg	gd	135.60	
		4 x 2.5 kg	gd	108.45	433.80
4912-20	STAKMOR	12 kg	bs	Inquire	
4912-07	Poly Pail	12 kg	bs	Inquire	
4912-24		100 lb	bp	Inquire	

$C_6H_{12}O_6$ FW: 180.16

Meets ACS Specifications
Chloride (Cl) .....max. 0.01%
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 5 ppm
Loss on Drying at 105°C .....max. 0.2%
Residue after Ignition .....max. 0.02%
Starch .....Passes Test
Sulfate and Sulfite (as SO_4) .....max. 0.005%
Specific Rotation $[\alpha]^{25}_D$ .....+52.5 - +53.0°
Titrable Acid (meq/g) .....max. 0.002
Product Information (not specifications):
Appearance (white granules)
CAS: 50-99-7

L(+)-Glutamic Acid
OR

5095-59	Glass	500 g	so	85.00	

$HOCOCH_2CH_2CH(NH_2)COOH$ FW: 147.13

Infrared Spectrum .....Conforms to Reference Standard
Assay ($HOCOCH_2CH_2CH(NH_2)COOH$) (dried basis) 98.5-101.5%
Product Information (not specifications):
Appearance (white, crystalline powder)
CAS: 56-86-0

L-Glutamic Acid, Sodium Salt, Monohydrate
OR

2469-57	POLYSTORMOR	100 g	so	35.45	

$HOCOCH_2CH_2CH(NH_2)COONa{\cdot}H_2O$ FW: 187.13

Melting Point (with decomposition) .....max. 232 °C.
Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (white, crystalline powder)
CAS: 6106-04-3

Glycerin
See Glycerol

Glycerol
AR (ACS)

5092-02	Poly	500 mL	gs	71.85	
		12 x 500 mL	gs	58.05	696.60
5092-16	Poly	4 L	gs	366.15	
		4 x 4 L	gs	295.85	1183.40

$C_3H_5(OH)_3$ FW: 92.10

Meets ACS Specifications
Assay ($C_3H_5(OH)_3$) (by GC, corrected for water) .....min. 99.5%
Acrolein and Glucose .....Passes Test
Chlorinated Compounds (as Cl) .....max. 0.003%
Color (APHA) .....max. 10
Fatty Acid Esters (as Butyric Acid) .....max. 0.05%
Heavy Metals (as Pb) .....max. 2 ppm
Neutrality .....Passes Test
Residue after Ignition .....max. 0.005%
Solubility (5 in 50) .....Passes Test
Substances Darkened by H_2SO_4 .....Passes Test
Sulfate (SO_4) .....max. 0.001%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.5%
Product Information (not specifications):
Appearance (clear, colorless, syrupy liquid)
CAS: 56-81-5 DENSITY: 1 L = 1.26 kg FLASH POINT: 199°C

Glycine
GenAR
Suitable for Use in Biotechnology

7728-20	Poly Pail	12 kg	bs	Inquire	

NH_2CH_2COOH FW: 75.07

Assay (NH_2CH_2COOH) (dried basis) 98.5-101.5%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Chloride (Cl) .....max. 0.007%
Sulfate (SO_4) .....max. 0.007%
Heavy Metals (as Pb) .....max. 0.0020%
Solubility (1 in 10) .....Passes Test
Loss on Drying at 105°C .....max. 0.2%
Residue on Ignition .....max. 0.1%
Readily Carbonizable Substances .....Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrolyzable Substances ..... Passes Test
Optical Density (280 nm) (au) ..... max. 0.15
Enzyme Activity:
DNase Activity ..... Passes Test
RNase Activity ..... Passes Test
Protease Activity ..... Passes Test
Product Information (not specifications):
Appearance (white crystalline powder or granules)
CAS: 56-40-6

Glycine
USP
(aminoacetic acid)

cGMP

5104-12	POLYSTORMOR	500 g	fg	112.85	
		4 x 500 g	fg	90.25	361.00
5104-05	STAKMOR	2.5 kg	fg	337.25	
5104-20	STAKMOR	12 kg	bs	Inquire	
5104-88	Poly Pail	12 kg	bs	Inquire	

NH_2CH_2COOH FW: 75.07

Meets USP Requirements
Assay (NH_2CH_2COOH) (dried basis) 98.5-101.5%
Solubility (1 in 10) ..... Passes Test
Identification ..... Passes Test
Loss on Drying at 105°C ..... max. 0.2%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.007%
Heavy Metals (as Pb) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.0065%
Hydrolyzable Substances ..... Passes Test
Product Information (not specifications):
Appearance (white crystalline granules or powder)
CAS: 56-40-6

Glycocoll
See Glycine

Guanidine Hydrochloride
GenAR
Suitable for Use in Biotechnology

7716-04	POLYSTORMOR	500 g	ge	160.40	
		6 x 500 g	ge	144.05	864.30
7716-87	Poly Pail	10 kg	ge	2917.55	
7716-88	Poly Pail	12 kg	bs	Inquire	
7716-50	Poly Drum	50 kg	bp	Inquire	

$NH_2C(:NH)NH_2{\cdot}HCl$ FW: 95.53

Assay ($NH_2C(:NH)NH_2{\cdot}HCl$) ..... min. 99.5%
Acidity (as HCl) ..... max. 0.01%
Copper (Cu) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 0.5%
Enzyme Activity:
DNase Activity ..... Passes Test
RNase Activity ..... Passes Test
Protease Activity ..... Passes Test
Absorbance of a 6M Solution (260 nm) (au) ..... max. 0.03
Residue after Ignition ..... max. 0.2%
Product Information (not specifications):
Appearance (colorless crystals)
CAS: 50-01-1

Guanidine Hydrochloride
GenAR
Suitable for use in Biotechnology

cGMP

0506-04	POLYSTORMOR	500 g	ge	104.70	
		6 x 500 g	ge	94.05	564.30
0506-06	Poly Pail	5 kg	ge	849.65	
0506-88	Poly Pail	12 kg	bs	Inquire	
0506-25	Poly Drum	50 kg	bp	Inquire	
0506-F9	Flowmor	50 kg	bp	Inquire	

$NH_2C(:NH)NH_2{\cdot}HCL$ FW: 95.53

Appearance ..... Passes Test
Water-Insoluble Matter ..... max. 0.3%
Melting Range ..... Actual Value Reported
Assay ($NH_2C(:NH)NH_2{\cdot}HCL$) 99.5-101.0%
Ultraviolet Absorbance:
275 nm ..... Actual Value Reported
260 nm ..... Actual Value Reported
Water (H_2O) ..... max. 0.5%
Iron (Fe) ..... max. 2 ppm
CAS: 50-01-1

Guanidine Hydrochloride
GenAR
Suitable for use in Biotechnology

cGMP

0507-04	POLYSTORMOR	500 g	ge	148.95	
		6 x 500 g	ge	133.80	802.80
0507-06	Poly Pail	5 kg	ge	1233.75	
0507-88	Poly Pail	12 kg	bs	Inquire	
0507-F7	Flowmor	12 kg	bs	Inquire	
0507-25	Poly Drum	50 kg	bp	Inquire	
0507-F9	Flowmor	50 kg	bp	Inquire	

$NH_2C(:NH)NH_2{\cdot}HCL$ FW: 95.53

Assay ($NH_2C(:NH)NH_2{\cdot}HCL$) 99.5-101.0%
Acidity (as HCl) ..... max. 0.01%
Loss on Drying at 105°C ..... max. 0.5%
Residue after Ignition ..... max. 0.05%
Absorbance of a 6M Aqueous Solution
230 nm ..... max. 0.2
260 nm ..... max. 0.03
275 nm ..... max. 0.03
Enzyme Activity:
RNase Activity ..... None Detected
DNase Activity ..... None Detected
Protease Activity ..... None Detected
Nitrate (NO_3) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%

Guanidine Hydrochloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trace Impurities (in ppm):
Arsenic and Antimony (as As) .....max. 0.5
Copper (Cu) .....max. 0.2
Cyanide (CN) .....max. 0.1
Iron (Fe) .....max. 2
Lead (Pb) .....max. 0.5
Particulate Matter .....Passes Test

CAS: 50-01-1

Guanidine Hydrochloride

cGMP

GenAR
Suitable for Use in Biotechnology

0072-08	Poly Pail	10 kg	ge	2957.70	
0072-88	Poly Pail	12 kg	bs	Inquire	
0072-20	Flowmor	12 kg	bs	Inquire	
0072-25	Poly Drum	50 kg	bp	Inquire	
0072-26	Flowmor	50 kg	bp	Inquire	
0072-F9	Flowmor	50 kg	bp	Inquire	

$NH_2C(:NH)NH_2 \cdot HCl$ FW: 95.53

Assay ($NH_2C(:NH)NH_2 \cdot HCl$) .....min. 99.5%
Acidity (as HCl) .....max. 0.01%
Arsenic and Antimony (as As) .....max. 10 ppm
Copper (Cu) .....max. 10 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Iron (Fe) .....max. 10 ppm
Loss on Drying at 105°C .....max. 0.5%
Enzyme Activity:
DNase Activity .....Passes Test
RNase Activity .....Passes Test
Protease Activity .....Passes Test
Melamine and Related Compounds .....Passes Test
Absorbance of a 6M Solution (260 nm) (au) .....max. 0.03
Residue after Ignition .....max. 0.2%
Water-Insoluble Matter .....max. 0.3%
Product Information (not specifications):
Appearance (colorless crystals)

CAS: 50-01-1

Guanidine Hydrochloride Solution, 8M

cGMP

GenAR
Suitable for use in Biotechnology

0561-19	Hedpak	19 L	bs	Inquire
0561-26	Poly Drum	200 L	bp	Inquire

$NH_2C(:NH)NH_2 \cdot HCl$ FW: 95.53

Appearance (clear, colorless liquid) .....Passes Test
Identification (by FTIR) .....Passes Test
Molarity (by titrimetry) 7.8-8.2
pH (1:10 dilution) 4.5-6.5
Ultraviolet Absorbance:
260 nm .....max. 0.04
Solution Test .....Passes Test
Sulfate (SO_4) .....max. 0.005%
Cyanide (CN) .....Passes Test
Trace Impurities (in ppm):
Iron (Fe) .....max. 3
Heavy Metals (as Pb) .....max. 10

CAS: 50-01-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Guanidine Hydrochloride Solution, 6M

cGMP

GenAR
Suitable for use in Biotechnology

0563-10	Poly	4 L	ge	577.35	
		4 x 4 L	ge	518.55	2074.20
0563-20	Hedpak	19 L	bs	Inquire	
0563-26	Poly Drum	200 L	bp	Inquire	

$NH_2C(:NH)NH_2 \cdot HCl$ FW: 95.53

Appearance (clear, colorless liquid) .....Passes Test
Cyanide (CN) .....Passes Test
Heavy Metals (as Pb) .....max. 10 ppm
Identification (by FTIR) .....Passes Test
Iron (Fe) .....max. 3 ppm
Molarity (by titrimetry) 5.8-6.2
pH (1:10 dilution) 4.5-6.5
Ultraviolet Absorbance (1.00-cm cell vs. water):
260 nm .....max. 0.1

CAS: 50-01-1

Hematoxylin

cGMP

Certified OR
Certified by Biological Stain Commission

E106-55	Glass	25 g	so	90.20	
E106-57	Glass	100 g	so	325.45	

$C_{16}H_{14}O_6$ FW: 302.28

CAS: 517-28-2

HEPES, Free Acid

GenAR
Suitable for Use in Biotechnology

7745-88	Poly Pail	12 kg	bs	Inquire	

$C_8H_{18}N_2O_4S$ FW: 238.31

Assay ($C_8H_{18}N_2O_4S$) .....min. 99.5%
pK_a at 25°C 7.2-7.6
Residue on Ignition .....max. 0.1%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.6%
UV Absorbance (au) .....max. 0.05
Enzyme Activity:
DNase Activity .....Passes Test
RNase Activity .....Passes Test
Protease Activity .....Passes Test
Endotoxin Concentration (EU/g) .....max. 20
Product Information (not specifications):
Appearance (fine, white crystalline powder)

CAS: 7365-45-9

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

HEPES, Sodium Salt
GenAR
(4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid, disodium salt)
Suitable for Use in Biotechnology

V165-01	Poly Pail	10 kg	ge	5586.65	

$C_8H_{17}N_2NaO_4S$ FW: 260.28

Assay ($C_8H_{17}N_2NaO_4S$) (dried basis) .....min. 98.0%
Chloride (Cl) .....max. 0.01%
Enzyme Activity:
DNase Activity .....Passes Test
RNase Activity .....Passes Test
Protease Activity .....Passes Test
Heavy Metals (as Pb) .....max. 10 ppm
Identification for Sodium .....Passes Test
Iron (Fe) .....max. 5 ppm
Loss on Drying at 105°C .....max. 5.0%
pK_a at 20°C 7.3-7.7
Sulfate (SO_4) .....max. 0.02%
UV Absorbance of 1M Soln. at 250 nm (au) .....max. 0.5
Product Information (not specifications):
Appearance (white powder)

CAS: 75277-39-3

Heptane
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V554-10	Glass	4 L	sp	201.75	
		4 x 4 L	sp	137.25	549.00
V554-23	NOWPak	20 L	np	616.30	
V554-19	Steel Pail	20 L	sb	655.40	

$CH_3(CH_2)_5CH_3$ FW: 100.20

Meets ACS Specifications
Assay ($CH_3(CH_2)_5CH_3$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Water (H_2O)(by KF, coulometric) .....max. 0.01%
Ultraviolet Absorbance (1.00-cm cell vs. water):
197 nm .....max. 1.00
210 nm .....max. 0.40
220 nm .....max. 0.10
254-400 nm .....max. 0.01
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at Emission Maximum for Impurities .....max. 1.0
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ....max. 5
Neat Solvent Front Characterization .....Passes Test
Titrable Acid (µeq/g) .....max. 0.8

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg IMO: 3:1206
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Heptane
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

5139-06	Glass	1 L	sp	67.40	
		6 x 1 L	sp	45.85	275.10
5139-10	Glass	4 L	sp	172.50	
		4 x 4 L	sp	117.35	469.40
5139-19	Steel Pail	20 L	sb	585.15	

$CH_3(CH_2)_5CH_3$ FW: 100.20

Meets ACS Specifications
Assay (sum of n-C_7H_{16} and other C_7 hydrocarbons)(by GC, corrected for water) .....min. 99%
Assay ($CH_3(CH_2)_5CH_3$) (by GC, corrected for water) .....min. 96%
Acidity (as CH_3COOH) .....Passes Test
Residue after Evaporation .....max. 0.0003%
Water (H_2O) .....max. 0.02%
Ultraviolet Absorbance (1.00-cm cell vs. water):
197 nm .....max. 1.00
210 nm .....max. 0.40
225 nm .....max. 0.10
254 nm .....max. 0.01
280 nm .....max. 0.01
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg IMO: 3:1206
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

n-Heptane
AR

5164-16	Poly	4 L	ur	121.65	
		4 x 4 L	ur	98.30	393.20
5164-22	Steel Pail	20 L	ur	327.60	

$CH_3(CH_2)_5CH_3$ FW: 100.20

Assay ($CH_3(CH_2)_5CH_3$) (by GC, corrected for water) .....min. 95.0%
Acidity (as CH_3COOH) .....Passes Test
Residue after Evaporation .....max. 0.001%
Sulfur Compounds (as S) .....max. 0.005%

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg IMO: 3:1206
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

See Drug Development and Manufacturing section for more information about scale-up and process chromatography products, starting on page 64.

Heptane

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
n-Heptane					
AR					
5177-02	Poly	500 mL	ur	46.30	
		12 x 500 mL	ur	37.40	448.80
5177-16	Poly	4 L	ur	138.80	
		4 x 4 L	ur	112.15	448.60
5177-22	Steel Pail	20 L	ur	336.45	
5177-26	Steel Drum	302 lb	bp	Inquire	

$CH_3(CH_2)_5CH_3$ FW: 100.20

Assay ($CH_3(CH_2)_5CH_3$) (by GC, corrected for water) .....min. 99.0%
Acidity (as CH_3COOH) .....Passes Test
Residue after Evaporation .....max. 0.001%
Sulfur Compounds (as S) .....max. 0.005%
Specific Gravity at 60°/60°F 0.68-0.72
Thiophene .....Passes Test
Product Information (not specifications):
Appearance (clear, colorless, volatile liquid)

CAS: 142-82-5 DENSITY: 1 L = 0.684 kg IMO: 3:1206
FLASH POINT: -4°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hexadecane, 99.0%					
H223-57	Glass	100 g	so	66.55	
H223-59		500 g	so	303.90	

$CH_3(CH_2)_{14}CH_3$ FW: 226.45

Assay ($CH_3(CH_2)_{14}CH_3$) (by GC) .....min. 99.0%
Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 544-76-3 DENSITY: 1 L = 0.77 kg FLASH POINT: > 100°C

Hexahydrobenzene
See Cyclohexane

Hexahydrophenol
See Cyclohexanol

Hexalin
See Cyclohexanol

Hexamethylene
See Cyclohexane

Hexamethylenetetramine
See Methenamine

Hexanaphthene
See Cyclohexane

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hexanes					
AR (ACS)					
5189-02	Poly	500 mL	ur	23.35	
		12 x 500 mL	ur	18.85	226.20
5189-06	Glass	1 L	gs	56.20	
		6 x 1 L	gs	45.40	272.40
5189-08	Glass	4 L	gs	135.45	
		4 x 4 L	gs	109.45	437.80
5189-16	Poly	4 L	ur	51.70	
		4 x 4 L	ur	42.05	168.20
5189-22	Steel Pail	20 L	ur	128.85	
5189-26	Steel Drum	200 L	bp	Inquire	

C_6H_{14} FW: 86.18

Meets ACS Specifications
Assay (sum of 5 isomers, total hexanes, plus methylcyclopentane)(by GC) .....min. 98.5%
Assay (as n-hexane) (by GC, corrected for water) .....min. 60.0%
Appearance (clear, colorless liquid) .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Sulfur Compounds (as S) .....max. 0.005%
Thiophene .....Passes Test
Water-Soluble Titrable Acid (meq/g) .....max. 0.0003

CAS: 110-54-3 DENSITY: 1 L = 0.664 kg IMO: 3:1208
FLASH POINT: -22°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hexanes					
AR (ACS)					
5162-08	Glass	4 L	gs	160.85	
		4 x 4 L	gs	129.95	519.80
5162-22	Steel Pail	20 L	sb	368.00	

C_6H_{14} FW: 86.18

Meets ACS Specifications
Assay (sum of 5 isomers, total hexanes, plus methylcyclopentane)(by GC) .....min. 98.5%
Assay (as n-hexane) (by GC, corrected for water) .....min. 95.0%
Appearance (clear, colorless liquid) .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Sulfur Compounds (as S) .....max. 0.005%
Thiophene .....Passes Test
Water-Soluble Titrable Acid (meq/g) .....max. 0.0003

CAS: 110-54-3 DENSITY: 1 L = 0.664 kg IMO: 3:1208
FLASH POINT: -22°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hexanes
SpectrAR
Suitable for UV-Spectrophotometry

5188-08	Glass	4 L	sr	427.40	
		4 x 4 L	sr	290.75	1163.00

C_6H_{14} FW: 86.18

Assay (sum of 5 isomers, total hexanes, plus methylcyclopentane)(by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Sulfur Compounds (as S) .....max. 0.005%
Thiophene .....Passes Test
Water-Soluble Titrable Acid (meq/g) .....max. 0.0003
Ultraviolet Absorbance (1.00-cm cell vs. water):
210 nm .....max. 1.00
220 nm .....max. 0.20
230 nm .....max. 0.10
240 nm .....max. 0.04
250 nm .....max. 0.02
280-750 nm .....max. 0.01

CAS: 110-54-3 DENSITY: 1 L = 0.664 kg IMO: 3:1208
FLASH POINT: -22°C

Hexanes
(60% n-hexane)

4153-19	Steel Pail	20 L	sb	304.15	

C_6H_{14} FW: 86.18

Assay (sum of 5 isomers, total hexanes, plus methylcyclopentane)(by GC) .....min. 95%
Appearance (clear, colorless liquid) .....Passes Test

CAS: 110-54-3 DENSITY: 1 L = 0.664 kg IMO: 3:1208
FLASH POINT: -22°C

See the Academic section for research and chemical stockroom product information, starting on page 91.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hexanes (95% n-Hexane)
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

H487-06	Glass	1 L	sp	65.45	
		6 x 1 L	sp	44.50	267.00
H487-10	Glass	4 L	sp	158.70	
		4 x 4 L	sp	107.95	431.80
H487-23	NOWPak	20 L	np	557.50	

C_6H_{14} FW: 86.18

Meets ACS Specifications for Liquid Chromatography and UV Spectrophotometry

Assay (sum of 5 isomers, total hexanes, plus methylcyclopentane)(by GC, corrected for water) .....min. 99.5%
Assay (as n-hexane) (by GC, corrected for water) .....min. 95.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0001%
Sulfur Compounds (as S) .....max. 0.005%
Thiophene .....Passes Test
Water (H_2O)(by Karl Fischer titrn) .....max. 0.01%
Water-Soluble Titrable Acid (meq/g) .....max. 0.0003
Ultraviolet Absorbance (1.00-cm cell vs. water):
195 nm .....max. 1.00
210 nm .....max. 0.20
220 nm .....max. 0.07
230 nm .....max. 0.05
240 nm .....max. 0.04
250 nm .....max. 0.02
254 nm .....max. 0.005
280-400 nm .....max. 0.005
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ....max. 5
Sum of the Peaks (µg/L) .....max. 10
Neat Solvent Front Characterization
Single Impurity Peak (ng/mL) .....max. 5
Largest Peak, 0-0.4 x RT (ng/mL) .....Actual Value Reported
Filtered through a 0.2 micron filter.
Packaged under Nitrogen
Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 110-54-3 DENSITY: 1 L = 0.664 kg IMO: 3:1208
FLASH POINT: -22°C

Hexone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hexone

See Methyl Isobutyl Ketone

Hydrochloric Acid
AR (ACS)

H613-05	Poly	500 mL	ur	30.25	
		12 x 500 mL	ur	24.20	290.40
H613-14	Glass	500 mL	ra	50.60	
		6 x 500 mL	ra	29.75	178.50
H613-46	Glass	2.5 L	ra	60.50	
		6 x 2.5 L	ra	35.60	213.60
H613-16	Poly	2.5 L	ur	53.65	
		6 x 2.5 L	ur	40.25	241.50
H613-45	Poly	4 L	ur	61.35	
		4 x 4 L	ur	49.05	196.20
H613-27	Poly Drum	500 lb	bp	Inquire	

HCl FW: 36.46

Meets ACS Requirements

Assay (HCl) 36.5-38.0%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Ammonium (NH_4) ..... max. 3 ppm
Arsenic (As) ..... max. 0.005 ppm
Bromide (Br) ..... max. 0.005%
Extractable Organic Substances ..... max. 5 ppm
Free Chlorine (as Cl) ..... max. 1 ppm
Heavy Metals (as Pb) ..... max. 0.1 ppm
Residue after Ignition ..... max. 4 ppm
Sulfate (SO_4) ..... max. 0.5 ppm
Sulfite (SO_3) ..... max. 0.8 ppm

Trace Impurities (in ppm):

Aluminum (Al) ..... max. 0.3
Boron (B) ..... max. 0.1
Chromium (Cr) ..... max. 0.2
Copper (Cu) ..... max. 0.1
Gold (Au) ..... max. 0.1
Iron (Fe) ..... max. 0.1
Lead (Pb) ..... max. 0.1
Magnesium (Mg) ..... max. 0.3
Manganese (Mn) ..... max. 0.3
Nickel (Ni) ..... max. 0.1
Potassium (K) ..... max. 0.3
Tin (Sn) ..... max. 0.3
Titanium (Ti) ..... max. 0.3
Zinc (Zn) ..... max. 0.1

CAS: 7647-01-0 DENSITY: 1 L = 1.18 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid
AR Select (ACS)
For Trace Element Analysis

5587-46	SAFEMOR	2.5 L	as	92.80	
		6 x 2.5 L	as	58.00	348.00

HCl FW: 36.46

Meets ACS Requirements

Assay (HCl) 36.5-38.0%
Appearance ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ammonium (NH_4) ..... max. 0.0003%
Arsenic and Antimony (as As) ..... max. 0.005 ppm
Bromide (Br) ..... max. 0.005%
Color (APHA) ..... max. 10
Extractable Organic Substances ..... max. 5 ppm
Free Chlorine (as Cl) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.0001%
Phosphate (PO_4) ..... max. 0.5 ppm
Residue after Ignition ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.0001%
Sulfite (SO_3) ..... max. 0.0001%

Trace Impurities (in ppb):

Determined by Flame Photometry & ICP

Analytes for EPA 624 and 8260B ..... max. 50
Aluminum (Al) ..... max. 10
Barium (Ba) ..... max. 10
Beryllium (Be) ..... max. 1
Bismuth (Bi) ..... max. 10
Boron (B) ..... max. 10
Cadmium (Cd) ..... max. 1
* Calcium (Ca) ..... max. 300
Chromium (Cr) ..... max. 4
Cobalt (Co) ..... max. 1
Copper (Cu) ..... max. 1
Gallium (Ga) ..... max. 10
Germanium (Ge) ..... max. 5
Gold (Au) ..... max. 4
Iron (Fe) ..... max. 50
Lithium (Li) ..... max. 5
Lead (Pb) ..... max. 1
Magnesium (Mg) ..... max. 10
Manganese (Mn) ..... max. 1
Mercury (Hg) ..... max. 1
Molybdenum (Mo) ..... max. 1
Nickel (Ni) ..... max. 4
Potassium (K) ..... max. 9
* Silicon (Si) ..... max. 300
Silver (Ag) ..... max. 5
* Sodium (Na) ..... max. 500
Strontium (Sr) ..... max. 1
Thallium (Tl) ..... max. 10
Tin (Sn) ..... max. 10
Vanadium (V) ..... max. 5
Zinc (Zn) ..... max. 20
Zirconium (Zr) ..... max. 5

* May change over time due to extraction from glass container.

CAS: 7647-01-0 DENSITY: 1 L = 1.18 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid
AR Select Plus

V078-04	Glass	500 mL	as	78.40	
		6 x 500 mL	as	49.00	294.00
V078-46	SAFEMOR	2.5 L	as	122.20	
		4 x 2.5 L	as	76.40	305.60

HCl FW: 36.46

Assay (HCl) (by acidimetry) 30-38%

Trace Impurities (in ppb):

Aluminum (Al) ..... Actual Value Reported
Antimony (Sb) ..... max. 0.5
Arsenic (As) ..... Actual Value Reported
Barium (Ba) ..... max. 0.5
Beryllium (Be) ..... max. 0.5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Bismuth (Bi)					max. 0.5
Cadmium (Cd)					max. 0.5
Calcium (Ca)					Actual Value Reported
Cerium (Ce)					max. 0.5
Cesium (Cs)					max. 0.5
Chromium (Cr)					max. 0.5
Cobalt (Co)					max. 0.5
Copper (Cu)					max. 0.5
Gallium (Ga)					max. 0.5
Gold (Au)					max. 0.5
Indium (In)					max. 0.5
Iron (Fe)					max. 5.0
Lead (Pb)					max. 0.5
Lithium (Li)					max. 0.5
Magnesium (Mg)					Actual Value Reported
Manganese (Mn)					max. 0.5
Mercury (Hg)					max. 0.5
Molybdenum (Mo)					max. 0.5
Nickel (Ni)					max. 0.5
Niobium (Nb)					max. 0.5
Palladium (Pd)					max. 0.5
Platinum (Pt)					max. 0.5
Potassium (K)					Actual Value Reported
Rhodium (Rh)					max. 0.5
Rubidium (Rb)					max. 0.5
Selenium (Se)					Actual Value Reported
Silver (Ag)					max. 0.5
Sodium (Na)					Actual Value Reported
Strontium (Sr)					max. 0.5
Thallium (Tl)					max. 0.5
Thorium (Th)					max. 0.5
Tin (Sn)					max. 0.5
Titanium (Ti)					max. 0.5
Tungsten (W)					max. 0.5
Uranium (U)					max. 0.5
Vanadium (V)					max. 0.5
Yttrium (Y)					max. 0.5
Zinc (Zn)					max. 0.5
Zirconium (Zr)					max. 0.5

Actual Concentrations of Al, Ca, K, Mg, Na may change over time.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7647-01-0 DENSITY: 1 L = 1.18 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid
cGMP
NF-GenAR

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2515-46	SAFEMOR	2.5 L	fa	118.50	
		6 x 2.5 L	fa	69.70	418.20

HCl FW: 36.46

Meets NF Requirements

Identification	Passes Test
Residue on Ignition	max. 0.008%
Bromide or Iodide	Passes Test
Free Bromine or Chlorine	Passes Test
Sulfate (SO_4)	Passes Test
Sulfite (SO_3)	Passes Test
Heavy Metals (as Pb)	max. 5 ppm
Assay (HCl)	36.5-38.0%

Meets BP/Ph.Eur. Chemical Specifications

Identification A	Passes Test
Identification B	Passes Test
Identification C	Passes Test
Appearance of Solution	Passes Test
Free Chlorine (as Cl)	max. 4 ppm
Sulfate (SO_4)	max. 20 ppm
Heavy Metals (as Pb)	max. 2 ppm
Residue after Evaporation	max. 0.01%
Assay (HCl)	35.0-39.0%

Meets JP Chemical Specifications

Assay (HCl)	35.0-38.0%
Identification	Passes Test
Residue after Ignition	max. 0.0085%
Bromide or Iodide	Passes Test
Bromine or Chlorine	Passes Test
Sulfate (SO_4)	Passes Test
Sulfite (SO_3)	Passes Test
Arsenic (As)	max. 1 ppm
Heavy Metals (as Pb)	max. 5 ppm
Mercury (Hg)	max. 0.04 ppm

CAS: 7647-01-0 DENSITY: 1 L = 1.18 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid
cGMP
NF-GenAR

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2626-46	Glass	2.5 L	fa	107.45	
		6 x 2.5 L	fa	63.20	379.20

HCl FW: 36.46

Meets NF Requirements

Identification	Passes Test
Residue on Ignition	max. 0.008%
Bromide or Iodide	Passes Test
Free Bromine or Chlorine	Passes Test
Sulfate (SO_4)	Passes Test
Sulfite (SO_3)	Passes Test
Heavy Metals (as Pb)	max. 5 ppm
Assay (HCl)	36.5-38.0%

Meets BP/Ph.Eur. Chemical Specifications

Identification A	Passes Test
Identification B	Passes Test
Identification C	Passes Test
Appearance of Solution	Passes Test
Free Chlorine	max. 4 ppm
Sulfate (SO_4)	max. 20 ppm
Heavy Metals (as Pb)	max. 2 ppm
Residue after Evaporation	max. 0.01%
Assay (HCl)	35.0-39.0%

Meets JP Chemical Specifications

Assay (HCl)	35.0-38.0%
Identification	Passes Test
Residue after Ignition	max. 0.0085%
Bromide or Iodide	Passes Test
Bromine or Chlorine	Passes Test
Sulfate (SO_4)	Passes Test
Sulfite (SO_3)	Passes Test
Arsenic (As)	max. 1 ppm
Heavy Metals (as Pb)	max. 5 ppm
Mercury (Hg)	max. 0.04 ppm

CAS: 7647-01-0 DENSITY: 1 L = 1.18 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid

Hydrochloric Acid (HCl 36.5%-38.0%)

NF, FCC, ACS cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2612-14	Glass	500 mL	fa	61.55	
		6 x 500 mL	fa	36.20	217.20
2612-13	Deal-AR-Pak	6 x 500 mL	fa	62.55	375.30
2612-46	Glass	2.5 L	fa	88.15	
		6 x 2.5 L	fa	51.85	311.10
2612-48	Deal-AR-Pak	6 x 2.5 L	fa	74.30	445.80
2612-44	Glass	4 x 2.5 L	fa	49.35	197.40
2612-06	Poly	10 lb	fa	111.00	
		4 x 10 lb	fa	65.30	261.20
2612-24	Poly Pail	47 lb	bp	Inquire	
2612-23	Glass Carboy	65 lb	bp	Inquire	
2612-19	Poly Drum	500 lb	bp	Inquire	

HCl FW: 36.46

Meets NF, FCC & ACS Requirements

Assay (HCl) (by acidimetry) 36.5-38.0%
Appearance .....Passes Test
Ammonium (NH_4) .....max. 3 ppm
Arsenic (As) .....max. 0.01 ppm
Baume Degrees 22.7-23.4
Bromide (Br) .....max. 0.005%
Bromide or Iodide .....Passes Test
Color (FCC) .....Passes Test
Color (APHA) .....max. 10
Extractable Organic Substances .....max. 5 ppm
Free Bromine or Chlorine .....Passes Test
Free Chlorine .....max. 1 ppm
Heavy Metals (as Pb) .....max. 1 ppm
Identification .....Passes Test
Iron (Fe) .....max. 0.2 ppm
Lead (Pb) .....max 1 mg/kg
Nonvolatile Residue .....max. 0.5%
Organic Compounds:
Total Organic Compounds:
Non-Fluorine Containing(mg/kg) .....max. 5
Benzene (mg/kg) .....max. 0.05
Fluorinated Organic Compounds .....max. 0.0025%
Oxidizing Substances .....max. 0.003%
Reducing Substances .....max. 0.007%
Residue on Ignition (ACS) .....max. 5 ppm
Residue on Ignition (NF) .....max. 2 mg
Specific Gravity 1.1856-1.1924
Sulfate (SO_4) .....max. 1 ppm
Sulfate (NF)(SO_4) .....Passes Test
Sulfite (SO_3) .....max. 1 ppm
Sulfite (NF)(SO_3) .....Passes Test

CAS: 7647-01-0 DENSITY: 1 L = 1.18 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid

NF, FCC, ACS cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2062-04	SAFEMOR	500 mL	fa	70.20	
		6 x 500 mL	fa	41.30	247.80
2062-46	SAFEMOR	2.5 L	fa	91.95	
		6 x 2.5 L	fa	54.10	324.60

HCl FW: 36.46

Meets NF Specifications

Assay (HCl) (by acidimetry) 36.5-38.0%
Bromide or Iodide .....Passes Test
Free Bromine or Chlorine .....Passes Test
Heavy Metals .....max. 5 ppm
Identification .....Passes Test
Residue on Ignition .....max. 0.008%
Sulfate (NF)(SO_4) .....Passes Test
Sulfite (NF)(SO_3) .....Passes Test

Meets FCC Specifications

Assay (HCl) (by acidimetry) 36.5-38.0%
Color .....Passes Test
Baume Degrees 22.7-23.4
Identification .....Passes Test
Iron (Fe) .....max 5 mg/kg
Lead (Pb) .....max 1 mg/kg
Nonvolatile Residue .....max. 0.5%
Organic Compounds:
Total Organic Compounds:
Non-Fluorine Containing(mg/kg) .....max. 5
Benzene (mg/kg) .....max. 0.05
Fluorinated Organic Compounds(mg/kg) .....max. 25
Oxidizing Substances .....max. 0.003%
Reducing Substances .....max. 0.007%
Specific Gravity 1.1856-1.1924
Sulfate (FCC)(SO_4) .....max. 0.5%

Meets ACS Specifications

Assay (HCl) (by acidimetry) 36.5-38.0%
Ammonium (NH_4) .....max. 3 ppm
Arsenic (As) .....max. 0.01 ppm
Bromide (Br) .....max. 0.005%
Color .....max. 10
Extractable Organic Substances .....max. 5 ppm
Free Chlorine (as Cl) .....max. 1 ppm
Heavy Metals (as Pb) .....max. 1 ppm
Iron (Fe) .....max. 0.2 ppm
Residue after Ignition .....max. 5 ppm
Sulfate (SO_4) .....max. 1 ppm
Sulfite (SO_3) .....max. 1 ppm
Appearance .....Passes Test
Hydrazine .....max. 0.00001%

CAS: 7647-01-0 DENSITY: 1 L = 1.18 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrochloric Acid, Diluted
NF cGMP

2608-02	Glass	6 x 500 mL	fa	40.50	243.00
2608-45	Glass	2.5 L	fa	149.70	
2608-22	Poly Pail	19 L	bs	Inquire	
2608-08	Poly Drum	50 L	bp	Inquire	

HCl FW: 36.46

Meets NF Requirements

Assay (HCl)(g/100ml) 9.5-10.5
Identification (HCl) ..... Passes Test
Residue on Ignition ..... max. 0.01%
Free Bromine or Chlorine ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Sulfite (SO_3) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.0005%

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 30%
Technical (20° Baume)

2624-44	Glass	2.5 L	ra	46.60	
		4 x 2.5 L	ra	37.25	149.00

HCl FW: 36.46

Assay (HCl) ..... min. 34%
Identification ..... Passes Test
Arsenic (As) ..... Actual Value Reported
Nitrate (NO_3) ..... Actual Value Reported
Other Heavy Metals (as Pb) ..... Actual Value Reported
Total Iron (Fe) ..... max. 0.0010%

Product Information (not specifications):
Appearance (clear, colorless to pale yellow or green solution)

CAS: 7647-01-0 DENSITY: 1 L = 1.18 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 10%
StandARd

H151-05	Poly	1 L	st	24.30	
H151-07	Poly	4 L	st	59.25	

Assay ((HCl))(g/100 mL) 9.5-10.5

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrochloric Acid, 6.0 Normal Volumetric Solution
StandARd

H168-05	Glass	1 L	st	26.40	
H168-07	Glass	4 L	st	72.75	

Normality 5.98-6.02

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7647-01-0 DENSITY: 1 L = 1.05 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 1.0 Normal Volumetric Solution
StandARd

6388-60	Poly	1 L	st	21.55	
6388-01	Cubitainer	4 L	st	72.70	
6388-05	Cubitainer	20 L	st	204.20	

Normality 0.995-1.005

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7647-01-0 DENSITY: 1 L = 1 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrochloric Acid, 0.1 Normal (N/10) Volumetric Solution
StandARd

2853-60	Poly	1 L	st	31.10	
2853-01	Cubitainer	4 L	st	53.35	
2853-05	Cubitainer	20 L	st	153.00	

Normality 0.0995-0.1005

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7647-01-0 DENSITY: 1 L = 1.0 kg IMO: 8:1789

Acid Spill Cleanup Products available. See pp. 378.

Hydrocortisone, Micronized
USP cGMP

8830-05	Glass	10 g	fg	655.90	

$C_{21}H_{30}O_5$ FW: 362.47

Meets USP Requirements

Assay ($C_{21}H_{30}O_5$) (dried basis) 97.0-102.0%
Chromatographic Purity ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Loss on Drying ..... max. 1.0%
Residue on Ignition (mg) ..... max. 0.50
Specific Rotation $[\alpha]^{25}_D$ ..... +150 - +156°

Product Information (not specifications):
Appearance (white, crystalline powder)

CAS: 50-23-7

Hydrofluoric Acid

Hydrofluoric Acid, 52%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2648-12	Circle of Safety	1 lb	ra	55.15	
		6 x 1 lb	ra	44.10	264.60
2648-18	Poly	2.5 L	ur	184.65	
		6 x 2.5 L	ur	138.50	831.00
2648-08	Circle of Safety	10 lb	ra	211.00	
		4 x 10 lb	ra	168.80	675.20

HF FW: 20.01

Assay (HF) ..... min. 52%
Residue after Ignition ..... max. 0.2%
Product Information (not specifications):
Appearance (colorless, corrosive, fuming solution)

CAS: 7664-39-3 DENSITY: 1 L = 1.15 kg IMO: 8:1790

Acid Spill Cleanup Products available. See pp. 378.

Hydrofluoric Acid, 48%
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2640-12	Circle of Safety	1 lb	ra	61.95	
		6 x 1 lb	ra	49.55	297.30
2640-18	Poly	2.5 L	ur	227.80	
		6 x 2.5 L	ur	170.85	1025.10
2640-08	Circle of Safety	10 lb	ra	260.40	
		4 x 10 lb	ra	208.30	833.20

HF FW: 20.01

Meets ACS Specifications

Assay (HF) (by acidimetry) 48.75-49.2%
Fluosilicic Acid (H_2SiF_6) ..... max. 0.01%
Residue after Ignition ..... max. 5 ppm
Trace Impurities (in ppm):
Aluminum (Al) ..... max. 0.05
Arsenic (As) ..... max. 0.05
Boron (B) ..... max. 0.05
Calcium (Ca) ..... max. 0.3
Chloride (Cl) ..... max. 5
Chromium (Cr) ..... max. 0.01
Copper (Cu) ..... max. 0.05
Gold (Au) ..... max. 0.3
Heavy Metals (as Pb) ..... max. 0.5
Iron (Fe) ..... max. 0.2
Lead (Pb) ..... max. 0.1
Magnesium (Mg) ..... max. 0.2
Manganese (Mn) ..... max. 0.2
Nickel (Ni) ..... max. 0.1
Phosphate (PO_4) ..... max. 1
Potassium (K) ..... max. 0.3
Sodium (Na) ..... max. 0.3
Sulfate and Sulfite (as SO_4) ..... max. 5
Tin (Sn) ..... max. 0.3
Titanium (Ti) ..... max. 0.3
Zinc (Zn) ..... max. 0.3
Product Information (not specifications):
Appearance (colorless, corrosive, fuming solution)

CAS: 7664-39-3 DENSITY: 1 L = 1.15 kg IMO: 8:1790

Acid Spill Cleanup Products available. See pp. 378.

Hydrogen Peroxide, 30% Solution
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5240-02	Poly	120 mL	gs	37.10	
		12 x 120 mL	gs	29.95	359.40
5240-05	Poly	500 mL	ur	69.40	
		12 x 500 mL	ur	55.50	666.00
5240-18	Poly	2.5 L	ur	450.65	
		6 x 2.5 L	ur	338.00	2028.00
5240-08	Poly	8 pt	gs	509.85	
		4 x 8 pt	gs	412.00	1648.00
5240-20	Poly Pail	20 L	sb	1356.55	

H_2O_2 FW: 34.01

Meets ACS Specifications

Assay (H_2O_2) 29.0-32.0%
Ammonium (NH_4) ..... max. 0.0005%
Chloride (Cl) ..... max. 0.0003%
Color (APHA) ..... max. 10
Heavy Metals (as Pb) ..... max. 0.0001%
Iron (Fe) ..... max. 0.00005%
Nitrate (NO_3) ..... max. 0.0002%
Phosphate (PO_4) ..... max. 0.0002%
Residue after Evaporation ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.0005%
Titrable Acid (meq/g) ..... max. 0.0006
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7722-81-1 DENSITY: 1 L = 1.11 kg IMO: 5.1:2014

Hydrogen Peroxide, 30% Solution
AR Select (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
V340-04	Poly	500 mL	as	157.90	
		12 x 500 mL	as	98.70	1184.40
V340-08	Poly	4 L	as	721.65	
		4 x 4 L	as	451.05	1804.20
V340-20	Poly Pail	20 L	sb	2068.75	

H_2O_2 FW: 34.01

Meets ACS Specifications

Assay (H_2O_2) 30.0-32.0%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 20 ppm
Free Acid (µeq/g) ..... max. 0.6
Trace Impurities (in ppm):
Aluminum (Al) ..... max. 0.2
Ammonium (NH_4) ..... max. 5
Arsenic and Antimony (as As) ..... max. 0.01
Barium (Ba) ..... max. 0.01
Beryllium (Be) ..... max. 0.01
Bismuth (Bi) ..... max. 0.01
Boron (B) ..... max. 0.01
Cadmium (Cd) ..... max. 0.01
Calcium (Ca) ..... max. 0.1
Chloride (Cl) ..... max. 2
Chromium (Cr) ..... max. 0.04
Cobalt (Co) ..... max. 0.01
Copper (Cu) ..... max. 0.01
Gallium (Ga) ..... max. 0.01
Germanium (Ge) ..... max. 0.02

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Gold (Au) ..... max. 0.01
Heavy Metals (as Pb) ..... max. 1
Iron (Fe) ..... max. 0.05
Lead (Pb) ..... max. 0.01
Lithium (Li) ..... max. 0.01
Magnesium (Mg) ..... max. 0.01
Manganese (Mn) ..... max. 0.05
Mercury (Hg) ..... max. 0.001
Molybdenum (Mo) ..... max. 0.01
Nickel (Ni) ..... max. 0.02
Nitrate (NO_3) ..... max. 2
Phosphate (PO_4) ..... max. 2
Potassium (K) ..... max. 0.4
Silver (Ag) ..... max. 0.05
Sodium (Na) ..... max. 0.05
Strontium (Sr) ..... max. 0.01
Sulfate (SO_4) ..... max. 5
Thallium (Tl) ..... max. 0.05
Tin (Sn) ..... max. 0.5
Titanium (Ti) ..... max. 0.01
Vanadium (V) ..... max. 0.01
Zinc (Zn) ..... max. 0.1
Zirconium (Zr) ..... max. 0.01

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7722-84-1 DENSITY: 1 L = 1.11 kg IMO: 5.1:2014

Hydrogen Peroxide Solution, 3%
AR

5241-04	Glass	500 mL	gs	55.35	
		12 x 500 mL	gs	44.70	536.40
5241-05	Poly	500 mL	ur	30.45	
		12 x 500 mL	ur	24.35	292.20
5241-18	Poly	2.5 L	ur	207.45	
		6 x 2.5 L	ur	155.60	933.60
5241-45	Poly	4 L	ur	129.70	
		4 x 4 L	ur	103.75	415.00
5241-08	Glass	8 pt	gs	233.70	
		4 x 8 pt	gs	188.85	755.40

H_2O_2 FW: 34.01

Assay (H_2O_2) (by $KMnO_4$ titrn) 3.10-3.30%
Arsenic (As) ..... max. 0.00005%
Barium (Ba) ..... Passes Test
Chloride (Cl) ..... max. 0.001%
Free Acid (as H_2SO_4) ..... max. 0.010%
Heavy Metals (as Pb) ..... max. 0.0005%
Iron (Fe) ..... max. 0.0005%
Nitrogen Compounds (as N) ..... max. 0.005%
Phosphate (PO_4) ..... max. 0.003%
Residue after Evaporation ..... max. 0.020%
Sulfate (SO_4) ..... max. 0.010%

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7722-84-1 DENSITY: 1 L = 1.01 kg

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Hydrogen Peroxide, Topical Solution
cGMP
USP
(Contains 0.05% max. Acetophenetidin as a Preservative)

5232-12	Glass	12 x 500 mL	fg	35.50	426.00
5232-10	Glass	4 L	fg	208.85	
		4 x 4 L	fg	167.05	668.20

H_2O_2 FW: 34.01

Meets USP Requirements

Assay (H_2O_2)(g/100 mL) 2.5-3.5
Heavy Metals (as Pb) ..... max. 5 ppm
Identification ..... Passes Test
Barium (Ba) ..... Passes Test
Acidity (as H_2SO_4) ..... Passes Test
Limit of Preservative ..... max. 0.05%
Nonvolatile Residue (mg) ..... max. 30

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7722-84-1 DENSITY: 1 L = 1.01 kg

Hydroquinone, Crystals "Photo Purified"

5256-20	Lined Fiber Dr	12 kg	bs	Inquire	

$C_6H_4(OH)_2$ FW: 110.11

Assay ($C_6H_4(OH)_2$) ..... min. 99.0%
Solubility in air-free H_2O ..... Passes Test
Melting Point ..... 170-174 °C.
Residue after Ignition ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Solubility in dilute Acetic Acid ..... Passes Test

Product Information (not specifications):
Appearance (fine, colorless or white, needle crystals)

CAS: 123-31-9 IMO: 9:3077 FLASH POINT: 165°C

4-(2-Hydroxyethyl)-1-Piperazineethanesulfonic Acid, Disodium Salt

See HEPES, Sodium Salt

Hydroxylamine Hydrochloride, Crystal
AR (ACS)
Suitable for Mercury Determination

5258-02	POLYSTORMOR	125 g	gd	74.10	
		12 x 125 g	gd	59.25	711.00

$NH_2OH{\cdot}HCl$ FW: 69.49

Meets ACS Specifications

Assay ($NH_2OH{\cdot}HCl$) (by $KMnO_4$ titrn) ..... min. 96.0%
Clarity of Alcohol Solution ..... Passes Test
Residue after Ignition ..... max. 0.05%
Titrable Free Acid (meq/g) ..... max. 0.25
Ammonium (NH_4) ..... Passes Test
Sulfur Compounds (as SO_4) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.0005%
Iron (Fe) ..... max. 0.0005%
Mercury (Hg) ..... max. 0.05 ppm

CAS: 5470-11-1 IMO: 8:2923

Hydroxy Naphthol Blue

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Hydroxy Naphthol Blue					
AR (ACS)					
(Calcium Indicator)					
5630-34	Glass	30 g	gd	131.65	
5630-02	POLYSTORMOR	125 g	gd	346.90	
		12 x 125 g	gd	277.50	3330.00

Meets ACS Specifications

Optical Density (650 nm)(au) 0.35-0.90
Solubility ..... .Passes Test
Suitability for Calcium Determination ..... .Passes Test
Product Information (not specifications):
Appearance (small, deep blue crystals)

CAS: 63451-35-4

α-Hydroxytoluene
See Benzyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Imidazole					
OR					
4337-55	Glass	25 g	so	42.50	
4337-09	Poly Pail	5 kg	so	667.70	

$C_3H_4N_2$ FW: 68.08

Assay ..... .min. 99.0%
Water (H_2O) ..... .max. 0.5%
Product Information (not specifications):
Appearance (white to off white flakes or crystalline powder)

CAS: 288-32-4 IMO: 8:3263 FLASH POINT: 146°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Iodine, Crystal					
AR (ACS)					
1008-34	Glass	30 g	gd	68.75	
1008-02	Glass	125 g	gd	191.75	
		12 x 125 g	gd	153.40	1840.80
1008-12	Glass	500 g	gd	324.40	
		4 x 500 g	gd	259.50	1038.00
1008-06	Glass	2.5 kg	gd	1085.25	
		4 x 2.5 kg	gd	868.20	3472.80
1008-07	Poly Pail	5 kg	gd	1402.60	
1008-20	STAKMOR	12 kg	bs	Inquire	

I_2 FW: 253.81

Meets ACS Specifications

Assay (I_2) 99.8-100.5%
Chlorine and Bromine (as Cl) ..... .max. 0.005%
Nonvolatile Matter ..... .max. 0.01%
Product Information (not specifications):
Appearance (large, bluish-black crystalline pieces)

CAS: 7553-56-2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Iodine, Crystals					
USP					
0984-34	Glass	30 g	fg	Inquire	
0984-02	Glass	125 g	fg	201.75	
		12 x 125 g	fg	161.40	1936.80
0984-12	Glass	500 g	fg	446.20	
		4 x 500 g	fg	356.95	1427.80
0984-05	Glass	2.5 kg	fg	1177.85	
0984-21	STAKMOR	12 kg	bs	Inquire	
0984-88	Poly Pail	12 kg	bs	Inquire	

cGMP

I_2 FW: 253.81

Meets USP Requirements

Assay (I_2) 99.8-100.5%
Chloride or Bromide (as Cl) ..... .max. 0.028%
Identification A ..... .Passes Test
Identification B ..... .Passes Test
Limit of Nonvolatile Residue ..... .max. 0.05%
Product Information (not specifications):
Appearance (heavy, grayish-black plates)

CAS: 7553-56-2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Iodine, 1.0 Normal Volumetric Solution					
StandARd					
H185-05	Glass	1 L	st	153.65	
H185-07	Glass	4 L	st	472.45	

Normality 0.95-1.05
Product Information (not specifications):
Appearance (transparent, reddish-brown solution)

CAS: 7553-56-2 DENSITY: 1 L = 1.37 kg

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Iodine, 0.10 Normal (N/10) Volumetric Solution					
StandARd					
2962-01	Glass	100 mL	st	13.50	
2962-60	Glass	1 L	st	46.75	
2962-07	Glass	4 L	st	83.70	

Normality 0.0995-0.1005
Product Information (not specifications):
Appearance (dark brown to red-brown solution)

CAS: 7553-56-2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Iodine, 0.0282 Normal Volumetric Solution (APHA)					
StandARd					
H169-05	Glass	1 L	st	36.75	

Normality 0.0277-0.0287
Product Information (not specifications):
Appearance (transparent, reddish-brown solution)

CAS: 7553-56-2 DENSITY: 1 L = 1.01 kg

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iodine, 0.01 Normal (N/100) Volumetric Solution

StandARd

H175-05	Glass	1 L	st	30.60	
H175-07	Glass	4 L	st	58.05	

Normality 0.0095-0.0105

Product Information (not specifications):

Appearance (transparent, reddish-brown solution)

CAS: 7553-56-2 DENSITY: 1 L = 1.01 kg

Iodine-Monochloride Solution

StandARd
(Wijs Solution)

H180-05	Glass	1 L	st	46.55	
H180-07	Glass	4 L	st	171.55	

Assay (halogen content as Normality)
(at time of packaging) 0.215-0.225

Product Information (not specifications):

Appearance (dark orange to brown solution)

DENSITY: 1 L = 1.05 kg IMO: 8:2920 FLASH POINT: 40°C

Iodoform, Powder

cGMP

Purified

1026-03	Glass	500 g	spc	599.24	

CHI_3 FW: 393.73

Assay (CHI_3) 99.0-100.5%
Coloring Matter, Acids and Alkalies .....Passes Test
Loss on Drying .....max. 1.0%
Melting Point .....min. 115 °C.
Residue after Ignition .....max. 0.20%
Solubility in Acetone .....Passes Test

Product Information (not specifications):

Appearance (fine, greenish-yellow powder)

CAS: 75-47-8

Live Chat and Customer Support

www.avantormaterials.com

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Ion Exchange Resins

Amberlite IR-120 Plus (16-50 Mesh)

AR
(styrene-divinylbenzene)
(cation exchange resin, strongly acidic, gel type)

6221-04	Glass	500 g	sg	152.45	
		12 x 500 g	sg	121.95	1463.40

Product Information (not specifications):

A premium quality conventional strongly acidic cation exchange gel type resin, styrene-divinylbenzene (8% DVB by weight), amber in color and contains a high perfect bead content. Available in sodium or hydrogen ionic forms.

Ion Exchange Resin (TMD-8), H^+/OH^- Form, Type 1, Mixed Bed Resin (16-50 Mesh)

(strong acid/strong base: sulfonated quaternary ammonium polystyrenes)

V051-04	Glass	500 g	sg	181.35	
		6 x 500 g	sg	145.05	870.30

Hydrogen ion .....Actual Value Reported
Hydroxide ion .....Actual Value Reported
Cation .....Actual Value Reported
Anion .....Actual Value Reported
Mesh:
Thru U.S. No. 50 Sieve .....max. 1.0%

Product Information (not specifications):

This product is a self-indicating, high-capacity mixed bed resin containing gelular polystyrene cation and anion resins. Upon exhaustion the resin turns from a deep blue to a dark amber color.

IPTG

GenAR
(isopropyl-beta-D-thiogalactopyranoside) dioxane free
Suitable for Use in Biotechnology

V263-01		1 g	ge	47.40	

$C_9H_{18}O_5S$ FW: 238.31

Assay ($C_9H_{18}O_5S$) .....min. 99.0%
Dioxane .....None Detected
Specific Rotation .....-34.5 to -28.5°
Melting Point .....110-114 °C.

Product Information (not specifications):

Appearance (white, crystalline powder)

NOTE: Freeze upon receipt. Keep dry. Warm to room temperature before opening. Keep from light.

CAS: 367-93-1

Iron

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iron, Powder (100 Mesh)

5312-12	Glass	500 g	gd	113.25	
		4 x 500 g	gd	90.60	362.40
5312-06	Glass	2.5 kg	gd	428.40	
		6 x 2.5 kg	gd	342.70	2056.20

Fe AW: 55.85

Mesh:
Thru U.S. No. 100 Sieve .....min. 98%
Product Information (not specifications):
Appearance (fine, gray powder)
CAS: 7439-89-6

Iron Alum
See Ferric Ammonium Sulfate

Iron Salts
See Ferric and Ferrous

Isoamyl Acetate
OR

2491-57	Glass	100 g	so	26.30	
2491-59	Glass	500 g	so	71.40	

$CH_3COOC_5H_{11}$ FW: 130.19

Assay ($CH_3COOC_5H_{11}$) (by GC) .....min. 95%
Refractive Index, η^{20}_D 1.400-1.404
Specific Gravity at 25°/25°C 0.868-0.878
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 123-92-2 DENSITY: 1 L = 0.88 kg
IMO: 3:1104 FLASH POINT: 25°C

Solvent Spill Cleanup Products available. See pp. 378.

Isoamyl Acetate
See also Amyl Acetate

Isoamyl Alcohol
See Isopentyl Alcohol

Isobutyl Alcohol
AR (ACS)
(2-methyl-1-propanol)

3002-04	Glass	500 mL	gs	37.55	
		12 x 500 mL	gs	30.35	364.20
3002-08	Glass	4 L	gs	160.20	
		4 x 4 L	gs	129.45	517.80
3002-19	Steel Pail	20 L	sb	459.60	

$(CH_3)_2CHCH_2OH$ FW: 74.12

Meets ACS Specifications
Appearance (clear, colorless liquid) .....Passes Test
Assay ($(CH_3)_2CHCH_2OH$) (by GC, corrected for water) .....min. 99.0%
Carbonyl Compounds:
2-butanone .....max. 0.02%
Butyraldehyde .....max. 0.01%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Solubility in H_2O .....Passes Test
Titrable Acid (meq/g) .....max. 0.0005
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
CAS: 78-83-1 DENSITY: 1 L = 0.803 kg IMO: 3:1212
FLASH POINT: 28°C

Solvent Spill Cleanup Products available. See pp. 378.

Isobutyl Carbinol
See Isopentyl Alcohol

Isopentyl Alcohol
AR (ACS)
(isoamyl alcohol)

2992-04	Glass	500 mL	gs	80.20	
		12 x 500 mL	gs	64.80	777.60

$(CH_3)_2CHCH_2CH_2OH$ FW: 88.15

Meets ACS Specifications
Assay ($(CH_3)_2CHCH_2CH_2OH$) (by GC) .....min. 98.5%
Acids and Esters (as amyl acetate) .....max. 0.2%
Carbonyl Compounds (as HCHO) (by polarography) .....max. 0.1%
Residue after Evaporation .....max. 0.003%
Titrable Acid (meq/g) .....max. 0.002
Water (H_2O)(by Karl Fischer titrn) .....max. 0.5%
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 123-51-3 DENSITY: 1 L = 0.813 kg IMO: 3:1105
FLASH POINT: 43°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Isopropoxypropane
See Isopropyl Ether

Isopropylacetone
See Methyl Isobutyl Ketone

Isopropyl Alcohol
AR (ACS)
For Histological Use

3032-02	Poly	500 mL	ur	27.30	
		12 x 500 mL	ur	22.20	266.40
3032-06	Glass	1 L	gs	39.85	
		6 x 1 L	gs	32.20	193.20
3032-16	Poly	4 L	ur	61.50	
		4 x 4 L	ur	50.00	200.00
3032-21	Cubitainer	20 L	ur	172.25	
3032-22	Steel Pail	20 L	ur	168.15	
3032-23	Poly Drum	345 lb	bp	Inquire	

$CH_3CHOHCH_3$ FW: 60.10

Meets ACS Specifications
Appearance (clear, colorless liquid) .....Passes Test
Assay ($CH_3CHOHCH_3$) .....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Solubility in H_2O .....Passes Test
Titrable Acid or Base (meq/g) .....max. 0.0001

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Carbonyl Compounds:
Propionaldehyde .....max. 0.002%
Acetone .....max. 0.002%

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg IMO: 3:1219
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Alcohol
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V555-10	Glass	4 L	sp	125.25	
		4 x 4 L	sp	85.20	340.80
V555-23	NOWPak	20 L	np	461.20	
V555-51	NOWPak	200 L	np	2209.65	

$CH_3CHOHCH_3$ FW: 60.10

Meets ACS Specifications for Liquid Chromatography and UV Spectrophotometry

Assay ($CH_3CHOHCH_3$) (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 1 ppm
Solubility in H_2O .....Passes Test
Titrable Acid or Base (µeq/g) .....max. 0.1
Water (H_2O)(by KF, coulometric) .....max. 0.06%
Ultraviolet Absorbance (1.00-cm cell vs. water):
205 nm .....max. 1.00
210 nm .....max. 0.50
220 nm .....max. 0.30
225 nm .....max. 0.16
230 nm .....max. 0.15
245 nm .....max. 0.04
254 nm .....max. 0.018
260 -400 nm .....max. 0.01
275 nm .....max. 0.03
300 nm .....max. 0.02
Carbonyl Compounds (as Propionaldehyde) .....max. 0.002%
Carbonyl Compounds (as Acetone) .....max. 0.002%
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ....max. 5

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg IMO: 3:1219
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

See the Academic section for research and chemical stockroom product information, starting on page 91.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Isopropyl Alcohol
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

3043-06	Glass	1 L	sp	74.25	
		6 x 1 L	sp	50.50	303.00
3043-10	Glass	4 L	sp	134.65	
		4 x 4 L	sp	91.60	366.40
3043-23	NOWPak	20 L	np	448.10	

$CH_3CHOHCH_3$ FW: 60.10

Meets ACS Specifications

Assay ($CH_3CHOHCH_3$) .....min. 99.5%
Carbonyl Compounds:
Propionaldehyde .....max. 0.002%
Acetone .....max. 0.002%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0005%
Solubility in H_2O .....Passes Test
Titrable Acid or Base (meq/g) .....max. 0.0001
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
205 nm .....max. 1.00
210 nm .....max. 1.00
220 nm .....max. 0.30
230 nm .....max. 0.15
245 nm .....max. 0.08
254 nm .....max. 0.02
260 nm .....max. 0.04
275 nm .....max. 0.03
280 nm .....max. 0.01
300 nm .....max. 0.02
350 nm .....max. 0.01
400-330 nm .....max. 0.01
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg IMO: 3:1219
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Alcohol
USP

cGMP

3031-08	Glass	4 L	fg	145.60	
		4 x 4 L	fg	116.45	465.80
3031-19	Steel Pail	20 L	bs	Inquire	
3031-26	Steel Drum	345 lb	bp	Inquire	

$CH_3CHOHCH_3$ FW: 60.10

Meets USP Requirements

Assay ($CH_3CHOHCH_3$) (by GC) .....min. 99.0%
Appearance (clear, colorless liquid) .....Passes Test
Identification .....Passes Test
Specific Gravity at 25°/25°C 0.783-0.787
Acidity (mL) .....max. 0.70
Nonvolatile Residue .....max. 0.005%
Refractive Index, η^{20}_D 1.376-1.378

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg IMO: 3:1219
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Isopropyl Alcohol, 70% Aqueous Solution
AR

V623-10	Poly	4 L	ur	83.65	
		4 x 4 L	ur	66.90	267.60
V623-25	Poly Drum	200 L	ur	Inquire	

$CH_3CHOHCH_3$ FW: 60.10

Specific Gravity at 20°/20°C 0.872-0.883
Acidity (mL) .....max. 1.0
Nonvolatile Residue .....max. 0.01%
Assay .....Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)
Material also meets the chemical specifications of Isopropyl Rubbing Alcohol, USP

CAS: 67-63-0 DENSITY: 1 L = 0.849 kg IMO: 3:1219
FLASH POINT: 18.3°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Alcohol
Lab Grade
For Histological Use

H604-10	Poly	4 L	gs	135.85	
		4 x 4 L	gs	109.75	439.00
H604-20	Cubitainer	20 L	gs	307.00	
H604-19	Steel Pail	20 L	gs	320.05	

$CH_3CHOHCH_3$ FW: 60.10

Assay ($CH_3CHOHCH_3$) .....min. 99.0%
Color (APHA) .....max. 10
Density (g/mL) at 25°C 0.781-0.783
Residue after Evaporation .....max. 0.001%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Product Information (not specifications):
Appearance (clear, colorless liquid free from foreign matter)

CAS: 67-63-0 DENSITY: 1 L = 0.79 kg IMO: 3:1219
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl Carbinol
See Isobutyl Alcohol

Isopropyl Ether
AR (ACS)
(Stabilized)

0800-12	Al Bottle	500 g	gs	136.95	
		6 x 500 g	gs	110.65	663.90
0800-14	Al Bottle	2.5 kg	gs	333.75	
		4 x 2.5 kg	gs	269.70	1078.80

$(CH_3)_2CHOCH(CH_3)_2$ FW: 102.18

Meets ACS Requirements
Assay ($(C_3H_7)_2O$) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 25
Isopropyl Ether Peroxide .....max. 0.05%
Residue after Evaporation .....max. 0.01%
Titrable Acid (meq/g) .....max. 0.0007

CAS: 108-20-3 DENSITY: 1 L = 0.78 kg IMO: 3:1159
FLASH POINT: -27.8°C

Solvent Spill Cleanup Products available. See pp. 378.

Isopropyl-beta-D-thiogalactopyranoside
See IPTG

Ketohexamethylene
See Cyclohexanone

Klean-AR
AR
(Chromic/Sulfuric Acid Cleaning Solution)

6622-18	Poly	2.5 L	ur	78.80	
		6 x 2.5 L	ur	59.10	354.60
6622-08	SAFEMOR	9 lb	ur	90.10	
		6 x 9 lb	ur	72.05	432.30

Sulfuric Acid (H_2SO_4) 90-96%
Chromium Trioxide (CrO_3) 0.42-0.47%
Specific Gravity at 25°/25°C 1.8182-1.8427
Product Information (not specifications):
Appearance (dark orange to brown solution)

DENSITY: 1 L = 1.84 kg IMO: 8:3264

Lactic Acid, 88%
cGMP
USP, FCC
Racemic

2672-04	Poly	500 g	fa	130.00	
		12 x 500 g	fa	104.00	1248.00

$CH_3CHOHCOOH$ FW: 90.08

Meets USP & FCC Requirements
Assay ($CH_3CHOHCOOH$) 88.0-92.0%
Identification .....Passes Test
Residue on Ignition .....max. 0.05%
Chloride (Cl) .....max. 0.1%
Chloride (Cl) (USP) .....Passes Test
Sulfate (SO_4) .....max. 0.25%
Sulfate (SO_4) (USP) .....Passes Test
Cyanide (CN) .....max 5 mg/kg
Heavy Metals (as Pb) .....max. 10 ppm
Lead (Pb)(mg/kg) .....max 0.5 mg/kg
Iron (Fe) .....max 10 mg/kg
Sugars .....Passes Test
Limit of Citric, Oxalic, Phosphoric, or Tartaric Acid .....Passes Test
Readily Carbonizable Substances .....Passes Test
Specific Rotation $[\alpha]^{25}_D$ .....-0.05 to +0.05°
Specific Gravity at 25°/25°C .....Actual Value Reported
Product Information (not specifications):
Appearance (clear, colorless to slightly yellow liquid)

CAS: 50-21-5 DENSITY: 1 L = 1.2 kg IMO: 8:3265
FLASH POINT: > 112°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lactic Acid, 85%
AR (ACS)

2676-04	Poly	500 g	ra	97.20	
		12 x 500 g	ra	77.75	933.00

$CH_3CHOHCOOH$ FW: 90.08

Meets ACS Specifications

Assay ($CH_3CHOHCOOH$) 85.0-90.0%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Residue after Ignition ..... max. 0.02%
Substances Darkened by H_2SO_4 ..... Passes Test
Sulfate (SO_4) ..... max. 0.002%

Product Information (not specifications):
Appearance (clear, colorless to slightly yellow liquid)

CAS: 50-21-5 DENSITY: 1 L = 1.2 kg IMO: 8:3265
FLASH POINT: > 112°C

Lactose, Monohydrate, Powder
AR (ACS)

5652-04	POLYSTORMOR	500 g	gd	60.70	
		12 x 500 g	gd	48.55	582.60
5652-06	Poly	2.5 kg	gd	182.25	
		4 x 2.5 kg	gd	145.80	583.20

$C_{12}H_{22}O_{11}·H_2O$ FW: 360.32

Meets ACS Specifications

Dextrose ..... Passes Test
Heavy Metals ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
Residue after Ignition ..... max. 0.03%
Solubility ..... Passes Test
Sucrose ..... Passes Test
Water (H_2O) 4.0-6.0%

Product Information (not specifications):
Appearance (white powder)

CAS: 64044-51-5

Lactose, Monohydrate, Powder
NF cGMP

6270-04	POLYSTORMOR	500 g	fg	69.00	
		12 x 500 g	fg	55.20	662.40

$C_{12}H_{22}O_{11}·H_2O$ FW: 360.32

Meets NF Requirements

Acidity or Alkalinity ..... Passes Test
Alcohol-Soluble Residue (mg) ..... max. 20
Clarity and Color of Solution ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Loss on Drying ..... max. 0.5%
Microbial Limit ..... Passes Test
Protein and Light-Absorbing Impurities ..... Passes Test
Residue on Ignition ..... max. 0.1%
Specific Rotation, $[\alpha]^{20}_D$ (dried basis, c = 10 in H_2O) ..... +54.4 - +55.9°
Water (H_2O)(by Karl Fischer titrn) 4.5-5.5%

Product Information (not specifications):
Appearance (white powder)

CAS: 64044-51-5

Lead Acetate Cotton
StandARd (For Arsenic)

H220-03	STAKMOR	500 g	st	285.10	

Identification ..... Passes Test

Product Information (not specifications):
Appearance (cotton balls)

IMO: 6.1:2811

Light Green SF Yellowish
Certified OR
Certified for Use in Histology and Cytology (C.I. 42095)

E059-03	Glass	25 g	so	73.85	

$C_{37}H_{34}N_2Na_2O_9S_3$ FW: 792.86

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in H_2O, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 5141-20-8 MERCK INDEX: 13,5506

Ligroin
See Petroleum Ether

Liquid Petrolatum
See Mineral Oil

Lithium Carbonate, Powder
AR (ACS)

5840-02	POLYSTORMOR	125 g	gd	80.85	
		12 x 125 g	gd	64.65	775.80
5840-04	POLYSTORMOR	500 g	gd	181.90	
		12 x 500 g	gd	145.50	1746.00

Li_2CO_3 FW: 73.89

Meets ACS Specifications

Assay (Li_2CO_3) ..... min. 99.0%
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Heavy Metals ..... max. 0.002%
Insoluble in Dilute HCl ..... max. 0.01%
Iron (Fe) ..... max. 0.002%
Nitrate (NO_3) ..... max. 5 ppm
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.1%
Sulfur Compounds (as SO_4) ..... max. 0.2%

Product Information (not specifications):
Appearance (white powder)

CAS: 554-13-2

Lithium Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lithium Chloride, Granular
AR (ACS)

5852-02	POLYSTORMOR	125 g	gd	101.90	
		12 x 125 g	gd	81.50	978.00
5852-04	POLYSTORMOR	500 g	gd	151.15	
		12 x 500 g	gd	120.90	1450.80
5852-06	Poly	2.5 kg	gd	671.50	
		4 x 2.5 kg	gd	537.20	2148.80
5852-20	STAKMOR	12 kg	bs	Inquire	

LiCl FW: 42.39

Meets ACS Specifications

Assay (LiCl) ..... min. 99%
Solubility ..... Passes Test
Titrable Base (meq/g) ..... max. 0.008
Calcium (Ca) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.002%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.20%
Sulfate (SO_4) ..... max. 0.01%
Barium (Ba) ..... max. 0.003%
Loss on Drying at 105°C ..... max. 1.0%

Product Information (not specifications):
Appearance (colorless, hygroscopic, crystalline granules with some black specks)

CAS: 7447-41-8

Lithium Nitrate, Granular
AR

5872-02	POLYSTORMOR	125 g	gd	63.10	
		12 x 125 g	gd	50.45	605.40
5872-04	POLYSTORMOR	500 g	gd	190.95	
		12 x 500 g	gd	152.75	1833.00
5872-06	Poly	2.5 kg	gd	627.75	
		4 x 2.5 kg	gd	502.20	2008.80

$LiNO_3$ FW: 68.95

Barium (Ba) ..... max. 0.002%
Calcium (Ca) ..... max. 0.03%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.20%
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.20%

Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 7790-69-4 IMO: 5.1:2722

Magnesia
See Magnesium Oxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Acetate, 4-Hydrate
AR (ACS)

H571-20	STAKMOR	12 kg	bs	Inquire	

$(CH_3COO)_2Mg{\cdot}4H_2O$ FW: 214.45

Meets ACS Specifications

Assay ($(CH_3COO)_2Mg{\cdot}4H_2O$) (by EDTA titrn) 98.0-102.0
Barium (Ba) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
Manganese (Mn) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Strontium (Sr) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%

Product Information (not specifications):
Appearance (colorless or white deliquescent crystals, granules or powder)

CAS: 16674-78-5

Magnesium Acetate, 4-Hydrate
GenAR
Suitable for Use in Biotechnology

7799-04	POLYSTORMOR	500 g	ge	89.50	
		12 x 500 g	ge	71.60	859.20
7799-06	Poly	2.5 kg	ge	326.00	
		4 x 2.5 kg	ge	260.80	1043.20
7799-88	Poly Pail	12 kg	bs	Inquire	

$(CH_3COO)_2Mg{\cdot}4H_2O$ FW: 214.45

Assay ($(CH_3CO_2)_2Mg{\cdot}4H_2O$) 98.0-102.0%
Barium (Ba) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Endotoxin Concentration (EU/g) ..... max. 5.0
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
Manganese (Mn) ..... max. 0.001%
Nitrogen (N) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Strontium (Sr) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%

Product Information (not specifications):
Appearance (colorless or white deliquescent crystals, granules or powder)

CAS: 16674-78-5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Chloride, 6-Hydrate
USP

cGMP

5956-06	Poly	2.5 kg	fg	415.60	
		4 x 2.5 kg	fg	332.45	1329.80
5956-12	Lined Fiber Dr	12 kg	bs	Inquire	
5956-88	Poly Pail	12 kg	bs	Inquire	

$MgCl_2 \cdot 6H_2O$ FW: 203.30

Meets USP Requirements

Assay ($MgCl_2 \cdot 6H_2O$) 98.0-101.0%
Barium (Ba) ..... Passes Test
Calcium (Ca) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Matter ..... max. 0.005%
pH of Aqueous Solution 4.5-7.0
Potassium (K) ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%

Product Information (not specifications):
Appearance (colorless crystals)
Preserve in Tight Containers

CAS: 7791-18-6

Magnesium Chloride, 6-Hydrate, Crystal
AR (ACS)

5958-02	POLYSTORMOR	125 g	gd	44.60	
		12 x 125 g	gd	35.65	427.80
5958-04	POLYSTORMOR	500 g	gd	78.35	
		12 x 500 g	gd	62.65	751.80
5958-06	Poly	2.5 kg	gd	299.45	
		4 x 2.5 kg	gd	239.55	958.20
5958-20	Lined Fiber Dr	12 kg	bs	Inquire	
5958-88	Poly Pail	12 kg	bs	Inquire	
5958-26	Lined Fiber Dr	250 lb	bp	Inquire	

$MgCl_2 \cdot 6H_2O$ FW: 203.30

Meets ACS Specifications

Assay ($MgCl_2 \cdot 6H_2O$) 99.0-102.0%
Ammonium (NH_4) ..... max. 0.001%
Barium (Ba) ..... max. 0.005%
Calcium (Ca) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
Manganese (Mn) ..... max. 5 ppm
Nitrate (NO_3) ..... max. 0.001%
pH of 5% Solution 4.5-7.0
Phosphate (PO_4) ..... max. 5 ppm
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Strontium (Sr) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.002%

Product Information (not specifications):
Appearance (colorless, deliquescent crystals)

CAS: 7791-18-6

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Hydroxide, Powder
USP, FCC

cGMP

5984-20	Lined Fiber Dr	12 kg	bs	Inquire	
5984-25		200 lb	bp	Inquire	

$Mg(OH)_2$ FW: 58.32

Meets USP & FCC Requirements

Assay ($Mg(OH)_2$) (dried basis) 95.0-100.5%
Calcium (Ca) ..... max. 1.5%
Calcium Oxide ..... max. 1%
Carbonate (CO_3) ..... Passes Test
Heavy Metals (as Pb) ..... max. 20 ppm
Identification ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Lead (Pb)(USP) ..... max. 1.5 ppm
Loss on Drying at 105°C ..... max. 2.0%
Loss on Ignition 30.0-33.0%
Soluble Salts ..... max. 2.0%
Alkalies (as SO_4) ..... Passes Test
Microbiological E Coli (negative) ..... Passes Test

Product Information (not specifications):
Appearance (fine, white powder)

CAS: 1309-42-8

Magnesium Nitrate, 6-Hydrate, Flake
AR (ACS)

6002-20	STAKMOR	12 kg	bs	Inquire	

$Mg(NO_3)_2 \cdot 6H_2O$ FW: 256.41

Meets ACS Specifications

Assay ($(Mg(NO_3)_2 \cdot 6H_2O)$) (by EDTA titrn) 98.0-102.0%
Appearance (white, irregular flakes) ..... Passes Test
Ammonium (NH_4) ..... max. 0.003%
Barium (Ba) ..... max. 0.002%
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
Manganese (Mn) ..... max. 5 ppm
pH of 5% Solution at 25°C 5.0-8.2
Phosphate (PO_4) ..... max. 5 ppm
Potassium (K) ..... max. 0.005%
Sodium (Na) ..... max. 0.005%
Solubility ..... Passes Test
Strontium (Sr) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%

CAS: 13446-18-9 IMO: 5.1:1474

Magnesium Oxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Oxide, Heavy Powder

cGMP

USP

6010-12	Poly	500 g	fg	138.50	
		4 x 500 g	fg	110.80	443.20
6010-05	STAKMOR	2.5 kg	fg	219.35	
6010-31		20 kg	bp	Inquire	

MgO FW: 40.30

Meets USP Requirements

Assay (MgO) (ignited basis) 96.0-100.5%
Identification ..... Passes Test
Loss on Ignition ..... max. 10.0%
Free Alkali and Soluble Salts ..... max. 2.0%
Acid-Insoluble Substances ..... max. 0.1%
Bulk Density ..... Actual Value Reported
Calcium (Ca) ..... max. 1.1%
Tapped Density(g/mL) 0.2-0.65
Heavy Metals (as Pb) ..... max. 20 ppm
Iron (Fe) ..... max. 0.05%

Product Information (not specifications):
Appearance (white powder)

CAS: 1309-48-4

Magnesium Perchlorate, Desiccant

AR (ACS)

5039-04	Glass	500 g	gd	311.85	
		12 x 500 g	gd	249.45	2993.40

$Mg(ClO_4)_2$ FW: 223.21

Meets ACS Specifications

Loss on Drying at 190°C ..... max. 8%
Suitability for Moisture Absorption ..... Passes Test
Titrable Free Acid (meq/g) ..... max. 0.005
Titrable Base (meq/g) ..... max. 0.025

Product Information (not specifications):
Appearance (white granular or flaky powder)

CAS: 10034-81-8 IMO: 5.1:1475

Magnesium Stearate, Hyqual, Vegetable Source

cGMP

NF-GenAR
Vegetable Grade-Non Bovine

5712-06	STAKMOR	2.5 kg	ge	165.20	
5712-88	Poly Drum	12 kg	bs	Inquire	

Meets NF Requirements

Assay (as Mg) (dried basis) 4.0-5.0%
Stearic Acid ..... min. 40.0%
Stearic and Palmitic Acids ..... min. 90.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Microbiological ..... Passes Test
Total Aerobic Microbial Count (cfu/g) ..... max. 1000
Total Mold and Yeast Count (cfu/g) ..... max. 500
Salmonella Species (negative) ..... Passes Test
Escherichia Coli (negative) ..... Passes Test
Loss on Drying at 105°C ..... max. 6.0%
Specific Surface Area, m^2/g 6.0-12.0
Limit of Chloride ..... max. 0.025%
Limit of Sulfate ..... max. 0.5%
Lead (Pb) ..... max. 10 ppm

Meets BP/Ph.Eur. Chemical Specifications

Identification C ..... Passes Test
Identification D ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Chloride (Cl) ..... max. 0.025%
Sulfate (SO_4) ..... max. 0.5%
Cadmium (Cd) ..... max. 3.0 ppm
Lead (Pb) ..... max. 10.0 ppm
Nickel (Ni) ..... max. 5.0 ppm
Loss on Drying at 105°C ..... max. 6.0%
Escherichia Coli (negative) ..... Passes Test
Assay (as Mg) (dried basis) 4.0-5.0%
Salmonella (absent) ..... Passes Test
Stearic Acid ..... min. 40.0%
Stearic and Palmitic Acids ..... min. 90.0%
Total Aerobic Microbial Count (cfu/g) ..... max. 1000
Total Mold and Yeast Count (cfu/g) ..... max. 100

Meets JP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Chloride (Cl) ..... max. 0.025%
Sulfate (SO_4) ..... max. 0.5%
Heavy Metals (as Pb) ..... max. 20 ppm
Stearic Acid ..... min. 40.0%
Stearic and Palmitic Acids ..... min. 90.0%
Loss on Drying at 105°C ..... max. 6.0%
Microbiological ..... Passes Test
Total Aerobic Microbial Count (cfu/g) ..... max. 1000
Total Mold and Yeast Count (cfu/g) ..... max. 500
Salmonella Species (negative) ..... Passes Test
Escherichia Coli (negative) ..... Passes Test
Assay (as Mg) (dried basis) 4.0-5.0%

CAS: 557-04-0

Magnesium Stearate, Hyqual, Vegetable Source

cGMP

NF-GenAR

2257-06	STAKMOR	2.5 kg	ge	197.10	
2257-88	Poly Drum	12 kg	bs	Inquire	

$Mg(C_{18}H_{35}O_2)_2$

Meets NF Requirements

Assay (as Mg) (dried basis) 4.0-5.0%
Stearic Acid ..... min. 40%
Stearic and Palmitic Acids ..... min. 90%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Microbiological ..... Passes Test
Total Aerobic Microbial Count (cfu/g) ..... max. 1000
Total Mold and Yeast Count (cfu/g) ..... max. 500
Salmonella Species (negative) ..... Passes Test
Escherichia Coli (negative) ..... Passes Test
Loss on Drying at 105°C ..... max. 6.0%
Specific Surface Area, m^2/g 5-10
Limit of Chloride ..... max. 0.1%
Limit of Sulfate ..... max. 1.0%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lead (Pb) ..... max. 0.001%

Meets BP/Ph.Eur. Chemical Specifications

Identification C ..... Passes Test
Identification D ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Chloride (Cl) ..... max. 0.1%
Sulfate (SO_4) ..... max. 1.0%
Cadmium (Cd) ..... max. 3.0 ppm
Lead (Pb) ..... max. 10.0 ppm
Nickel (Ni) ..... max. 5.0 ppm
Loss on Drying at 105°C ..... max. 6.0%
Total Aerobic Microbial Count (cfu/g) ..... max. 1000
Escherichia Coli (negative) ..... Passes Test
Assay (as Mg) (dried basis) 4.0-5.0%
Salmonella (absent) ..... Passes Test
Stearic Acid ..... min. 40.0%
Stearic and Palmitic Acids ..... min. 90.0%
Total Mold and Yeast Count (cfu/g) ..... max. 100

Meets JP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Chloride (Cl) ..... max. 0.10%
Sulfate (SO_4) ..... max. 1.0%
Heavy Metals (as Pb) ..... max. 20 ppm
Stearic Acid ..... min. 40%
Stearic and Palmitic Acids ..... min. 90%
Loss on Drying at 105°C ..... max. 6.0%
Microbiological ..... Passes Test
Total Aerobic Microbial Count (cfu/g) ..... max. 1000
Total Mold and Yeast Count (cfu/g) ..... max. 500
Salmonella Species (negative) ..... Passes Test
Escherichia Coli (negative) ..... Passes Test
Assay (as Mg) (dried basis) 4.0-5.0%

Meets FCC Requirements

Identification A ..... Passes Test
Identification B ..... Passes Test
Assay (as MgO) 6.8-8.3%
Lead (Pb) ..... max 5 mg/kg
Loss on Drying at 105°C ..... max. 4.0%
Mesh:
Thru U.S. No. 325 Sieve ..... Actual Value Reported
Tapped Density (g/cc) 0.21-0.33
Particle Size (50th percentile) (µm) 10.5-16.5
Particle Size (90th percentile) (µm) ..... max. 35

CAS: 557-04-0

Magnesium Sulfate, Anhydrous, Powder

AR

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
6070-12	POLYSTORMOR	500 g	gd	328.60	
		4 x 500 g	gd	262.85	1051.40
6070-10	Poly	2 kg	gd	1151.50	
		4 x 2 kg	gd	921.20	3684.80
6070-20	Lined Fiber Dr	12 kg	bs	Inquire	
6070-26	Lined Fiber Dr	200 lb	bp	Inquire	

$MgSO_4$ FW: 120.37

Ammonium (NH_4) ..... max. 0.005%
Arsenic (As) ..... max. 0.001%
Calcium (Ca) ..... max. 0.04%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iron (Fe) ..... max. 0.001%
Loss on Ignition ..... max. 2.0%
Mesh:
Thru U.S. No. 200 Sieve ..... min. 80%
Nitrate (NO_3) ..... max. 0.005%
pH of 5% Solution 5.0-9.2
Product Information (not specifications):
Appearance (fine, white powder, free from lumps)

CAS: 7487-88-9

Magnesium Sulfate, Anhydrous, Powder

cGMP

USP
Not Intended For Parenteral Dosage Use

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
5053-20	Poly Pail	12 kg	bs	Inquire	
5053-26	Lined Fiber Dr	200 lb	bp	Inquire	

$MgSO_4$ FW: 120.37

Meets USP Requirements

Appearance and Odor ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Loss on Drying at 105°C ..... max. 2%
Solubility ..... Passes Test
pH (1 in 20) 5.0-9.2
Chloride (Cl) ..... max. 0.014%
Heavy Metals (as Pb) ..... max. 0.001%
Selenium (Se) ..... max. 0.003%
Iron (Fe) ..... max. 20 ppm
Assay (as $MgSO_4$) (ignited basis) ..... min. 99.0%
Mesh:
Thru U.S. No. 100 Sieve ..... min. 85%
Product Information (not specifications):
Appearance (fine, white powder)

CAS: 7487-88-9

Magnesium Sulfate, 7-Hydrate

cGMP

USP-GenAR
Suitable for Use in Biotechnology

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7778-06	Poly	2.5 kg	ge	394.60	
		4 x 2.5 kg	ge	315.65	1262.60

$MgSO_4 \cdot 7H_2O$ FW: 246.47

Meets USP & FCC Requirements

Assay (as $MgSO_4$) (ignited basis) 99.5-100.5%
Acidity or Alkalinity ..... Passes Test
Appearance of a 10% Solution (clear and colorless) ..... Passes Test
Chloride (Cl) ..... max. 0.014%
Endotoxin Concentration (EU/g) ..... max. 5.0
Heavy Metals (as Pb) ..... max. 0.0005%
Identification ..... Passes Test
Iron (Fe)(µg/g) ..... max. 0.5
Lead (Pb) ..... max 4 mg/kg
Loss on Ignition 48.0-52.0%
Arsenic (As) ..... max. 2 ppm
pH of 5% Solution at 25°C 5.0-8.8
Selenium (Se) ..... max. 0.003%
Solubility (5 in 50) ..... Passes Test
Product Information (not specifications):
Appearance (colorless crystals)

CAS: 10034-99-8

Magnesium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium Sulfate, 7-Hydrate

cGMP

USP, FCC
(epsom salts)
For Parenteral Use

4200-07	Poly	2.5 kg	fg	341.00	
		4 x 2.5 kg	fg	272.80	1091.20
4200-20	STAKMOR	12 kg	bs	Inquire	

$MgSO_4 \cdot 7H_2O$ FW: 246.47

Meets USP & FCC Requirements

Assay (as $MgSO_4$) 99.5-100.5%
Solubility (5 in 50) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
pH (1 in 20) 5.0-8.8
Loss on Ignition 40.0-52.0%
Chloride (Cl) .....max. 0.014%
Heavy Metals (as Pb) .....max. 0.001%
Lead (Pb) .....max 4 mg/kg
Selenium (Se) .....max. 0.003%
Iron (Fe)(µg/g) .....max. 0.5

Product Information (not specifications):
Appearance (colorless crystals)

CAS: 10034-99-8

Magnesium Sulfate, 7-Hydrate, Crystal

AR (ACS)

6066-04	POLYSTORMOR	500 g	gd	77.90	
		12 x 500 g	gd	62.30	747.60
6066-06	Poly	2.5 kg	gd	275.15	
		4 x 2.5 kg	gd	220.10	880.40
6066-20	STAKMOR	12 kg	bs	Inquire	

$MgSO_4 \cdot 7H_2O$ FW: 246.47

Meets ACS Specifications

Assay ($MgSO_4 \cdot 7H_2O$) (by EDTA titrn) 98.0-102.0%
Ammonium (NH_4) .....max. 0.002%
Calcium (Ca) .....max. 0.02%
Chloride (Cl) .....max. 5 ppm
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 5 ppm
Manganese (Mn) .....max. 5 ppm
Nitrate (NO_3) .....max. 0.002%
pH of 5% Solution at 25°C 5.0-8.2
Potassium (K) .....max. 0.005%
Sodium (Na) .....max. 0.005%
Strontium (Sr) .....max. 0.005%

Product Information (not specifications):
Appearance (colorless crystals)

CAS: 10034-99-8

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mallcosorb

AR
(Indicating Carbon Dioxide Absorbent)

7631-12		1 pk	sg	506.95	
		4 x 1 pk	sg	405.55	1622.20

Carbon Dioxide Absorption Capacity .....min. 25%
Loss on Drying 12-19%
Mesh:
On U.S. No. 20 Sieve .....Actual Value Reported
Thru U.S. No. 50 Sieve .....Actual Value Reported

Product Information (not specifications):
Appearance (uniform off-white granules)

CAS: 8006-28-8 IMO: 8:3262

Maltose, Monohydrate

OR

1881-58	Glass	250 g	so	204.00	
1881-61	Glass	1 kg	so	581.50	

$C_{12}H_{22}O_{11} \cdot H_2O$ FW: 360.32

Specific Rotation $[\alpha]^{20}_D$ (c = 4 in H_2O) .....+111.7 - +131.7°
Water (H_2O)(by Karl Fischer titrn) .....Actual Value Reported

Product Information (not specifications):
Appearance (white powder)

CAS: 6363-53-7

Manganese Chloride, 4-Hydrate

AR (ACS)

6126-20	STAKMOR	12 kg	bs	Inquire	

$MnCl_2 \cdot 4H_2O$ FW: 197.91

Meets ACS Specifications

Assay ($MnCl_2 \cdot 4H_2O$) (by EDTA titrn) 98.0-101.0%
Solubility (20 in 150) .....Passes Test
Heavy Metals (as Pb) .....max. 0.0005%
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.0005%
Sulfate (SO_4) .....max. 0.005%
Zinc (Zn) .....max. 0.005%
Calcium (Ca) .....max. 0.005%
Magnesium (Mg) .....max. 0.005%
Potassium (K) .....max. 0.01%
Sodium (Na) .....max. 0.05%
pH of 5% Solution at 25°C 3.5-6.0

Product Information (not specifications):
Appearance (fine crystalline powder to pink translucent crystals)

CAS: 13446-34-9

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Manganese Sulfate, Monohydrate, Powder
AR (ACS)

6192-20	STAKMOR	12 kg	bs	Inquire	

$MnSO_4 \cdot H_2O$ FW: 169.02

Meets ACS Specifications

Assay ($MnSO_4 \cdot H_2O$) 98.0-101.0%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.002%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.002%
Loss on Ignition 10.0-12.0%
Magnesium (Mg) ..... max. 0.005%
Nickel (Ni) ..... max. 0.02%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Solubility ..... Passes Test
Substances Reducing $KMnO_4$ ..... Passes Test
Zinc (Zn) ..... max. 0.005%

Product Information (not specifications):
Appearance (fine pink powder)

CAS: 10034-96-5

Mannitol, Powder
AR (ACS)

6209-04	POLYSTORMOR	500 g	gd	142.75	
		12 x 500 g	gd	114.20	1370.40
6209-05	STAKMOR	2.5 kg	gd	433.20	

$C_6H_{14}O_6$ FW: 182.17

Meets ACS Specifications

Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.01%
Loss on Drying at 105°C ..... max. 0.05%
Reducing Sugars ..... Passes Test
Residue after Ignition ..... max. 0.01%
Titrable Acid (meq/g) ..... max. 0.0008
Specific Rotation $[\alpha]^{25}_D$ ..... +23.3 - +24.3°
Melting Point ..... 166-168 °C.
Solubility (2 in 20) ..... Passes Test

Product Information (not specifications):
Appearance (white powder)

CAS: 69-65-8

Mannitol, Powder
cGMP
USP-GenAR
Suitable for Use in Biotechnology

7781-04	POLYSTORMOR	500 g	ge	165.20	
		12 x 500 g	ge	132.15	1585.80
7781-88	Poly Pail	12 kg	bs	Inquire	

$C_6H_{14}O_6$ FW: 182.17

Meets USP Requirements

Assay ($C_6H_{14}O_6$) (dried basis) 96.0-101.5%
Acidity ..... Passes Test
Arsenic (As) ..... max. 0.0001%
Chloride (Cl) ..... max. 0.007%
Identification ..... Passes Test
Loss on Drying at 105°C ..... max. 0.3%
Melting Range ..... 164-169 °C.
Reducing Sugars ..... Passes Test
Specific Rotation $[\alpha]^{25}_D$ ..... +137 - +145°
Sulfate (SO_4) ..... max. 0.01%

Meets BP/Ph.Eur. Chemical Specifications

Assay (as $C_6H_{14}O_6$) (calculated on anhydrous basis) 98.0-102.0%
Conductivity, µS cm^{-1} ..... max. 20
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Lead (Pb) ..... max. 0.5 ppm
Nickel (Ni) ..... max. 1 ppm
Water (H_2O) ..... max. 0.5%
Reducing Sugars ..... max. 0.2%
Related Substances
Impurities A,B,C ..... max. 2.0%
Any other Impurity ..... max. 0.10%
Total ..... max. 2.0%
Appearance of Solution ..... Passes Test
Total Aerobic Microbial Count (cfu/g) ..... max. 100
Total Mold and Yeast Count (cfu/g) ..... max. 100
Escherichia coli (absent) ..... Passes Test
Salmonella (absent) ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 10

Product Information (not specifications):
Appearance (fine, white crystalline powder)

CAS: 69-65-8

Mannitol, Powder
cGMP
USP

6208-04	POLYSTORMOR	500 g	fg	192.75	
		12 x 500 g	fg	154.20	1850.40
6208-05	STAKMOR	2.5 kg	fg	590.45	
6208-88	Poly Pail	12 kg	bs	Inquire	

$C_6H_{14}O_6$ FW: 182.17

Meets USP Requirements

Assay ($C_6H_{14}O_6$) (dried basis) 96.0-101.5%
Acidity ..... Passes Test
Arsenic (As) ..... max. 1 ppm
Chloride (Cl) ..... max. 0.007%
Identification ..... Passes Test
Loss on Drying at 105°C ..... max. 0.3%
Melting Range ..... 164-169 °C.
Reducing Sugars ..... Passes Test
Specific Rotation $[\alpha]^{25}_D$ ..... +137 - +145°
Solubility (2 in 20) ..... Passes Test
Sulfate (SO_4) ..... max. 0.01%

Product Information (not specifications):
Appearance (fine, white crystalline powder)

CAS: 69-65-8

Marble Chips

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Marble Chips
(calcium carbonate)

6210-06	Poly	2.5 kg	gd	119.20	
		4 x 2.5 kg	gd	95.35	381.40

$CaCO_3$ FW: 100.09

Identification ..... Passes Test

Product Information (not specifications):

Appearance (pieces or chips of crystalline fracture from white marble slabs)

CAS: 471-34-1

Menthol, Crystal
USP
(l-menthol)

cGMP

6222-12	POLYSTORMOR	30 g	fg	75.70	
		12 x 30 g	fg	60.55	726.60
6222-02	POLYSTORMOR	125 g	fg	302.65	
		12 x 125 g	fg	242.10	2905.20

$C_{10}H_{20}O$ FW: 156.27

Meets USP Requirements

Chromatographic Purity ..... Passes Test
Identification ..... Passes Test
Melting Range ..... 41-44 °C.
Specific Rotation $[\alpha]^{25}_D$ ..... -51 to -45°
Limit of Nonvolatile Residue ..... max. 0.05%
Solubility in Alcohol ..... Passes Test

Product Information (not specifications):

Appearance (colorless, hexagonal or needle-like crystals or fused mass or crystalline powder)

CAS: 89-78-1

Mercaptoacetic Acid
OR
(thioglycolic acid)

1903-57	Glass S/S	100 g	so	78.35	

$HSCH_2COOH$ FW: 92.12

Assay ($HSCH_2COOH$) ..... min. 95%
Infrared Spectrum ..... Conforms to Reference Standard

Product Information (not specifications):

Appearance (clear, colorless liquid)

CAS: 68-11-1 DENSITY: 1 L = 1.33 kg IMO: 8:1940
FLASH POINT: > 113°C

Mercuric Acetate, Crystal
AR (ACS)

1416-02	Glass	12 x 125 g	gd	197.45	2369.40

$(CH_3COO)_2Hg$ FW: 318.68

Meets ACS Specifications

Assay ($(CH_3COO)_2Hg$) (by EDTA titrn) ..... min. 98.0%
Appearance (white to yellowish-white crystals or crystalline powder) ..... Passes Test
Chloride (Cl) ..... max. 0.005%
Other Heavy Metals (as Pb) ..... max. 0.002%
Residue after Reduction ..... max. 0.02%
Iron (Fe) ..... max. 0.001%
Mercurous Mercury (as Hg) ..... max. 0.4%
Nitrate (NO_3) ..... max. 0.005%
Insoluble Matter ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.005%

CAS: 1600-27-7 IMO: 6.1:1629

Mercuric Chloride
AR (ACS)
(Single Shipper, D.O.T. Approved)

H419-01	Poison Pack	125 g	gd	179.45	
H419-03	Poison Pack	500 g	gd	550.75	

$HgCl_2$ FW: 271.50

Meets ACS Specifications

Assay ($HgCl_2$) ..... min. 99.5%
Iron (Fe) ..... max. 0.002%
Residue after Reduction ..... max. 0.02%
Solution in Ether ..... Passes Test

Product Information (not specifications):

Appearance (white granules or powder)

CAS: 7487-94-7 IMO: 6.1:1624

Mercuric Oxide, Yellow, Powder
AR (ACS)

1428-02	Glass	12 x 125 g	gd	126.65	1519.80

HgO FW: 216.59

Meets ACS Specifications

Assay (HgO) (by EDTA titrn) ..... min. 99.0%
Insoluble in Dilute HCl ..... max. 0.03%
Residue after Reduction ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.01%
Chloride (Cl) ..... max. 0.025%
Nitrogen Compounds (as N) ..... max. 0.005%
Iron (Fe) ..... max. 0.003%

CAS: 21908-53-2 IMO: 6.1:1641

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mercuric Sulfate, Powder
AR (ACS)

1430-04	Glass	12 x 500 g	gd	484.80	5817.60

$HgSO_4$ FW: 296.65

Meets ACS Requirements

Assay ($HgSO_4$) ..... min. 98.0%
Residue after Reduction ..... max. 0.02%
Chloride (Cl) ..... max. 0.003%
Nitrate (NO_3) ..... Passes Test
Iron (Fe) ..... max. 0.005%
Mercurous Mercury (as Hg) ..... max. 0.15%

Product Information (not specifications):
Appearance (white powder)

CAS: 7783-35-9 IMO: 6.1:1645

Mercurous Nitrate, Dihydrate, Crystal
AR (ACS)

1434-04	Glass	500 g	gd	525.10	
		12 x 500 g	gd	420.05	5040.60
1434-05	Glass	2.5 kg	gd	1632.20	

$Hg_2(NO_3)_2 \cdot 2H_2O$ FW: 561.22

Meets ACS Specifications

Assay ($Hg_2(NO_3)_2 \cdot 2H_2O$) ..... min. 97.0%
Chloride (Cl) ..... max. 0.005%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Mercuric Mercury (as Hg) ..... max. 1.0%
Residue after Reduction ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.005%
Solubility in Dilute Nitric Acid ..... Passes Test

Product Information (not specifications):
Appearance (fine, white to slightly yellow crystals)

CAS: 14836-60-3 IMO: 6.1:1627

Mercury, Redistilled
Purified

1280-03	Poison Pack	1 lb	gd	309.95	

Hg AW: 200.59

Appearance ..... Passes Test
Residue on Ignition ..... max. 0.01%

CAS: 7439-97-6 DENSITY: 1 L = 13.55 kg IMO: 8:2809

Mercury Spill Cleanup Products available. See pp. 378.

Mercury Protonitrate
See Mercurous Nitrate

Methacide
See Toluene

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methacrylic Acid (Stabilized)
OR

1506-59	Glass S/S	500 g	so	86.35	

CH_2:$C(CH_3)COOH$ FW: 86.09

Assay (CH_2:$C(CH_3)COOH$) ..... min. 98.0%
Infrared Spectrum ..... Conforms to Reference Standard

Product Information (not specifications):
Appearance (colorless to clear, slightly yellow solution)

CAS: 79-41-4 DENSITY: 1 L = 1.015 kg IMO: 8:2531
FLASH POINT: 76.6°C

Methanesulfonic Acid, 98%

E207-57	Glass S/S	100 g	so	52.00	

CH_3SO_3H FW: 96.10

Assay (CH_3SO_3H) ..... min. 98.0%

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 75-75-2 DENSITY: 1 L = 1.5 kg IMO: 8:2922

Methanol
See Methyl Alcohol

Methenamine, Granular
USP
(hexamethylenetetramine)

cGMP

5180-12	POLYSTORMOR	500 g	fg	128.75	
		4 x 500 g	fg	103.00	412.00
5180-06	Poly	2.5 kg	fg	370.10	
		4 x 2.5 kg	fg	296.05	1184.20

$(CH_2)_6N_4$ FW: 140.19

Meets USP Requirements

Assay ($(CH_2)_6N_4$) (dried basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Loss on Drying ..... max. 2.0%
Residue on Ignition ..... max. 0.1%
Chloride (Cl) ..... max. 0.014%
Sulfate (SO_4) ..... Passes Test
Ammonium Salts ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%

Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 100-97-0 IMO: 4.1:1328 FLASH POINT: 250°C

p-Methoxybenzaldehyde
See p-Anisaldehyde (p-methoxybenzaldehyde)

Methyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methyl Alcohol
AR (ACS)
(Karl Fischer)

3017-08	Glass	4 L	gs	102.35	
		4 x 4 L	gs	82.70	330.80

CH_3OH FW: 32.04

Meets ACS Specifications

Assay (CH_3OH) (by GC) ..... min. 99.8%
Substances Darkened by H_2SO_4 ..... Passes Test
Substances Reducing $KMnO_4$ ..... Passes Test
Solubility in H_2O ..... Passes Test
Color (APHA) ..... max. 10
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.02%
Residue after Evaporation ..... max. 0.001%
Carbonyl Compounds:
Acetaldehyde ..... max. 0.001%
Acetone ..... max. 0.001%
Formaldehyde ..... max. 0.001%
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0002
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Alcohol
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

H488-06	Glass	1 L	sp	60.80	
		6 x 1 L	sp	41.35	248.10
H488-10	Glass	4 L	sp	111.90	
		4 x 4 L	sp	76.10	304.40
H488-23	NOWPak	20 L	np	411.70	

CH_3OH FW: 32.04

Meets ACS Specifications for Liquid Chromatography and UV Spectrophotometry

Appearance ..... Passes Test
Assay (CH_3OH) (by GC, corrected for water) ..... min. 99.9%
Carbonyl Compounds:
Acetone ..... max. 0.001%
Acetaldehyde ..... max. 0.001%
Formaldehyde ..... max. 0.001%
Color (APHA) ..... max. 5
Residue after Evaporation ..... max. 0.0001%
Solubility in H_2O ..... Passes Test
Substances Darkened by H_2SO_4 ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0002
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
205 nm ..... max. 1.00
210 nm ..... max. 0.80
220 nm ..... max. 0.25
230 nm ..... max. 0.12
240 nm ..... max. 0.05
260 nm ..... max. 0.01
400-280 nm ..... max. 0.005

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Liquid Chromatography Suitability
Absorbance ..... Passes Test
HPLC Gradient Elution (No Peak Greater than 25% of Full Scale)(0.005 au) ..... Passes Test
Extraction-Concentration Suitability
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) ..... max. 5
Sum of the Peaks (ng/L) ..... max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ..... max. 5
Sum of the Peaks (µg/L) ..... max. 10
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at Emission Maximum for Impurities ..... max. 1.0

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Alcohol
NF

cGMP

8814-04	Glass	500 mL	fg	24.60	
		12 x 500 mL	fg	19.65	235.80
8814-06	Glass	4 L	fg	98.45	
		4 x 4 L	fg	78.75	315.00
8814-14	SAFEMOR	4 L	fg	111.20	
		4 x 4 L	fg	88.95	355.80
8814-19	Steel Pail	20 L	bs	Inquire	
8814-28	Steel Drum	350 lb	bp	Inquire	

CH_3OH FW: 32.04

Meets NF Requirements

Assay (CH_3OH) (by GC) ..... min. 99.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity ..... Passes Test
Alkalinity (as NH_3) ..... max. 3 ppm
Nonvolatile Residue ..... max. 0.001%
Readily Carbonizable Substances ..... Passes Test
Readily Oxidizable Substances ..... Passes Test
Acetone, Aldehydes (as $(CH_3)_2CO$) ..... max. 0.003%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.1%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Methyl Alcohol

Lab Grade
For Histological Use

cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
H603-12	Poly	4 L	gs	85.50	
		4 x 4 L	gs	69.10	276.40
H603-20	Cubitainer	20 L	gs	202.25	
H603-19	Lined Steel Dr	20 L	gs	212.50	

CH_3OH FW: 32.04

Assay (CH_3OH) (by GC) ..... min. 99.8%
Appearance (clear, colorless liquid) ..... Passes Test
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.001%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.10%

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Alcohol, Anhydrous

AR (ACS)
(Absolute)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3016-02	Poly	500 mL	ur	21.45	
		12 x 500 mL	ur	17.45	209.40
3016-06	Glass	1 L	gs	33.05	
		6 x 1 L	gs	26.70	160.20
3016-68	Glass	4 L	gs	78.05	
		4 x 4 L	gs	63.05	252.20
3016-16	Poly	4 L	ur	41.90	
		4 x 4 L	ur	34.05	136.20
3016-22	Lined Steel Dr	20 L	ur	107.15	
3016-25	Steel Drum	350 lb	bp	Inquire	

CH_3OH FW: 32.04

Meets ACS Specifications

Assay (CH_3OH) (by GC) ..... min. 99.8%
Appearance (clear, colorless liquid) ..... Passes Test
Carbonyl Compounds:
Acetaldehyde ..... max. 0.001%
Acetone ..... max. 0.001%
Formaldehyde ..... max. 0.001%
Color (APHA) ..... max. 10
Heavy Metals (as Pb) ..... max. 0.0001%
Identification ..... Passes Test
Residue after Evaporation ..... max. 0.001%
Solubility in H_2O ..... Passes Test
Substances Darkened by H_2SO_4 ..... Passes Test
Substances Reducing $KMnO_4$ ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0002
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.1%

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Alcohol, Anhydrous

ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3041-06	Glass	1 L	sp	41.15	
		6 x 1 L	sp	28.00	168.00
3041-10	Glass	4 L	sp	96.10	
		4 x 4 L	sp	65.35	261.40
3041-23	NOWPak	20 L	np	376.15	
3041-51	NOWPak	200 L	np	1808.75	

CH_3OH FW: 32.04

Meets ACS Specifications

Assay (CH_3OH) (by GC) ..... min. 99.9%
Carbonyl Compounds:
Acetaldehyde ..... max. 0.001%
Acetone ..... max. 0.001%
Formaldehyde ..... max. 0.001%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0002%
Solubility in H_2O ..... Passes Test
Substances Darkened by H_2SO_4 ..... Passes Test
Substances Reducing $KMnO_4$ ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0002
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
205 nm ..... max. 1.00
210 nm ..... max. 0.80
220 nm ..... max. 0.25
230 nm ..... max. 0.20
240 nm ..... max. 0.05
254 nm ..... max. 0.01
260 nm ..... max. 0.04
280 nm ..... max. 0.005
280-400 nm ..... max. 0.01
350 nm ..... max. 0.005
Liquid Chromatography Suitability
Ultraviolet Absorbance (1.00-cm cell vs. water): ..... Passes Test
HPLC Gradient Elution (No Peak Greater than 25% of Full Scale)(0.005 au) ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)
Filtered through a 0.2 micron filter.

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Alcohol, Anhydrous

ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
H080-10	SAFEMOR	4 L	sp	113.40	
		4 x 4 L	sp	77.15	308.60

CH_3OH FW: 32.04

Meets ACS Specifications

Assay (CH_3OH) (by GC) ..... min. 99.9%
Carbonyl Compounds:
Acetaldehyde ..... max. 0.001%
Acetone ..... max. 0.001%
Formaldehyde ..... max. 0.001%

Methyl Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.0001%
Solubility in H_2O ..... Passes Test
Substances Darkened by H_2SO_4 ..... Passes Test
Substances Reducing $KMnO_4$ ..... Passes Test
Titrable Acid (meq/g) ..... max. 0.0003
Titrable Base (meq/g) ..... max. 0.0002
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
205 nm ..... max. 1.00
210 nm ..... max. 0.80
220 nm ..... max. 0.25
230 nm ..... max. 0.20
240 nm ..... max. 0.05
254 nm ..... max. 0.01
260 nm ..... max. 0.04
280 nm ..... max. 0.005
280-400 nm ..... max. 0.01
350 nm ..... max. 0.005
Liquid Chromatography Suitability
Absorbance ..... Passes Test
HPLC Gradient Elution (No Peak Greater than 25% of Full Scale)(0.005 au) ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)
Filtered through a 0.2 micron filter.

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Alcohol, Anhydrous

3004-08	Glass	4 L	gs	78.65	
		4 x 4 L	gs	63.55	254.20
3004-19	Lined Steel Dr	20 L	sb	165.05	

CH_3OH FW: 32.04

Assay (CH_3OH) (by GC) ..... min. 99.8%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.1%
Substances Reducing $KMnO_4$ ..... Passes Test
Acidity ..... Passes Test
Acetone ..... Passes Test
Solubility in H_2O ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 67-56-1 DENSITY: 1 L = 0.8 kg IMO: 3:1230
FLASH POINT: 12°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Benzoate
OR

1882-59	Glass S/S	500 g	so	56.50	

$C_6H_5COOCH_3$ FW: 136.15

Infrared Spectrum ..... Conforms to Reference Standard
Product Information (not specifications):
Appearance (colorless, oily liquid)

CAS: 93-58-3 DENSITY: 1 L = 1.094 kg FLASH POINT: 83°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2-Methylbutane
OR

1967-59	Glass	500 g	so	45.15	

$(CH_3)_2CHCH_2CH_3$ FW: 72.15

Assay ($(CH_3)_2CHCH_2CH_3$) ..... min. 95%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 78-78-4 DENSITY: 1 L = 0.62 kg IMO: 3:1265
FLASH POINT: -51°C

Solvent Spill Cleanup Products available. See pp. 378.

2-Methyl-1-Butanol
See Amyl Alcohol

3-Methyl-1-Butanol
See Isopentyl Alcohol

Methyl tert-Butyl Ether
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

5398-08	Glass	4 L	sp	199.70	
		4 x 4 L	sp	135.85	543.40

$(CH_3)_3COCH_3$ FW: 88.15

Meets ACS Specifications
Assay (by GC, corrected for water) ..... min. 99.0%
Color (APHA) ..... max. 10
Peroxide (as H_2O_2) ..... max. 1 ppm
Residue after Evaporation ..... max. 2 ppm
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.05%
Optical Absorbance (1-cm path vs water):
210 nm ..... max. 1.00
225 nm ..... max. 0.50
250 nm ..... max. 0.10
300 nm ..... max. 0.005
350 nm ..... max. 0.005
400 nm ..... max. 0.005
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 1634-04-4 DENSITY: 1 L = 0.74 kg IMO: 3:2398
FLASH POINT: -27°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Cyanide
See Acetonitrile

Methylene Bichloride
See Dichloromethane

N,N'-Methylenebisacrylamide
See BIS

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methylene Blue
Certified OR
Certified for Use in Histology, Bacteriology & Compounding of Blood Stains (C.I. 52015)

E065-03	Glass	25 g	so	42.30	

$C_{16}H_{18}ClN_3S{\cdot}3H_2O$ FW: 373.91

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in H_2O, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 7220-79-3 MERCK INDEX: 13,6085

Methylene Blue Indicator
OR

5891-57	Glass	100 g	so	57.65	

$C_{16}H_{18}ClN_3S{\cdot}3H_2O$ FW: 373.91

Identification ..... Passes Test
Solubility ..... Passes Test
Product Information (not specifications):
Appearance (dark green crystals or crystalline powder with bronze-like luster)

CAS: 7220-79-3

Methylene Chloride
See Dichloromethane

Methylene Dichloride
See Dichloromethane

Methyl Ethyl Ketone
AR (ACS)
(2-butanone)

6240-04	Glass	500 mL	gs	34.85	
		12 x 500 mL	gs	28.15	337.80
6240-06	Glass	1 L	gs	42.65	
		6 x 1 L	gs	34.45	206.70
6240-08	Glass	4 L	gs	198.75	
		4 x 4 L	gs	160.60	642.40
6240-19	Lined Steel Dr	20 L	sb	445.00	
6240-28	Lined Steel Dr	200 L	bp	Inquire	

$CH_3COCH_2CH_3$ FW: 72.11

Meets ACS Specifications
Assay ($CH_3COCH_2CH_3$) (by GC, corrected for water) ..... min. 99.0%
Color (APHA) ..... max. 15
Residue after Evaporation ..... max. 0.0025%
Titrable Acid (meq/g) ..... max. 0.0005
Water (by KF, volumetric) ..... max. 0.20%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 78-93-3 DENSITY: 1 L = 0.81 kg IMO: 3:1193
FLASH POINT: -9°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Ethyl Ketone
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

6206-08	Glass	4 L	sp	166.55	
		4 x 4 L	sp	113.30	453.20

$CH_3COCH_2CH_3$ FW: 72.11

Meets ACS Specifications
Assay ($CH_3COCH_2CH_3$) (by GC) ..... min. 99.0%
Color ..... max. 15
Residue after Evaporation ..... max. 5 ppm
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.08%
Optical Absorbance (1-cm path vs water):
329 nm ..... max. 1.00
335 nm ..... max. 0.50
344 nm ..... max. 0.05
350-400 nm ..... max. 0.01
Titrable Acid (meq/g) ..... max. 0.0005
Filtered through a 0.2 micron filter.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 78-93-3 DENSITY: 1 L = 0.81 kg IMO: 3:1193
FLASH POINT: -9°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Glycol
See 1,2-Propanediol and Propylene Glycol

Methyl Isobutyl Ketone
AR (ACS)
(4-methyl-2-pentanone)

6247-04	Glass	500 mL	gs	60.35	
		12 x 500 mL	gs	48.75	585.00
6247-08	Glass	4 L	gs	272.15	
		4 x 4 L	gs	219.90	879.60
6247-19	Steel Pail	20 L	sb	451.95	

$CH_3COCH_2CH(CH_3)_2$ FW: 100.16

Meets ACS Specifications
Assay ($CH_3COCH_2CH(CH_3)_2$) (by GC, corrected for water) ..... min. 98.5%
Color (APHA) ..... max. 15
Residue after Evaporation ..... max. 0.005%
Titrable Acid (meq/g) ..... max. 0.002
Water (H_2O) ..... max. 0.1%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 108-10-1 DENSITY: 1 L = 0.80 kg IMO: 3:1245
FLASH POINT: 14°C

Solvent Spill Cleanup Products available. See pp. 378.

Methyl Isobutyl Ketone

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methyl Isobutyl Ketone
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

5923-08	Glass	4 L	sp	245.60	
		4 x 4 L	sp	167.05	668.20

$CH_3COCH_2CH(CH_3)_2$ FW: 100.16

Meets ACS Specifications

Color ..... max. 15
Assay ($CH_3COCH_2CH(CH_3)_2$) (by GC, corrected for water) ..... min. 99%
Residue after Evaporation ..... max. 5 ppm
Titrable Acid (meq/g) ..... max. 0.002
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.08%
Optical Absorbance (1-cm path vs water):
335 nm ..... max. 1.00
340 nm ..... max. 0.50
350 nm ..... max. 0.25
360 nm ..... max. 0.15
400 nm ..... max. 0.01
Filtered through a 0.2 micron filter.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 108-10-1 DENSITY: 1 L = 0.80 kg IMO: 3:1245
FLASH POINT: 14°C

Solvent Spill Cleanup Products available. See pp. 378.

4-Methyl-2-Pentanone
See Methyl Isobutyl Ketone

2-Methyl-1-Propanol
See Isobutyl Alcohol

2-Methyl-2-Propanol
See tert-Butyl Alcohol

N-Methyl-2-Pyrrolidinone
See NMP

Methyl Red, Water Soluble
AR (ACS)

2578-55	Glass	25 g	gd	290.25	

$(CH_3)_2NC_6H_4N{:}NC_6H_4COONa$ FW: 291.29

Meets ACS Specifications

Clarity of Alcohol Solution ..... Passes Test
Clarity of Aqueous Solution ..... Passes Test
Visual Transition Interval:
pH ..... (Pink) 4.2
pH ..... (Yellow) 6.2
Product Information (not specifications):
Appearance (dull, orange-brown powder or crystals)

CAS: 845-10-3

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Methyl Salicylate
NF, FCC
(synthetic oil of wintergreen)

2064-04	Glass	500 mL	fg	104.50	
		12 x 500 mL	fg	83.60	1003.20
2064-08	Glass	4 L	fg	411.25	
		4 x 4 L	fg	329.00	1316.00

$2\text{-}HOC_6H_4COOCH_3$ FW: 152.15

Meets NF & FCC Requirements

Assay ($2\text{-}HOC_6H_4COOCH_3$) 98.0-100.5%
Appearance (clear, colorless liquid) ..... Passes Test
Identification (NF) ..... Passes Test
Identification (FCC) ..... Passes Test
Heavy Metals (as Pb) ..... max. 20 ppm
Acid Value ..... max. 1.0
Angular Rotation (optically inactive)
(synthetic methyl salicylate) ..... Passes Test
Refractive Index, η^{20}_D 1.535-1.538
Specific Gravity at 25°/25°C 1.180-1.185
Solubility in 70% Alcohol ..... Passes Test

CAS: 119-36-8 DENSITY: 1 L = 1.180-1.185 kg IMO: 9:3082
FLASH POINT: 96°C

Methyl Sulfoxide
See Dimethyl Sulfoxide

MIBK
See Methyl Isobutyl Ketone

Milk Sugar
See Lactose

Mineral Oil, White, Heavy
USP
(paraffin oil, liquid petrolatum)
Contains Vitamin E as a stabilizer in the range of 10-20 ppm

6357-04	Glass	500 mL	fg	41.40	
		12 x 500 mL	fg	33.10	397.20
6357-10	Glass	4 L	fg	246.85	
		4 x 4 L	fg	197.45	789.80
6357-19	Steel Pail	20 L	bs	Inquire	

Meets USP Requirements

Acidity ..... Passes Test
Limit of Polycyclic Aromatic Hydrocarbons ..... Passes Test
Limit of Sulfur Compounds ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Specific Gravity at 25°/25°C 0.845-0.905
Viscosity at 40 °C, cSt 34.5-150.0
Readily Carbonizable Substances ..... Passes Test
Solid Paraffin ..... Passes Test
Product Information (not specifications):
Appearance (colorless, transparent oily liquid)

CAS: 8012-95-1 FLASH POINT: 135°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Mineral Oil, White, Light

cGMP

NF
(paraffin oil, liquid petrolatum)
Vitamin E (10-20 ppm) is added as a stabilizer

6358-04	Glass	500 mL	fg	41.95	
		12 x 500 mL	fg	33.55	402.60
6358-10	Glass	4 L	fg	247.10	
		4 x 4 L	fg	197.65	790.60
6358-19	Steel Pail	20 L	bs	Inquire	

Meets NF Requirements

Specific Gravity at 25°/25°C 0.818-0.880
Viscosity at 40 °C, cSt 3.0-34.4
Readily Carbonizable Substances .....Passes Test
Solid Paraffin .....Passes Test
Acidity .....Passes Test
Limit of Polycyclic Aromatic Hydrocarbons .....Passes Test
Limit of Sulfur Compounds .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test

Product Information (not specifications):
Appearance (colorless, transparent oily liquid)

CAS: 8012-95-1 FLASH POINT: 135°C

Molecular Sieves, Grade 514 (4 Angstroms) (8-12 Mesh)

4494-04	POLYSTORMOR	500 g	gd	109.45	
		6 x 500 g	gd	87.55	525.30
4494-20	Lined Fiber Dr	12 kg	sd	1001.15	

CAS: 1344-00-9

Molecular Sieves, Grade 564 (3 Angstroms) (8-12 Mesh)

4490-04	POLYSTORMOR	500 g	gd	108.20	
		6 x 500 g	gd	86.55	519.30

CAS: 55465-40-2

Monochlorobenzene

See Chlorobenzene

Morpholine

AR (ACS)

1884-08	Glass	4 L	gs	453.70	
		4 x 4 L	gs	366.60	1466.40

C_4H_9NO FW: 87.12

Meets ACS Specifications

Assay (C_4H_9NO) .....min. 99.0%
Color (APHA) .....max. 15

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Boiling Range .....126.0-130.0 °C.
Appearance (clear, colorless viscous liquid) .....Passes Test

CAS: 110-91-8 DENSITY: 1 L = 1.0 kg IMO: 8:2054
FLASH POINT: 38°C

Solvent Spill Cleanup Products available. See pp. 378.

Murexide

5971-53	Glass	5 g	so	74.60	

$C_8H_8N_6O_6$ FW: 284.19

Loss on Drying .....max. 1%
Sensitivity .....Passes Test

Product Information (not specifications):
Appearance (purple-red to reddish brown powder)

CAS: 3051-09-0

Muriatic Acid

See Hydrochloric Acid, 30%

Nadone

See Cyclohexanone

Naphtha

See Petroleum Ether

p-Naphtholbenzein

OR

E121-54	Glass	10 g	so	126.15	

4-$HOC_{10}H_6C(C_6H_5)$:$C_{10}H_6$-4-:O FW: 374.44

Solubility .....Passes Test
Identification (by IR) .....Passes Test
Visual Transition Interval:
pH .....(Orange) 8.2
pH .....(Blue) 10.0

Product Information (not specifications):
Appearance (brownish-red powder)

CAS: 145-50-6

Natural Black 1

See Hematoxylin

NBS

See N-Bromosuccinimide

Nessler Reagent

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nessler Reagent
StandARd
(For Ammonia Nitrogen)

H261-01		100 mL	st	19.00	
H261-07	Poly	4 L	st	258.85	

Suitability ..... Passes Test
Product Information (not specifications):
Appearance (colorless to clear, slightly yellow solution)
DENSITY: 1 L = 1.2 kg IMO: 6.1:3289

Neutral Red
Certified OR
Certified for Use in Supravital Staining (C.I. 50040)

E063-03	Glass	25 g	so	48.25	

$C_{15}H_{16}N_4$·HCL FW: 288.78

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 50% C_2H_5OH and 0.005% CH_3COOH, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test
CAS: 553-24-2 MERCK INDEX: 13,6512

New Methylene Blue N, Brecher Formula
Certified OR
(5.0 g/L New Methylene Blue N, 16.0 g/L potassium oxalate, monohydrate in water)
For Reticulocyte Staining

E069-01	Poly	500 mL	so	54.60	

Absorbance of a 1:500 Water Solution (10-mm path vs Water):
632 nm 0.45-0.72
285 nm 0.30-0.45
Reticulocyte Staining Characteristics ..... Passes Test
DENSITY: 1 L = 1.10 kg

Nickel Chloride, 6-Hydrate, Crystal
AR

6376-20	STAKMOR	12 kg	bs	Inquire	

$NiCl_2$·$6H_2O$ FW: 237.70

Copper (Cu) ..... max. 0.002%
Cobalt (Co) ..... max. 0.2%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.002%
Solubility (20 in 150) ..... Passes Test
Lead (Pb) ..... max. 0.005%
Substances not Precipitated by $(NH_4)_2S$ ..... max. 0.20%
Sulfate (SO_4) ..... max. 0.005%
Product Information (not specifications):
Appearance (light green crystals)
CAS: 7791-20-0 IMO: 6.1:2811

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nickel Sulfate, 6-Hydrate, Powder
AR (ACS)

6400-02	Glass	125 g	gd	67.10	
		12 x 125 g	gd	53.65	643.80
6400-12	Glass	500 g	gd	199.85	
		4 x 500 g	gd	159.85	639.40
6400-20	STAKMOR	12 kg	bs	Inquire	

$NiSO_4$·$6H_2O$ FW: 262.84

Meets ACS Specifications
Assay ($NiSO_4$·$6H_2O$) (by EDTA titrn) 98.0-102.0%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Cobalt (Co) ..... max. 0.002%
Copper (Cu) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.005%
Manganese (Mn) ..... max. 0.002%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Product Information (not specifications):
Appearance (dark blue-green crystalline powder)
CAS: 10101-97-0 IMO: 9:3077

Nitric Acid
AR (ACS)

2704-14	Glass	500 mL	ra	78.30	
		6 x 500 mL	ra	46.05	276.30
2704-13	Glass	6 x 500 mL	ra	75.60	453.60
2704-48	Glass S/S	6 x 2.5 L	ra	92.00	552.00
2704-46	Glass	2.5 L	ra	84.40	
		6 x 2.5 L	ra	49.65	297.90
2704-44	Glass	4 x 2.5 L	ra	54.00	216.00
2704-23	Glass Carboy	75 lb	bp	Inquire	

HNO_3 FW: 63.01

Meets ACS Specifications
Appearance ..... Passes Test
Assay (HNO_3) 68.0-70.0%
Color (APHA) ..... max. 10
Heavy Metals (as Pb) ..... max. 0.2 ppm
Residue after Ignition ..... max. 5 ppm
Sulfate (SO_4) ..... max. 1 ppm
Trace Impurities (in ppm):
Aluminum (Al) ..... max. 0.1
Arsenic (As) ..... max. 0.01
Chromium (Cr) ..... max. 0.1
Chloride (Cl) ..... max. 0.5
Iron (Fe) ..... max. 0.2
Nickel (Ni) ..... max. 0.03
Titanium (Ti) ..... max. 0.3
CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
1409-04	SAFEMOR	500 mL	ra	81.55	
		6 x 500 mL	ra	47.95	287.70
1409-46	SAFEMOR	2.5 L	ra	96.40	
		6 x 2.5 L	ra	56.70	340.20

HNO_3 FW: 63.01

Meets ACS Specifications

Appearance ..... Passes Test
Assay (HNO_3) (by acidimetry) 68.0-70.0%
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 5 ppm
Chloride (Cl) ..... max. 0.5 ppm
Sulfate (SO_4) ..... max. 1 ppm
Arsenic (As) ..... max. 0.01 ppm
Heavy Metals (as Pb) ..... max. 0.2 ppm
Iron (Fe) ..... max. 0.2 ppm

CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid
AR Select (ACS)
For Trace Element Analysis

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
6623-14	Glass	500 mL	as	93.75	
		6 x 500 mL	as	58.60	351.60
6623-46	SAFEMOR	2.5 L	as	121.25	
		6 x 2.5 L	as	75.80	454.80

HNO_3 FW: 63.01

Meets ACS Specifications

Assay (HNO_3) 68.0-70.0%
Appearance ..... Passes Test
Color (APHA) ..... max. 10
Arsenic (As) ..... max. 0.01 ppm
Arsenic and Antimony (as As) ..... max. 0.005 ppm
Chloride (Cl) ..... max. 0.04 ppm
Heavy Metals (as Pb) ..... max. 0.05 ppm
Residue after Ignition ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.4 ppm

Trace Impurities (in ppb):
Determined by Flame Photometry & ICP

Aluminum (Al) ..... max. 50
Barium (Ba) ..... max. 1
Beryllium (Be) ..... max. 1
Bismuth (Bi) ..... max. 10
Boron (B) ..... max. 10
Cadmium (Cd) ..... max. 1
* Calcium (Ca) ..... max. 200
Chromium (Cr) ..... max. 10
Cobalt (Co) ..... max. 5
Copper (Cu) ..... max. 1
Gallium (Ga) ..... max. 20
Germanium (Ge) ..... max. 10
Gold (Au) ..... max. 10
Iron (Fe) ..... max. 40
Lead (Pb) ..... max. 1
Lithium (Li) ..... max. 5
Magnesium (Mg) ..... max. 10
Manganese (Mn) ..... max. 1
Mercury (Hg) ..... max. 1
Molybdenum (Mo) ..... max. 5
Nickel (Ni) ..... max. 5
Potassium (K) ..... max. 20
* Silicon (Si) ..... max. 50
Silver (Ag) ..... max. 5
* Sodium (Na) ..... max. 500
Strontium (Sr) ..... max. 1
Thallium (Tl) ..... max. 20
Tin (Sn) ..... max. 10
Vanadium (V) ..... max. 1
Zinc (Zn) ..... max. 5
Zirconium (Zr) ..... max. 10

* May change over time due to extraction from glass container.

CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid
AR Select Plus

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
V077-04	Glass	500 mL	as	124.90	
		6 x 500 mL	as	78.05	468.30
V077-46	SAFEMOR	4 x 2.5 L	as	Inquire	

HNO_3 FW: 63.01

Assay (HNO_3) (by acidimetry) 68-70%

Trace Impurities (in ppb):

Aluminum (Al) ..... Actual Value Reported
Antimony (Sb) ..... max. 0.5
Arsenic (As) ..... max. 0.5
Barium (Ba) ..... max. 0.5
Beryllium (Be) ..... max. 0.5
Bismuth (Bi) ..... max. 0.5
Cadmium (Cd) ..... max. 0.5
Calcium (Ca) ..... Actual Value Reported
Cerium (Ce) ..... max. 0.5
Cesium (Cs) ..... max. 0.5
Chromium (Cr) ..... max. 0.5
Cobalt (Co) ..... max. 0.5
Copper (Cu) ..... max. 0.5
Gallium (Ga) ..... max. 0.5
Germanium (Ge) ..... max. 0.5
Gold (Au) ..... max. 0.5
Indium (In) ..... max. 0.5
Iron (Fe) ..... max. 5.0
Lead (Pb) ..... max. 0.5
Lithium (Li) ..... max. 0.5
Magnesium (Mg) ..... Actual Value Reported
Manganese (Mn) ..... max. 0.5
Mercury (Hg) ..... max. 0.5
Molybdenum (Mo) ..... max. 0.5
Nickel (Ni) ..... max. 0.5
Niobium (Nb) ..... max. 0.5
Palladium (Pd) ..... max. 0.5
Platinum (Pt) ..... max. 0.5
Potassium (K) ..... Actual Value Reported
Rhodium (Rh) ..... max. 0.5
Rubidium (Rb) ..... max. 0.5
Selenium (Se) ..... Actual Value Reported
Silver (Ag) ..... max. 0.5
Sodium (Na) ..... Actual Value Reported
Strontium (Sr) ..... max. 0.5
Thallium (Tl) ..... max. 0.5

Nitric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Thorium (Th)					max. 0.5
Tin (Sn)					max. 0.5
Titanium (Ti)					max. 0.5
Tungsten (W)					max. 0.5
Uranium (U)					max. 0.5
Vanadium (V)					max. 0.5
Yttrium (Y)					max. 0.5
Zinc (Zn)					max. 0.5
Zirconium (Zr)					max. 0.5

Actual Concentrations of Al, Ca, K, Mg, Na may change over time.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7697-37-2 DENSITY: 1 L = 1.41 kg IMO: 8:2031

Acid Spill Cleanup Products available. See pp. 378.

Nitric Acid, 10%
StandARd

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
H262-01	Glass	500 mL	st	31.30	
H262-43	Glass	2.5 L	st	78.05	

Assay (HNO_3)(g/100 mL) 9.5-10.5
Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7697-37-2 DENSITY: 1 L = 1.054 kg IMO: 8:2031

Nitric Acid, Fuming
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2713-14		500 mL	ra	377.35	
2713-41		2.5 L	ra	462.75	

HNO_3 FW: 63.01

Meets ACS Specifications
Assay (HNO_3) (by acidimetry) ..... min. 90.0%
Dilution Test ..... Passes Test
Residue after Ignition ..... max. 0.002%
Dissolved Oxides (as N_2O_3) ..... max. 0.1%
Chloride (Cl) ..... max. 0.7 ppm
Sulfate (SO_4) ..... max. 5 ppm
Arsenic (As) ..... max. 0.3 ppm
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 2 ppm
Product Information (not specifications):
Appearance (colorless to slightly yellow-brown solution)

CAS: 7697-37-2 DENSITY: 1 L = 1.5 kg IMO: 8:2031

Product is a poison inhalation hazard, an oxidizer, corrosive, and toxic. For your safety, packaging includes a poly coated bottle in a steel or HDPE container over-packed with a HDPE pail.

2,2,2-Nitrilotriethanol
OR
(triethanolamine)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
1908-61		1 kg	so	94.10	

$(HOCH_2CH_2)_3N$ FW: 149.19

Color (APHA) ..... max. 100
Specific Gravity at 25°/25°C 1.122-1.125
Product Information (not specifications):
Appearance (hygroscopic, viscous liquid turning brown on exposure to air)

CAS: 102-71-6 DENSITY: 1 L = 1.13 kg FLASH POINT: 179°C

Nitrobenzene
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
6410-04	Glass	500 mL	gs	68.55	
		12 x 500 mL	gs	55.40	664.80

$C_6H_5NO_2$ FW: 123.11

Meets ACS Specifications
Assay ($C_6H_5NO_2$) (by GC, corrected for water) ..... min. 99.0%
Residue after Evaporation ..... max. 0.005%
Water-Soluble Titrable Acid (meq/g) ..... max. 0.0005
Chloride (Cl) ..... max. 5 ppm
Product Information (not specifications):
Appearance (colorless to yellow, oily liquid)

CAS: 98-95-3 DENSITY: 1 L = 1.20 kg IMO: 6.1:1662
FLASH POINT: 88°C

Nitrobenzol
See Nitrobenzene

Nitroblue Tetrazolium
OR

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
H265-52	Glass	1 g	so	129.80	

$C_{40}H_{30}Cl_2N_{10}O_6$ FW: 867.80

Assay ($C_{40}H_{30}Cl_2N_{10}O_6$) ..... min. 90.0%
Infrared Spectrum ..... Conforms to Reference Standard
Product Information (not specifications):
Appearance (fine yellow powder)

CAS: 298-83-9

See Drug Development and Manufacturing section for more information about scale up and process chromatography products on pages 64-86.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Nitromethane
OR

1911-59	Glass S/S	500 g	so	63.50	

CH_3NO_2 FW: 61.04

Color (APHA) .....max. 25
Identification .....Passes Test
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Product Information (not specifications):
Appearance (clear, colorless to pale yellow solution)

CAS: 75-52-5 DENSITY: 1 L = 1.14 kg IMO: 3:1261
FLASH POINT: 35°C

Solvent Spill Cleanup Products available. See pp. 378.

p-Nitrophenol
OR

1886-59	Glass	500 g	so	106.10	

$NO_2C_6H_4OH$ FW: 139.11

Infrared Spectrum .....Conforms to Reference Standard
Melting Range .....110-115 °C.
Product Information (not specifications):
Appearance (tan crystalline powder)

CAS: 100-02-7 IMO: 6.1:1663

NMP (N-Methyl-2-pyrrolidinone)
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

6392-08	Glass	4 L	sp	392.20	
		4 x 4 L	sp	266.80	1067.20

C_5H_9NO FW: 99.13

Assay (C_5H_9NO) .....min. 99.0%
Trace Impurities (in ppm):
Chloride (Cl) .....max. 1
Color (APHA) .....max. 50
Free Amines (as CH_3NH_2) .....max. 0.01%
Residue after Ignition .....max. 5 ppm
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Ultraviolet Absorbance (1.00-cm cell vs. water):
400 nm .....max. 0.01
350 nm .....max. 0.03
300 nm .....max. 0.20
285 nm .....max. 0.40
275 nm .....max. 1.00
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 872-50-4 DENSITY: 1 L = 1.03 kg FLASH POINT: 93°C

Solvent Spill Cleanup Products available. See pp. 378.

Octadecanoic Acid
See Stearic Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Octane, 99+%
OR

2617-59	Glass	500 g	so	198.55	

$CH_3(CH_2)_6CH_3$ FW: 114.23

Assay ($CH_3(CH_2)_6CH_3$) (by GC) .....min. 99%
Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 111-65-9 DENSITY: 1 L = 0.7 kg IMO: 3:1262
FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

iso-Octane
See Trimethylpentane

1-Octanesulfonic Acid, Sodium Salt, Monohydrate
OR

H165-56	Glass	50 g	so	459.60	

$CH_3(CH_2)_7SO_3Na{\cdot}H_2O$ FW: 234.28

Assay ($CH_3(CH_2)_7SO_3Na{\cdot}H_2O$) .....min. 98.0%
Solubility .....Passes Test
Optical Density at 210 nm (au) .....max. 0.05
Product Information (not specifications):
Appearance (white, crystalline powder)

CAS: 5324-84-5

Octyl Phenol Ethoxylate
OR

H282-01	Glass S/S	500 mL	so	96.05	

Color (APHA) .....max. 100
pH of 5% Solution at 25°C 5.0-8.0
Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (clear, colorless liquid)

DENSITY: 1 L = 1.067 kg FLASH POINT: 251°C

Oil of Vitriol
See Sulfuric Acid

Oil of Wintergreen
See Methyl Salicylate

Orange G Certified
OR

2619-55	Glass	25 g	so	69.85	

$C_6H_5N{:}NC_{10}H_4(OH)(SO_3Na)_2$ FW: 452.38

Certified by the Biological Stain Commission.

CAS: 1936-15-8

Orthoboric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Orthoboric Acid
See Boric Acid

Orthophosphoric Acid
See Phosphoric Acid

Oxalic Acid, Dihydrate, Crystal
AR (ACS)

2752-20	STAKMOR	12 kg	bs	Inquire	

$H_2C_2O_4 \cdot 2H_2O$ FW: 126.07

Meets ACS Specifications

Assay ($H_2C_2O_4 \cdot 2H_2O$) 99.5-102.5%
Calcium (Ca) .....max. 0.001%
Chloride (Cl) .....max. 0.002%
Heavy Metals (as Pb) .....max. 0.0005%
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.0002%
Nitrogen Compounds (as N) .....max. 0.001%
Residue after Ignition .....max. 0.01%
Solubility .....Passes Test
Substances Darkened by Hot H_2SO_4 .....Passes Test
Sulfate (SO_4) .....max. 0.005%
Product Information (not specifications):
Appearance (white or fine, colorless transparent crystals)

CAS: 6153-56-6 IMO: 8:3261

Oxalic Acid, 10% (w/v) Aqueous (APHA)
StandARd
For Silica

H281-05	Poly	1 L	st	50.20	

Assay ($H_2C_2O_4 \cdot 2H_2O$)(g/100 mL) 9.5-10.5
Product Information (not specifications):
Appearance (clear, colorless solution)

IMO: 8:3265

Acid Spill Cleanup Products available. See pp. 378.

Oxammonium Hydrochloride
See Hydroxylamine Hydrochloride

Paraffin Oil
See Mineral Oil

Paraformaldehyde
OR

2621-59	Glass	500 g	so	66.05	

$(CH_2O)n$

Identification .....Passes Test
Product Information (not specifications):
Appearance (fine, white powder or prill)

CAS: 30525-89-4 IMO: 4.1:2213 FLASH POINT: 70°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Parlodion, Strips
Purified
(Pyroxylin Purified)

6552-01	Glass	125 g	ur	535.30	
6552-12	Glass	500 g	ur	2450.75	
		4 x 500 g	ur	1960.60	7842.40

Solubility .....Passes Test
Free Acid .....Passes Test
Ash (w/w) .....max. 0.50%
Urea .....Actual Value Reported
Product Information (not specifications):
Appearance (thin, transparent, colorless to pale yellow strips)

CAS: 9004-70-0 IMO: 4.1:2557 FLASH POINT: 13°C

Pear Oil
See Isoamyl Acetate

Pentane
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V557-10	Glass	4 L	sp	206.90	
		4 x 4 L	sp	140.75	563.00

$CH_3(CH_2)_3CH_3$ FW: 72.15

Assay (as n-pentane) (by GC) .....min. 98.0%
Assay (total C_5 isomers) .....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0001%
Water (H_2O)(by KF, coulometric) .....max. 0.01%
Optical Absorbance (1-cm path vs water):
190 nm .....max. 1.0
210 nm .....max. 0.25
220 nm .....max. 0.05
250 nm .....max. 0.01
270-400 nm .....max. 0.005
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) .....max. 5
Neat Solvent Front Characterization .....Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 109-66-0 DENSITY: 1 L = 0.63 kg IMO: 3:1265
FLASH POINT: -49°C

Solvent Spill Cleanup Products available. See pp. 378.

See Histopathology section for more information about stains and buffers, starting on page 87.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Pentane
OR

1916-59		500 g	so	38.65	

$CH_3(CH_2)_3CH_3$ FW: 72.15

Refractive Index, η^{20}_D ..... Passes Test

Product Information (not specifications):

Appearance (clear, colorless liquid)

CAS: 109-66-0 DENSITY: 1 L = 0.63 kg IMO: 3:1265

FLASH POINT: -49°C

Solvent Spill Cleanup Products available. See pp. 378.

1-Pentanol
See Amyl Alcohol

Pentyl Alcohol
See Amyl Alcohol

Pepsin
OR

2629-57	Glass	100 g	so	70.00	

Activity (units/mg) ..... min. 3000
Identification ..... Passes Test
pH of (1 in 50) Aqueous Solution ..... Passes Test

Product Information (not specifications):

Appearance (yellowish-white powder or lustrous transparent scales)

CAS: 9001-75-6

Perchloric Acid, 70%
AR (ACS)

2766-14	Glass	500 mL	ra	178.50	
		6 x 500 mL	ra	105.00	630.00
2766-44	Glass	2.5 L	ra	378.50	
		4 x 2.5 L	ra	222.65	890.60

$HClO_4$ FW: 100.46

Meets ACS Specifications

Assay ($HClO_4$) 69.0-72.0%
Appearance (clear, colorless solution) ..... Passes Test
Chloride (Cl) ..... max. 0.001%
Color (APHA) ..... max. 10
Heavy Metals (as Pb) ..... max. 0.0001%
Iron (Fe) ..... max. 0.0001%
Nitrogen Compounds (as N) ..... max. 0.001%
Residue after Ignition ..... max. 0.003%
Silicate and Phosphate (as SiO_2) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.001%

CAS: 7601-90-3 IMO: 5.1:1873

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Perchloric Acid, 70%
AR (ACS)

3999-46	Poly Coated	2.5 L	ra	403.40	
		6 x 2.5 L	ra	237.30	1423.80

$HClO_4$ FW: 100.46

Meets ACS Specifications

Assay ($HClO_4$) 69.0-72.0%
Appearance (clear, colorless solution) ..... Passes Test
Chloride (Cl) ..... max. 0.001%
Color (APHA) ..... max. 10
Heavy Metals (as Pb) ..... max. 0.0001%
Iron (Fe) ..... max. 0.0001%
Nitrogen Compounds (as N) ..... max. 0.001%
Residue after Ignition ..... max. 0.003%
Silicate and Phosphate (as SiO_2) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.001%

CAS: 7601-90-3 IMO: 5.1:1873

Acid Spill Cleanup Products available. See pp. 378.

Perchloric Acid, 70%
AR Select (ACS)
For Trace Element Analysis

8828-14	Glass	500 mL	as	227.90	
		6 x 500 mL	as	142.45	854.70

$HClO_4$ FW: 100.46

Meets ACS Specifications

Assay ($HClO_4$) 69.0-72.0%
Chloride (Cl) ..... max. 0.001%
Color (APHA) ..... max. 10
Heavy Metals (as Pb) ..... max. 0.0001%
Nitrogen Compounds (as N) ..... max. 0.001%
Residue after Ignition ..... max. 0.003%
Silicate and Phosphate (as SiO_2) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.001%
Trace Impurities (in ppb): ..... Passes Test

Determined by Flame Photometry & ICP

Aluminum (Al) ..... max. 100
Barium (Ba) ..... max. 100
Beryllium (Be) ..... max. 10
Bismuth (Bi) ..... max. 10
Boron (B) ..... max. 1000
Cadmium (Cd) ..... max. 50
Calcium (Ca) ..... max. 1000
Chromium (Cr) ..... max. 100
Cobalt (Co) ..... max. 50
Copper (Cu) ..... max. 100
Gallium (Ga) ..... max. 500
Germanium (Ge) ..... max. 500
Gold (Au) ..... max. 500
Iron (Fe) ..... max. 100
Lead (Pb) ..... max. 100
Lithium (Li) ..... max. 500
Magnesium (Mg) ..... max. 100
Manganese (Mn) ..... max. 50
Mercury (Hg) ..... max. 100
Molybdenum (Mo) ..... max. 10
Nickel (Ni) ..... max. 100
Potassium (K) ..... max. 500
Silicon (Si) ..... max. 500

Perchloric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silver (Ag) ..... max. 100
Sodium (Na) ..... max. 1000
Strontium (Sr) ..... max. 100
Thallium (Tl) ..... max. 50
Tin (Sn) ..... max. 500
Vanadium (V) ..... max. 10
Zinc (Zn) ..... max. 100
Zirconium (Zr) ..... max. 10

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7601-90-3 IMO: 5.1:1873

Acid Spill Cleanup Products available. See pp. 378.

Perchloric Acid, 60%
AR (ACS)

2764-14	Glass	500 mL	ra	171.30	
		6 x 500 mL	ra	100.75	604.50
2764-48	Deal-AR-Pak	6 x 2.5 L	ra	372.75	2236.50

$HClO_4$ FW: 100.46

Meets ACS Specifications

Assay ($HClO_4$) 60.0-62.0%
Appearance (clear, colorless solution) ..... Passes Test
Chloride (Cl) ..... max. 0.001%
Color (APHA) ..... max. 10
Heavy Metals (as Pb) ..... max. 0.0001%
Iron (Fe) ..... max. 0.0001%
Nitrogen Compounds (as N) ..... max. 0.001%
Residue after Ignition ..... max. 0.003%
Silicate and Phosphate (as SiO_2) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.001%

CAS: 7601-90-3 IMO: 5.1:1873

Acid Spill Cleanup Products available. See pp. 378.

Perchloric Acid, 0.10 Normal (in Glacial Acetic Acid) Volumetric Solution
StandARd

H301-05	Glass	1 L	st	87.90	
H301-07	Glass	4 L	st	248.55	

Normality 0.0995-0.1005

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7601-90-3 DENSITY: 1 L = 1.05 kg IMO: 8:2920
FLASH POINT: 40°C

Acid Spill Cleanup Products available. See pp. 378.

Perchloroethylene
See Tetrachloroethylene

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Periodic Acid, Dihydrate
AR

E422-55	Glass	25 g	so	64.70	
E422-57	Glass	100 g	so	137.25	
E422-59	Glass	500 g	so	625.65	

$HIO_4 \cdot 2H_2O$ FW: 227.94

Assay ($HIO_4 \cdot 2H_2O$) ..... min. 99.0%
Heavy Metals (as Pb) ..... max. 0.005%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.003%
Halogens (as Cl) ..... max. 0.01%
Residue on Ignition ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.01%

Product Information (not specifications):
Appearance (white to pale yellow crystals)

CAS: 10450-60-9 IMO: 5.1:3085

Acid Spill Cleanup Products available. See pp. 378.

Petroleum Benzin
See Petroleum Ether

Petroleum Ether, 35°-60°C
AR (ACS)
(ligroin)

4980-04	Glass	500 mL	gs	38.50	
		12 x 500 mL	gs	31.10	373.20
4980-08	Glass	4 L	gs	126.85	
		4 x 4 L	gs	102.50	410.00
4980-19	Steel Pail	20 L	sb	289.85	
4980-26	Steel Drum	200 L	bp	Inquire	

Meets ACS Specifications

Acidity ..... Passes Test
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.001%
Boiling Range ..... 35-60 °C.
Appearance and Color ..... Passes Test

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg IMO: 3:1268
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Petroleum Ether, 35°-60°C
AR (ACS)
(ligroin)

4971-04	AR-CAN	950 mL	gs	59.45	
		6 x 950 mL	gs	48.05	288.30

Meets ACS Specifications

Acidity ..... Passes Test
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.001%
Boiling Range ..... 35-60 °C.
Appearance and Color ..... Passes Test

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg IMO: 3:1268
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Petroleum Ether, 35°-60°C
AR (ACS)
(ligroin)

4983-10	SAFEMOR	4 L	gs	137.85	
		4 x 4 L	gs	111.40	445.60

Meets ACS Specifications

Acidity .....Passes Test
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Boiling Range .....35-60 °C.
Appearance and Color .....Passes Test

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg IMO: 3:1268
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Petroleum Ether, 35°-60°C
UltimAR
Suitable for Extraction Concentration

H489-06	Glass	1 L	sp	61.40	
		6 x 1 L	sp	41.75	250.50
H489-10	Glass	4 L	sp	132.70	
		4 x 4 L	sp	90.25	361.00

Meets ACS Specifications for General Use

Acidity .....Passes Test
Boiling Range .....35-60 °C.
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0001%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.02%
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ....max. 5
Sum of the Peaks (µg/L) .....max. 10
Neat Solvent Front Characterization .....Passes Test
Product Information (not specifications):
Appearance (clear liquid free from suspended foreign matter or sediment)

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg IMO: 3:1268
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Petroleum Ether, 35°-60°C
(ligroin)
For Fat Extraction

6128-19	Steel Pail	20 L	sb	264.35	

Boiling Range .....35-60 °C.
Stearin Residue Test (increase in weight in g) .....max. 0.003
Appearance and Color .....Passes Test
Odor .....Passes Test

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg IMO: 3:1268
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

Petroleum Ether, 30°-75°C
AR
(ligroin)

4976-08	Glass	4 L	gs	136.25	
		4 x 4 L	gs	110.10	440.40

Acidity .....Passes Test
Appearance and Color .....Passes Test
Residue after Evaporation .....max. 0.0010%
Sulfur Compounds (doctor test) .....Passes Test
Boiling Range .....30.0-75.0 °C.

CAS: 8032-32-4 DENSITY: 1 L = 0.60 kg IMO: 3:1268
FLASH POINT: -18°C

Solvent Spill Cleanup Products available. See pp. 378.

pH Buffers
See under BuffAR

1,10-Phenanthroline
OR

2631-55	Glass	25 g	so	107.70	

$C_{12}H_8N_2$ FW: 180.20

Melting Point .....114-117 °C.
Product Information (not specifications):
Appearance (yellow flakes)

CAS: 66-71-7

Phenethyl Alcohol, 99%
OR

2633-10		10 kg	so	1169.35	

$C_6H_5CH_2CH_2OH$ FW: 122.17

Assay ($C_6H_5CH_2CH_2OH$) (by GC) .....min. 98.5
Refractive Index, η^{20}_D 1.531-1.534
Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 60-12-8 DENSITY: 1 L = 1.02 kg IMO: 6.1:2810
FLASH POINT: 96°C

Phenol, Crystal
USP cGMP

0605-04	Glass	12 x 500 g	fg	77.05	924.60
0605-06	Poly Coated	2.5 kg	fg	357.45	
		4 x 2.5 kg	fg	285.95	1143.80

C_6H_5OH FW: 94.11

Meets USP Requirements

Assay (C_6H_5OH) (anhydrous basis) 99.0-100.5%
Appearance of Melted Sample .....Passes Test
Benzene .....max. 2 ppm

Phenol Liquefied

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity of Solution and Reaction ..... Passes Test
Congealing Temperature ..... min. 39 °C.
Nonvolatile Residue ..... max. 0.05%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.5%
Odor of Solution ..... Passes Test
Product Information (not specifications):
Appearance (colorless to light pink, crystalline mass)
Product contains about 20 ppm Citric Acid as a preservative.
Preserve in tight, light-resistant glass containers.

CAS: 108-95-2 IMO: 6.1:1671 FLASH POINT: 79°C

Phenol Liquefied
USP
Contains 20 ppm Citric Acid as a Stabilizer
cGMP

0610-04	Glass	12 x 500 g	fg	94.00	1128.00
0610-06	Glass	2.5 kg	fg	400.90	
		4 x 2.5 kg	fg	320.70	1282.80
0610-22	Glass Carboy	50 lb	bp	Inquire	

C_6H_5OH FW: 94.11

Meets USP Requirements
Assay (C_6H_5OH) ..... min. 89.0%
Benzene ..... max. 2 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity of Solution and Reaction ..... Passes Test
Nonvolatile Residue ..... max. 0.05%
Distilling Range:
Initial Temperature ..... Actual Value Reported
Final Temperature ..... max. 182.5 °C.
Stabilizer ..... Passes Test
Product Information (not specifications):
Appearance (colorless to slightly pink liquid)
Preserve in tight, light-resistant glass containers.

CAS: 108-95-2 DENSITY: 1 L = 1.06 kg IMO: 6.1:2821
FLASH POINT: 79°C

Phenol, Liquefied
USP
(Single Shipper, D.O.T. Approved)
cGMP

0221-03	Poison Pack	500 g	fg	175.95	

C_6H_5OH FW: 94.11

Meets USP Requirements
Assay (C_6H_5OH) ..... min. 89.0%
Benzene ..... max. 2 ppm
Boiling Temperature ..... max. 182.5 °C.
Clarity of Solution and Reaction ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Nonvolatile Residue ..... max. 0.05%
Stabilizer ..... Passes Test
Color Limit (at time of packaging) ..... Passes Test
Product Information (not specifications):
Appearance (colorless to slightly pink liquid)
Preserve in tight, light-resistant glass containers.

CAS: 108-95-2 DENSITY: 1 L = 1.06 kg IMO: 6.1:2821
FLASH POINT: 79°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phenol, Liquefied
AR
(Contains no Preservative)

0025-04	Glass	12 x 500 g	gd	67.05	804.60
0025-06	Glass	2.5 kg	gd	286.40	
		4 x 2.5 kg	gd	229.10	916.40

C_6H_5OH FW: 94.11

Congealing Point ..... 10.5-14.0 °C.
Nonvolatile Matter ..... max. 0.05%
Reaction ..... Passes Test
Solubility (5 in 75) ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless to yellow solution)
Preserve in tight, light-resistant glass containers.

CAS: 108-95-2 DENSITY: 1 L = 1.06 kg IMO: 6.1:2821
FLASH POINT: 79°C

Phenol, Loose Crystals
AR (ACS)

0028-04	Glass	12 x 500 g	gd	103.95	1247.40
0028-10	Glass	1.5 kg	gd	314.65	
		4 x 1.5 kg	gd	251.70	1006.80

C_6H_5OH FW: 94.11

Meets ACS Specifications
Assay (C_6H_5OH) ..... min. 99.0%
Appearance (white deliquescent crystals) ..... Passes Test
Clarity of Solution ..... Passes Test
Preservative (H_3PO_2) ..... Actual Value Reported
Residue after Evaporation ..... max. 0.05%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.5%
Freezing Point (dry basis) ..... min. 40.5 °C.

CAS: 108-95-2 IMO: 6.1:1671 FLASH POINT: 79°C

Phenol, Loose Crystals
AR (ACS)
(Single Shipper, D.O.T. Approved)

0273-03	Poison Pack	125 g	gd	124.65	

C_6H_5OH FW: 94.11

Meets ACS Specifications
Assay (C_6H_5OH) ..... min. 99.0%
Appearance (white deliquescent crystals) ..... Passes Test
Clarity of Solution ..... Passes Test
Preservative (H_3PO_2) ..... Actual Value Reported
Residue after Evaporation ..... max. 0.05%
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.5%
Freezing Point ..... min. 40.5 °C.
Product Information (not specifications):
Appearance (white deliquescent crystals)
Preserve in tight, light-resistant glass containers.

CAS: 108-95-2 IMO: 6.1:1671 FLASH POINT: 79°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phenol Solution (1 mL = 1 mg Phenol)
StandARd

H302-01	Glass	100 mL	st	14.90	

Concentration (0.8-1.2 mg/mL) ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless solution)
DENSITY: 1 L = 1.01 kg

Phenolphthalein, 1.0% in 95% Alcohol (APHA), pH 8.0-10.0
StandARd

H306-01	Glass	100 mL	st	13.60	
H306-05	Glass	1 L	st	54.70	

Visual Transition Interval:
pH ..... (Colorless) 8.0
pH ..... (Red) 10.0
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 77-09-8 DENSITY: 1 L = 0.8 kg IMO: 3:1170
FLASH POINT: 13°C

Phenolphthalein, 1.0% in 50% Alcohol
StandARd

H295-05	Glass	1 L	st	44.95	

Visual Transition Interval:
pH ..... (Colorless) 8.0
pH ..... (Red) 10.0
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 77-09-8 DENSITY: 1 L = 0.92 kg IMO: 3:1993
FLASH POINT: 13°C

Phenolphthalein, 0.5% in 50% Alcohol (APHA), pH 8.0-10.0
StandARd

H297-05	Glass	1 L	st	43.75	

Visual Transition Interval:
pH ..... (Colorless) 8.0
pH ..... (Pale Pink) 8.2
pH ..... (Pink) 8.6
pH ..... (Red) 10.0
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 77-09-8 DENSITY: 1 L = 0.8 kg IMO: 3:1170
FLASH POINT: 13°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Phenol Red, 0.04% (w/v) Aqueous, pH 6.8-8.2
StandARd

H308-03	Glass	500 mL	st	23.85	

$C_{19}H_{13}NaO_5S$ FW: 376.37

Visual Transition Interval:
pH ..... (Yellow) 6.8
pH ..... (Red) 8.2
Product Information (not specifications):
Appearance (clear, orange-yellow solution to clear, orange-red solution)
CAS: 34487-61-1 DENSITY: 1 L = 1.0 kg

Phenylamine
See Aniline

Phenyl Carbinol
See Benzyl Alcohol

Phenylmethane
See Toluene

Phenylmethanol
See Benzyl Alcohol

Phloxine B
Certified OR
Certified for Use in Histology (C.I. 45410)

E054-03	Glass	25 g	so	67.40	

$C_{20}H_2Br_4Cl_4Na_2O_5$ FW: 829.67

Certified by the Biological Stain Commission
Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 50% C_2H_5OH and 0.01% Na_2CO_3, 1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test
CAS: 18472-87-2

Phosphomolybdic Acid, Crystal
AR (ACS)

2772-02	POLYSTORMOR	125 g	gd	865.40	
		12 x 125 g	gd	692.30	8307.60

$H_3Mo_{12}O_{40}P \cdot xH_2O$

Meets ACS Specifications
Appearance (bright yellow granular crystals turning to bright yellow-green) ..... Passes Test
Ammonium (NH_4) ..... max. 0.01%
Calcium (Ca) ..... max. 0.02%
Chloride (Cl) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 0.005%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.025%
CAS: 11104-88-4 IMO: 8:1759

Phosphoric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Phosphoric Acid NF, FCC					cGMP
2788-14	Glass	500 mL	fa	111.20	
		6 x 500 mL	fa	88.95	533.70
2788-46	Glass	2.5 L	fa	159.10	
		6 x 2.5 L	fa	127.25	763.50
2788-26	Poly Drum	200 lb	bp	Inquire	
2788-27	Poly Drum	700 lb	bp	Inquire	

H_3PO_4 FW: 98.00

Meets NF & FCC Requirements

Assay (H_3PO_4) (by acidimetry) 85.0-88.0%
Alkali Phosphates ..... Passes Test
Arsenic (As) ..... max 3 mg/kg
Cadmium (Cd) ..... max 3 mg/kg
Color (APHA) ..... max. 10
Fluoride (F) ..... max 10 mg/kg
Heavy Metals (as Pb) ..... max. 10 ppm
Identification ..... Passes Test
Lead (Pb) ..... max 3 mg/kg
Nitrate (NO_3) ..... Passes Test
Phosphorous or Hypophosphorous Acid ..... Passes Test
Sulfate (SO_4) ..... Passes Test

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7664-38-2 DENSITY: 1 L = 1.69 kg IMO: 8:1805

Acid Spill Cleanup Products available. See pp. 378.

Phosphoric Acid, 85%
AR (ACS)

2796-05	Poly	500 mL	ur	50.85	
		12 x 500 mL	ur	40.65	487.80
2796-18	Glass	500 mL	ra	65.35	
		6 x 500 mL	ra	52.25	313.50
2796-46	Glass	2.5 L	ra	143.15	
		6 x 2.5 L	ra	84.20	505.20
2796-16	Poly	2.5 L	ur	70.35	
		6 x 2.5 L	ur	52.75	316.50
2796-45	Poly	4 L	ur	90.50	
		4 x 4 L	ur	72.40	289.60
2796-23	Glass Carboy	96 lb	bp	Inquire	
2796-27	Poly Drum	700 lb	bp	Inquire	

H_3PO_4 FW: 98.00

Meets ACS Specifications

Assay (as H_3PO_4) (by acidimetry) ..... min. 85.0%
Antimony (Sb) ..... max. 15 ppm
Arsenic (As) ..... max. 1 ppm
Calcium (Ca) ..... max. 0.002%
Chloride (Cl) ..... max. 3 ppm
Color (APHA) ..... max. 10
Heavy Metals (as Pb) ..... max. 10 ppm
Insoluble Matter ..... max. 0.001%
Iron (Fe) ..... max. 6 ppm
Magnesium (Mg) ..... max. 0.002%
Manganese (Mn) ..... max. 0.5 ppm
Nitrate (NO_3) ..... max. 5 ppm
Potassium (K) ..... max. 6 ppm
Reducing Substances (mL) ..... max. 1.0
Sodium (Na) ..... max. 10 ppm
Sulfate (SO_4) ..... max. 0.001%
Volatile Acids (as CH_3COOH) ..... max. 0.001%

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7664-38-2 DENSITY: 1 L = 1.69 kg IMO: 8:1805

Acid Spill Cleanup Products available. See pp. 378.

Phosphoric Acid, Meta
AR (ACS)
(vitreous sodium acid metaphosphate)

2816-04	POLYSTORMOR	500 g	gd	361.90	
		12 x 500 g	gd	289.50	3474.00
2816-06	Poly	2.5 kg	gd	1448.75	
		4 x 2.5 kg	gd	1159.00	4636.00

Meets ACS Specifications

Assay (HPO_3) 33.5-36.5%
Appearance (colorless, small glassy scales) ..... Passes Test
Stabilizer (as $NaPO_3$) 57.0-63.0%
Arsenic (As) ..... max. 0.0001%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.005%
Nitrate (NO_3) ..... max. 0.001%
Solubility ..... Passes Test
Substances Reducing Permanganate (as H_3PO_3) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.001%

CAS: 37267-86-0 IMO: 8:3260

Phosphotungstic Acid, n-Hydrate, Crystal
AR

2824-34	POLYSTORMOR	30 g	gd	103.80	
2824-02	POLYSTORMOR	125 g	gd	277.50	
		12 x 125 g	gd	222.00	2664.00
2824-04	POLYSTORMOR	500 g	gd	837.90	
		12 x 500 g	gd	670.30	8043.60

$P_2O_5 \cdot 24WO_3 \cdot nH_2O$

Solubility ..... Passes Test
Ammonium (NH_4) ..... max. 0.004%
Chloride (Cl) ..... max. 0.03%
Heavy Metals and Iron ..... Passes Test
Insoluble Matter ..... max. 0.02%
Nitrate (NO_3) ..... max. 0.004%
Sulfate (SO_4) ..... max. 0.02%

Product Information (not specifications):
Appearance (colorless to gray or slightly yellowish-green crystals)

CAS: 12067-99-1

Phthalic Acid Monopotassium Salt
See Potassium Phthalate

Pimelic Ketone
See Cyclohexanone

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Piperazine, Anhydrous
OR

2675-59	POLYSTORMOR	500 g	so	205.65	

$C_4H_{10}N_2$ FW: 86.14

Infrared Spectrum ..... Conforms to Reference Standard
Melting Point ..... 109-113 °C.
Product Information (not specifications):
Appearance (white flakes)

CAS: 110-85-0 IMO: 8:2579 FLASH POINT: 109°C

Platinum Chloride, Crystal
AR (ACS)

6672-16		1 g	rp	267.40	
6672-30	Glass	3.5 g	rp	711.85	
		4 x 3.5 g	rp	569.45	2277.80

$H_2PtCl_6 \cdot 6H_2O$ FW: 517.92

Meets ACS Specifications
Assay (Pt) ..... min. 37.50%
Alkalies and Other Salts (as SO_4) ..... max. 0.05%
Solubility in Alcohol ..... Passes Test
Suitability for Potassium Determination ..... Passes Test
Product Information (not specifications):
Appearance (orange-red crystals)

CAS: 18497-13-7 IMO: 8:2507

Platinum Cobalt Color Standard (APHA 500)
StandARd

H296-01	Glass	100 mL	rp	135.40	
H296-03	Glass	500 mL	rp	181.00	

Optical Absorbance (1-cm path vs water):
430 nm 0.110-0.120
455 nm 0.130-0.145
480 nm 0.105-0.120
510 nm 0.055-0.065
Product Information (not specifications):
Appearance (clear solution free from suspended matter)

DENSITY: 1 L = 1.0 kg IMO: 8:3264

Polyethylene Glycol 4000

H273-61	Glass	1 kg	so	129.20	

$(C_2H_4O)_n \cdot H_2O$

Color (APHA) ..... max. 25
Infrared Spectrum ..... Conforms to Reference Standard
Melting Range ..... 54-60 °C.
Product Information (not specifications):
Appearance (white powder or creamy-white flakes)

CAS: 25322-68-3

Polyethylene Glycol 8000

7755-61	Glass	1 kg	so	76.10	

$(C_2H_4O)_n \cdot H_2O$

Appearance ..... Passes Test
Viscosity, cSt 470-900
Average Molecular Weight 7000-9000

CAS: 25322-68-3

Polysorbate 80
NF
(polyoxyethylene (20) sorbitan monooleate)

7091-08	Glass	4 L	so	198.95	
		4 x 4 L	so	139.25	557.00

Meets NF Requirements
Appearance ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Specific Gravity at 25°/25°C 1.06-1.09
Viscosity at 25.0°C, cSt 300-500
Water (H_2O)(w/w) ..... max. 3.0%
Residue on Ignition ..... max. 0.25%
Heavy Metals (as Pb) ..... max. 0.001%
Acid Value ..... max. 2.2
Hydroxyl Value 65-80
Saponification Value 45-55
Reducing Substances ..... Passes Test

CAS: 9005-65-6 DENSITY: 1 L = 1.08 kg FLASH POINT: 148°C

Ponceau S

H312-55	Glass	25 g	so	87.35	

CAS: 6226-79-5

Potash Caustic
See Potassium Hydroxide

Potassium Acetate, Crystal
AR (ACS)

6700-04	POLYSTORMOR	500 g	gd	83.15	
		12 x 500 g	gd	66.50	798.00
6700-12	Poly	2.5 kg	gd	397.25	
		4 x 2.5 kg	gd	317.80	1271.20
6700-20	STAKMOR	12 kg	bs	Inquire	

CH_3COOK FW: 98.14

Meets ACS Specifications
Assay (CH_3COOK) ..... min. 99.0%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.0005%

Potassium Acetate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium (Mg) .....max. 0.002%
pH of 5% Solution at 25°C 6.5-9.0
Phosphate (PO_4) .....max. 0.001%
Sodium (Na) .....max. 0.03%
Sulfate (SO_4) .....max. 0.002%
Solubility .....Passes Test
Product Information (not specifications):
Appearance (glistening, white flaky crystals)
CAS: 127-08-2

Potassium Acetate, Crystal
USP-GenAR
Suitable for Use in Biotechnology

cGMP

7797-06	Poly	2.5 kg	ge	519.40	
		4 x 2.5 kg	ge	415.50	1662.00
7797-88	Poly Pail	12 kg	bs	Inquire	

CH_3COOK FW: 98.14

Meets USP Requirements
Assay (CH_3COOK) (dried basis) 99.0-100.5%
Endotoxin Concentration (EU/g) .....max. 5.0
Heavy Metals (as Pb) .....max. 5 ppm
Identification A .....Passes Test
Identification B .....Passes Test
Iron (Fe) .....max. 5 ppm
Loss on Drying at 150°C .....max. 1.0%
pH at 25°C (1 in 20) 7.5-8.5
Residual Acetic Acid .....Actual Value Reported
Sodium (Na) .....max. 0.03%
Solubility .....Passes Test
Product Information (not specifications):
Appearance (colorless, crystals or powder)
CAS: 127-08-2

Potassium Acetate, Crystal
USP

cGMP

6696-88	Poly Pail	12 kg	bs	Inquire	

CH_3COOK FW: 98.14

Meets USP Requirements
Assay (CH_3COOK) (dried basis) 99.0-100.5%
Heavy Metals (as Pb) .....max. 0.002%
Identification A .....Passes Test
Identification B .....Passes Test
Loss on Drying at 150°C .....max. 1.0%
pH of 5% Aqueous Solution 7.5-8.5
Residual Acetic Acid .....Actual Value Reported
Sodium (Na) .....max. 0.03%
Solubility .....Passes Test
Product Information (not specifications):
Appearance (colorless, crystals or powder)
CAS: 127-08-2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Bicarbonate, Granular
AR (ACS)

6748-03	POLYSTORMOR	500 g	gd	63.30	
6748-06	Poly	2.5 kg	gd	288.20	
		4 x 2.5 kg	gd	230.55	922.20
6748-20	STAKMOR	12 kg	bs	Inquire	

$KHCO_3$ FW: 100.12

Meets ACS Specifications
Assay ($KHCO_3$) 99.7-100.5%
Ammonium (NH_4) .....max. 0.0005%
Calcium (Ca) .....max. 0.002%
Chloride (Cl) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.0005%
Insoluble Matter .....max. 0.01%
Iron (Fe) .....max. 5 ppm
Magnesium (Mg) .....max. 0.001%
Phosphate (PO_4) .....max. 0.0005%
Sodium (Na) .....max. 0.03%
Sulfur Compounds (as SO_4) .....max. 0.003%
Product Information (not specifications):
Appearance (colorless, transparent granules)
CAS: 298-14-6

Potassium Bicarbonate, Powder
USP, FCC

cGMP

6736-04	POLYSTORMOR	500 g	fg	96.35	
		12 x 500 g	fg	77.05	924.60
6736-44	Poly Drum	25 kg	bp	Inquire	
6736-26	Poly Drum	250 lb	bp	Inquire	

$KHCO_3$ FW: 100.12

Meets USP & FCC Requirements
Assay ($KHCO_3$) (dried basis) 99.5-101.5%
Solubility .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Loss on Drying .....max. 0.25%
Lead (Pb) .....max 2 mg/kg
Normal Carbonate .....max. 2.5%
Carbonate .....Passes Test
Heavy Metals (as Pb) .....max. 10 ppm
Product Information (not specifications):
Appearance (white powder)
CAS: 298-14-6

Potassium Biphthalate
See Potassium Phthalate

Potassium Bisulfate
See Potassium Hydrogen Sulfate

Potassium Bisulfate Meta
See Potassium Metabisulfite

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Bromide, Crystal
AR (ACS)

0505-20	STAKMOR	12 kg	bs	Inquire	

KBr FW: 118.99

Meets ACS Requirements

Assay (KBr) (by Ag titrn) ..... min. 99.0%
Appearance (colorless crystals) ..... Passes Test
Barium (Ba) ..... max. 0.002%
Bromate (BrO_3) ..... max. 0.001%
Iodate (IO_3) ..... max. 0.001%
Calcium (Ca) ..... max. 0.002%
Chloride (Cl) ..... max. 0.2%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iodide (I) ..... max. 0.001%
Iron (Fe) ..... max. 5 ppm
Magnesium (Mg) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.005%
pH of 5% Solution at 25°C 5.0-8.8

CAS: 7758-02-3

Potassium Carbonate, Anhydrous, Granular
AR (ACS)

6814-20	STAKMOR	12 kg	bs	Inquire	

K_2CO_3 FW: 138.21

Meets ACS Specifications

Assay (K_2CO_3) (by acid-base titration) ..... min. 99.0%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 5 ppm
Magnesium (Mg) ..... max. 0.002%
Phosphate (PO_4) ..... max. 0.001%
Silica (SiO_2) ..... max. 0.005%
Sodium (Na) ..... max. 0.02%
Sulfur Compounds (as SO_4) ..... max. 0.004%
Product Information (not specifications):
Appearance (white granules)

CAS: 584-08-7

Potassium Chlorate, Granular
AR (ACS)

6834-04	Glass	500 g	gd	101.75	
		12 x 500 g	gd	81.40	976.80

$KClO_3$ FW: 122.55

Meets ACS Specifications

Assay ($KClO_3$) (by $KMnO_4$ titrn) ..... min. 99.0%
Bromate (BrO_3) ..... max. 0.015%
Calcium (Ca) ..... max. 0.002%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 3 ppm
Magnesium (Mg) ..... max. 0.002%
Sodium (Na) ..... max. 0.01%
Sulfate (SO_4) ..... Passes Test
Product Information (not specifications):
Appearance (white granules)

CAS: 3811-04-9 IMO: 5.1:1485

Potassium Chloride, Granular
AR (ACS)

6858-04	POLYSTORMOR	500 g	gd	46.95	
		12 x 500 g	gd	37.55	450.60
6858-06	Poly	2.5 kg	gd	143.20	
		4 x 2.5 kg	gd	114.55	458.20
6858-20	Flowmor	12 kg	bs	Inquire	
6858-26	Flowmor	250 lb	bp	Inquire	

KCl FW: 74.55

Meets ACS Specifications

Assay (as KCl) (dried basis) 99.0-100.5%
Barium (Ba) ..... Passes Test
Bromide (Br) ..... max. 0.01%
Calcium (Ca) ..... max. 0.002%
Chlorate and Nitrate (as NO_3) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iodide (I) ..... max. 0.002%
Iron (Fe) ..... max. 3 ppm
Magnesium (Mg) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.001%
pH of 5% Solution at 25°C 5.4-8.6
Phosphate (PO_4) ..... max. 5 ppm
Sodium (Na) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.001%
Loss on Drying at 105°C ..... max. 1%
Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 7447-40-7

Potassium Chloride, Granular
USP, FCC cGMP

6838-04	POLYSTORMOR	500 g	fg	78.75	
		12 x 500 g	fg	63.00	756.00
6838-06	Poly	2.5 kg	fg	222.20	
		6 x 2.5 kg	fg	177.75	1066.50
6838-20	STAKMOR	12 kg	bs	Inquire	
6838-32	Flowmor	50 lb	bp	Inquire	
6838-27		110 lb	bp	Inquire	
6838-26	Flowmor	250 lb	bp	Inquire	

KCl FW: 74.55

Meets USP & FCC Requirements

Assay (KCl) (by Ag titrn) 99.0-100.5%
Acidity or Alkalinity (no pink color then pink) ..... Passes Test
Bromide (Br)(USP) ..... max. 0.1%
Bromide and/or Iodide (FCC) ..... Passes Test
Calcium and Magnesium ..... Passes Test

Potassium Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Heavy Metals (as Pb) (USP) ..... max. 0.001%
Heavy Metals (as Pb)(FCC) ..... max 5 mg/kg
Identification A ..... Passes Test
Identification B ..... Passes Test
Iodide (I)(USP) ..... max. 0.005%
Loss on Drying at 105°C ..... max. 1.0%
Solubility (10 in 50) ..... Passes Test
Sodium (Na) ..... Passes Test
Product Information (not specifications):
Appearance (white granules)

CAS: 7447-40-7

Potassium Chloride, Crystal
USP

6845-04	POLYSTORMOR	500 g	fg	73.75	
		12 x 500 g	fg	59.00	708.00

KCl FW: 74.55

Meets USP Requirements

Assay (KCl) (dried basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Loss on Drying ..... max. 1.0%
Acidity or Alkalinity ..... Passes Test
Bromide (Br) ..... max. 0.1%
Calcium and Magnesium ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Iodide (I) ..... max. 0.005%
Sodium (Na) ..... Passes Test
Aluminum (Al) ..... max. 1 ppm
Product Information (not specifications):
Appearance (white granules)

CAS: 7447-40-7

Potassium Chloride, Saturated Aqueous
StandARd
(For Refilling Calomel Reference Electrodes)

H300-01		100 mL	st	32.80	
H300-05	Poly	1 L	st	55.90	

Density (g/mL) at 20°C 1.162-1.172
Identification ..... Passes Test
Product Information (not specifications):
Appearance (clear, colorless solution with some sediment of potassium chloride)

CAS: 7447-40-7 DENSITY: 1 L = 1.172 kg

Potassium Chromate, Crystal
AR (ACS)

6870-20	STAKMOR	12 kg	bs	Inquire	

K_2CrO_4 FW: 194.19

Meets ACS Specifications

Assay (K_2CrO_4) ..... min. 99.5%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.005%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Insoluble Matter ..... max. 0.005%
pH of 5% Solution at 25°C 8.6-9.8
Sodium (Na) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.03%
Product Information (not specifications):
Appearance (lemon yellow granular crystals)

CAS: 7789-00-6 IMO: 5.1:3085

Potassium Citrate, Monohydrate, Granular
USP, FCC

0714-06	Poly	2.5 kg	fg	189.60	
		4 x 2.5 kg	fg	151.65	606.60

$C_6H_5K_3O_7 \cdot H_2O$ FW: 324.42

Meets USP & FCC Requirements

Assay (as $C_6H_5K_3O_7$) (calculated on anhydrous basis) 99.0-100.5%
Alkalinity ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Loss on Drying at 180°C 3.0-6.0%
Tartrate ..... Passes Test
Product Information (not specifications):
Appearance (small transparent crystals or white granular powder)

CAS: 6100-05-6

Potassium Cyanide, Granular
AR (ACS)

6881-02	125 g	gd	56.75	
6881-04	500 g	gd	114.80	
6881-08	2.5 kg	gd	417.70	
6881-20	12 kg	bs	Inquire	

KCN FW: 65.12

Meets ACS Specifications

Assay (KCN) (by Ag titrn) ..... min. 96.0%
Chloride (Cl) ..... max. 0.5%
Total Iron (Fe) ..... max. 0.03%
Lead (Pb) ..... max. 0.0002%
Phosphate (PO_4) ..... max. 0.005%
Sodium (Na) ..... max. 0.5%
Sulfate (SO_4) ..... max. 0.04%
Sulfide (S) ..... max. 0.003%
Thiocyanate (SCN) ..... Passes Test
Solubility (5 in 50) ..... Passes Test
Appearance ..... Passes Test

CAS: 151-50-8 IMO: 6.1:1680

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Dichromate, Crystal
AR (ACS)

6770-20	Poly Pail	12 kg	bs	Inquire	

$K_2Cr_2O_7$ FW: 294.18

Meets ACS Specifications

Assay ($K_2Cr_2O_7$) .....min. 99.0%
Calcium (Ca) .....max. 0.001%
Chloride (Cl) .....max. 0.001%
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.001%
Loss on Drying at 105°C .....max. 0.05%
Sodium (Na) .....max. 0.02%
Sulfate (SO_4) .....max. 0.005%

CAS: 7778-50-9 IMO: 6.1:3086

Potassium Dihydrogen Phosphate
See Potassium Phosphate Monobasic

Potassium Ferrocyanide, Trihydrate, Crystal
AR (ACS)

6932-04	POLYSTORMOR	500 g	gd	114.95	
		12 x 500 g	gd	91.95	1103.40
6932-05	Poly	2.5 kg	gd	336.85	

$K_4Fe(CN)_6 \cdot 3H_2O$ FW: 422.39

Meets ACS Specifications

Assay ($K_4Fe(CN)_6 \cdot 3H_2O$) 98.5-102.0%
Appearance (pale yellow crystals) .....Passes Test
Chloride (Cl) .....max. 0.01%
Insoluble Matter .....max. 0.005%
Sulfate (SO_4) .....Passes Test
Solubility .....Passes Test

CAS: 14459-95-1

Potassium Fluoride, Dihydrate, Crystal
AR

6944-04	POLYSTORMOR	500 g	gd	137.00	
		12 x 500 g	gd	109.60	1315.20
6944-06	Poly	2.5 kg	gd	472.25	
		4 x 2.5 kg	gd	377.80	1511.20
6944-20	STAKMOR	12 kg	bs	Inquire	

$KF \cdot 2H_2O$ FW: 94.13

Solubility .....Passes Test
Melting Point .....max. 60 °C.
Chloride (Cl) .....max. 0.005%
Free Acid (as HF) .....max. 0.05%
Free Alkali (as K_2CO_3) .....max. 0.10%
Heavy Metals (as Pb) .....max. 0.003%
Insoluble Matter .....max. 0.020%
Iron (Fe) .....max. 0.001%
Sulfate (SO_4) .....max. 0.005%
Potassium Fluosilicate (K_2SiF_6) .....max. 0.05%
Product Information (not specifications):
Appearance (colorless crystals)

CAS: 13455-21-5 IMO: 6.1:1812

Potassium Hydrogen Phthalate, Acidimetric Standard
See Potassium Phthalate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Hydrogen Sulfate, Fused, Powder
AR (ACS)

7112-04	POLYSTORMOR	500 g	gd	173.65	
		12 x 500 g	gd	138.90	1666.80
7112-06	Poly	2.5 kg	gd	641.35	
		4 x 2.5 kg	gd	513.05	2052.20
7112-20	STAKMOR	12 kg	bs	Inquire	

$KHSO_4$ FW: 136.17

Meets ACS Specifications

Acidity (as H_2SO_4) 37.5-38.6%
Solubility (10 in 100) .....Passes Test
Water (H_2O) .....max. 2.5%
Chloride (Cl) .....max. 0.002%
Phosphate (PO_4) .....max. 0.001%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.002%
Sodium (Na) .....max. 0.01%
Insoluble Matter .....max. 0.01%
Ammonium Hydroxide Precipitate .....max. 0.01%
Calcium (Ca) .....max. 0.002%
Magnesium (Mg) .....max. 0.001%
Product Information (not specifications):
Appearance (white, crystalline powder)

CAS: 7646-93-7 IMO: 8:2509

Potassium Hydroxide, Pellets
AR (ACS)

6984-04	POLYSTORMOR	500 g	gd	50.45	
		12 x 500 g	gd	40.35	484.20
6984-12	POLYSTORMOR	1 kg	gd	78.40	
		6 x 1 kg	gd	62.70	376.20
6984-06	Poly	2.5 kg	gd	132.75	
		4 x 2.5 kg	gd	106.20	424.80
6984-20	STAKMOR	12 kg	bs	Inquire	
6984-28		25 kg	bp	Inquire	
6984-25	Lined Fiber Dr	110 lb	bp	Inquire	

KOH FW: 56.11

Meets ACS Specifications

Assay (KOH) .....min. 86%
Identification .....Passes Test
Calcium (Ca) .....max. 0.005%
Chloride (Cl) .....max. 0.001%
Heavy Metals (as Ag) .....max. 0.001%
Insoluble Matter .....max. 0.003%
Iron (Fe) .....max. 0.0003%
Magnesium (Mg) .....max. 0.002%
Mercury (Hg) .....max. 0.00001%
Nickel (Ni) .....max. 0.0002%
Sodium (Na) .....max. 0.05%
Nitrogen Compounds (as N) .....max. 0.0003%
Phosphate (PO_4) .....max. 2 ppm
Sulfate (SO_4) .....max. 0.0005%
Potassium Carbonate (K_2CO_3) .....max. 0.5%
Product Information (not specifications):
Appearance (white hygroscopic pellets)

CAS: 1310-58-3 IMO: 8:1813

Potassium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Hydroxide, Pellets

cGMP

NF-GenAR
Not Intended for Hemodialysis

7815-88	Poly Pail	12 kg	bs	Inquire	

KOH FW: 56.11

Meets NF & FCC Requirements

Assay (total alkali as KOH) 85.0-100.5%
Identification ..... Passes Test
Insoluble Substances ..... Passes Test
Iron (Fe) ..... max. 0.0003%
Heavy Metals (as Pb) ..... max. 0.002%
Carbonate (as K_2CO_3) ..... max. 2.0%
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg)(mg/kg) ..... max. 0.1
Solubility ..... Passes Test

Meets BP/Ph.Eur. Chemical Specifications

Assay (total alkali as KOH) 85.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Appearance of Solution ..... Passes Test
Carbonate (as K_2CO_3) ..... max. 2.0%
Chloride (Cl) ..... max. 50 ppm
Phosphate (PO_4) ..... max. 20 ppm
Sulfate (SO_4) ..... max. 50 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Sodium (Na) ..... max. 1.0%
Endotoxin Concentration (EU/g) ..... max. 5.0

Product Information (not specifications):
Appearance (white hygroscopic pellets)

CAS: 1310-58-3 IMO: 8:1813

Potassium Hydroxide, Pellets

cGMP

NF, FCC

6976-04	POLYSTORMOR	500 g	fg	79.15	
		12 x 500 g	fg	63.30	759.60
6976-06	Poly	2.5 kg	fg	193.50	
		4 x 2.5 kg	fg	154.80	619.20
6976-20	STAKMOR	12 kg	bs	Inquire	
6976-88	Poly Pail	12 kg	bs	Inquire	
6976-28		25 kg	bp	Inquire	
6976-25	Lined Fiber Dr	110 lb	bp	Inquire	

KOH FW: 56.11

Meets NF & FCC Requirements

Assay (KOH) 85.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Substances ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%
Potassium Carbonate (K_2CO_3) ..... max. 3.5%
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg) ..... max. 0.1 ppm
Solubility ..... Passes Test

Product Information (not specifications):
Appearance (white hygroscopic pellets)
Storage: Preserve in tight containers.

CAS: 1310-58-3 IMO: 8:1813

Potassium Hydroxide, 45% Solution

AR

6671-02	Poly	500 mL	st	43.10	
		12 x 500 mL	st	34.45	413.40
6671-04	Poly	4 L	st	165.75	
		4 x 4 L	st	132.60	530.40

KOH FW: 56.11

Assay (KOH) ..... min. 45%
Chloride (Cl) ..... max. 0.002%
Sulfate (SO_4) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.0002%
Ammonium Hydroxide Precipitate ..... max. 0.005%
Iron (Fe) ..... max. 0.0002%
Heavy Metals (as Ag) ..... max. 0.0005%
Nickel (Ni) ..... max. 0.0005%
Sodium (Na) ..... max. 0.02%
Potassium Carbonate (K_2CO_3) ..... max. 0.2%
Appearance ..... Passes Test
Identification ..... Passes Test

CAS: 1310-58-3 IMO: 8:1814

Caustic Spill Cleanup Products available. See pp. 378.

Potassium Hydroxide, 10% (w/v) Aqueous

StandARd

H320-01	Poly	100 mL	st	13.00	
H320-05	Poly	1 L	st	21.30	

Assay (KOH)(g/100 mL) 9.5-10.5
Identification ..... Passes Test

Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 1310-58-3 IMO: 8:1814

Caustic Spill Cleanup Products available. See pp. 378.

See Drug Development and Manufacturing section for more information about scale-up and process chromatography products, on page 64-86.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Iodide, Free Flowing
AR (ACS)

1123-02	Poly	125 g	gd	115.10	
		12 x 125 g	gd	92.05	1104.60
1123-12	POLYSTORMOR	500 g	gd	209.60	
		4 x 500 g	gd	167.65	670.60
1123-06	Poly	2.5 kg	gd	768.35	
		4 x 2.5 kg	gd	614.65	2458.60
1123-20	STAKMOR	12 kg	bs	Inquire	
1123-24	Lined Fiber Dr	100 lb	bp	Inquire	

KI FW: 166.00

Meets ACS Specifications

Assay (KI) ..... min. 99.0%
Appearance (white, crystalline granules) ..... Passes Test
Barium (Ba) ..... max. 0.002%
Calcium (Ca) ..... max. 0.002%
Chloride and Bromide (as Cl) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.005%
Iodate (IO_3) ..... max. 3 ppm
Iron (Fe) ..... max. 0.0003%
Loss on Drying at 150°C ..... max. 0.2%
Magnesium (Mg) ..... max. 0.001%
pH of 5% Solution at 25°C 6.0-9.2
Phosphate (PO_4) ..... max. 0.001%
Sodium (Na) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Mesh:
Thru U.S. No. 30 Sieve ..... max. 25%
Free Alkali ..... Actual Value Reported
Total Alkali ..... Actual Value Reported

CAS: 7681-11-0

Potassium Iodide, Powder
USP-GenAR cGMP

1115-04	POLYSTORMOR	500 g	fg	304.50	
		12 x 500 g	fg	243.60	2923.20
1115-05	Poly	2.5 kg	fg	1034.25	
1115-20	Lined Fiber Dr	12 kg	bs	Inquire	
1115-24		50 kg	bp	Inquire	
1115-65	Flowmor	50 kg	bp	Inquire	

KI FW: 166.00

Meets USP & FCC Requirements

Assay (KI)(USP) 99.0-101.5%
Assay (KI)(FCC) 99.0-101.5%
Appearance (white, granular powder) ..... Passes Test
Identification (Potassium) ..... Passes Test
Identification (Iodide) ..... Passes Test
Identification B (FCC) ..... Passes Test
Free Alkali ..... Actual Value Reported
Heavy Metals (as Pb) ..... max. 0.001%
Lead (Pb) ..... max 4 mg/kg
Loss on Drying at 105°C ..... max. 0.50%
Iodate (IO_3) ..... max 4 mg/kg
Thiosulfate and Barium ..... Passes Test
Alkalinity ..... Passes Test
Nitrate, Nitrite, and Ammonia ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iron (Fe) ..... Passes Test

Meets EP/BP Chemical Specifications

Assay (Dried Basis) 99.0-100.5%
Identificaton A (Iodides) ..... Passes Test
Identification B (Potassium) ..... Passes Test
Appearance of Solution ..... Passes Test
Alkalinity ..... Passes Test
Iodates ..... Passes Test
Sulfate (SO_4) ..... max. 150 ppm
Thiosulphates ..... Passes Test
Iron (Fe) ..... max. 20 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Loss on Drying ..... max. 1.0%

CAS: 7681-11-0

Potassium Iodide Neutral, Granular
AR (ACS)

1127-04	POLYSTORMOR	500 g	gd	217.75	
		12 x 500 g	gd	174.20	2090.40
1127-06	Poly	2.5 kg	gd	966.35	
		4 x 2.5 kg	gd	773.05	3092.20
1127-20	STAKMOR	12 kg	bs	Inquire	

KI FW: 166.00

Meets ACS Specifications

Assay (KI) ..... min. 99.0%
Alkalinity (as K_2CO_3) ..... max. 0.002%
Barium (Ba) ..... max. 0.002%
Calcium (Ca) ..... max. 0.002%
Chloride and Bromide (as Cl) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.005%
Iodate (IO_3) ..... max. 3 ppm
Iron (Fe) ..... max. 0.0003%
Loss on Drying at 150°C ..... max. 0.2%
Magnesium (Mg) ..... max. 0.001%
pH of 5% Solution at 25°C 6.0-9.2
Phosphate (PO_4) ..... max. 0.001%
Sodium (Na) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 7681-11-0

Potassium Metabisulfite, Granular
NF, FCC cGMP

7000-06	Poly	2.5 kg	fg	491.00	
		4 x 2.5 kg	fg	392.80	1571.20
7000-27	Leverpack	220 lb	bp	Inquire	

$K_2S_2O_5$ FW: 222.33

Meets NF & FCC Requirements

Assay ($K_2S_2O_5$) 90.0-100.5%
Assay (as SO_2) 51.8-57.6%
Arsenic (As) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test

Potassium Metabisulfite

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Identification B ..... Passes Test
Iron (Fe) ..... max. 10 ppm
Lead (Pb) ..... max 2 mg/kg
Reaction ..... Passes Test
Selenium (Se) ..... max 5 mg/kg
Mesh:
On U.S. No. 20 Sieve ..... max. 10%
Solubility ..... Passes Test
Product Information (not specifications):
Appearance (white to pale yellow crystalline granules)
CAS: 16731-55-8

Potassium Metabisulfite, Granular
AR

7008-20	STAKMOR	12 kg	bs	Inquire	

$K_2S_2O_5$ FW: 222.33

Assay ($K_2S_2O_5$) (by iodometry) ..... min. 95%
Solubility ..... Passes Test
Arsenic (As) ..... max. 0.0001%
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.003%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Product Information (not specifications):
Appearance (colorless to white, granular crystals)
CAS: 16731-55-8

Potassium Nitrate, Crystal
AR (ACS)

7028-20	Flowmor	12 kg	bs	Inquire	
7028-40	Leverpak	100 lb	bp	Inquire	

KNO_3 FW: 101.10

Meets ACS Specifications
Assay (KNO_3) ..... min. 99.0%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.005%
Iodate (IO_3) ..... max. 5 ppm
Iron (Fe) ..... max. 0.0003%
Magnesium (Mg) ..... max. 0.002%
Nitrite (NO_2) ..... max. 0.001%
Phosphate (PO_4) ..... max. 5 ppm
Sodium (Na) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.003%
pH of 5% Solution at 25°C 4.5-8.5
Product Information (not specifications):
Appearance (colorless crystals)
CAS: 7757-79-1 IMO: 5.1:1486

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Nitrate, Fine Crystal

6715-04	POLYSTORMOR	500 g	gd	50.40	
		12 x 500 g	gd	40.30	483.60
6715-06	Poly	2.5 kg	gd	157.60	
		4 x 2.5 kg	gd	126.05	504.20
6715-20	STAKMOR	12 kg	bs	Inquire	

KNO_3 FW: 101.09

Assay (KNO_3) 99.0-100.5%
Solubility ..... Passes Test
Loss on Drying at 105°C ..... max. 1.0%
Reaction ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification for Sodium ..... Passes Test
Sodium (Na) ..... Actual Value Reported
Chlorate ..... Passes Test
Chloride (Cl) ..... max. 0.058%
Arsenic (As) ..... max. 0.0003%
Heavy Metals (as Pb) ..... max. 0.0020%
Lead (Pb) ..... max. 0.0010%
Product Information (not specifications):
Appearance (white to off-white crystals)
CAS: 7757-79-1 IMO: 5.1:1486

Potassium Permanganate, Crystal
USP cGMP

7056-12	Glass	500 g	fg	110.85	
		4 x 500 g	fg	88.65	354.60

$KMnO_4$ FW: 158.03

Meets USP Requirements
Assay ($KMnO_4$) (dried basis) 99.0-100.5%
Identification ..... Passes Test
Insoluble Substances ..... max. 0.2%
Loss on Drying ..... max. 0.5%
Product Information (not specifications):
Appearance (dark purple crystals)
CAS: 7722-64-7 IMO: 5.1:1490

Potassium Permanganate, 1.0 Normal Volumetric Solution
StandARd

6139-60	Glass	1 L	st	84.95	
6139-01		4 L	st	103.85	

Normality 0.995-1.005
Product Information (not specifications):
Appearance (purple solution)
CAS: 7722-64-7 DENSITY: 1 L = 1.0-1.6 kg

Potassium Peroxydisulfate
See Potassium Persulfate

Potassium Persulfate
AR (ACS)
(potassium peroxydisulfate)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7076-12	Glass	500 g	gd	84.35	
		4 x 500 g	gd	67.45	269.80
7076-20	Lined Fiber Dr	12 kg	bs	Inquire	
7076-28	Lined Fiber Dr	225 lb	bp	Inquire	

$K_2S_2O_8$ FW: 270.32

Meets ACS Specifications

Assay ($K_2S_2O_8$) ..... min. 99.0%
Chlorine Compounds (as Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.0005%
Manganese (Mn) ..... max. 0.0002%

Product Information (not specifications):
Appearance (white crystals)

CAS: 7727-21-1 IMO: 5.1:1492

Potassium Phosphate, Monobasic, Crystal
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7100-02	POLYSTORMOR	125 g	gd	57.60	
		12 x 125 g	gd	46.05	552.60
7100-12	POLYSTORMOR	500 g	gd	76.35	
		4 x 500 g	gd	61.05	244.20
7100-06	Poly	2.5 kg	gd	263.40	
		4 x 2.5 kg	gd	210.70	842.80
7100-20	STAKMOR	12 kg	bs	Inquire	
7100-19	Poly Pail	12 kg	bs	Inquire	

KH_2PO_4 FW: 136.09

Meets ACS Specifications

Assay (KH_2PO_4) (by acidimetry) ..... min. 99.0%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.002%
Loss on Drying at 105°C ..... max. 0.2%
Nitrogen Compounds (as N) ..... max. 0.001%
Sodium (Na) ..... max. 0.005%
Solubility (10 in 100) ..... Passes Test
Sulfate (SO_4) ..... max. 0.003%
pH of 5% Solution at 25°C 4.1-4.5

Product Information (not specifications):
Appearance (white crystals)

CAS: 7778-77-0

Potassium Phosphate, Monobasic, Crystal
NF-GenAR
Suitable for Use in Biotechnology

cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7746-04	POLYSTORMOR	500 g	ge	87.15	
		12 x 500 g	ge	69.70	836.40
7746-06	Poly	2.5 kg	ge	316.65	
		4 x 2.5 kg	ge	253.30	1013.20
7746-88	Poly Pail	12 kg	bs	Inquire	

KH_2PO_4 FW: 136.09

Meets NF Requirements

Assay (KH_2PO_4) (dried basis) 98.0-100.5%
Solubility (5 in 50) ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Arsenic (As) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 0.001%
Lead (Pb) ..... max. 5 ppm
Insoluble Substances ..... max. 0.2%
Fluoride (F) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 1.0%
Endotoxin Concentration (EU/g) ..... max. 5
pH of a 1 in 100 Solution 4.2-4.7

Product Information (not specifications):
Appearance (colorless to white needle-like crystals)

CAS: 7778-77-0

Potassium Phosphate, Monobasic, Crystal
NF, FCC

cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7096-04	POLYSTORMOR	500 g	fg	84.65	
		12 x 500 g	fg	67.70	812.40
7096-06	Poly	2.5 kg	fg	299.35	
		4 x 2.5 kg	fg	239.45	957.80
7096-20	STAKMOR	12 kg	bs	Inquire	
7096-88	Poly Pail	12 kg	bs	Inquire	

KH_2PO_4 FW: 136.09

Meets NF & FCC Requirements

Assay (KH_2PO_4) (dried basis)(by acidimetry) 98.0-100.5%
Appearance (colorless to white needle-like crystals) ..... Passes Test
Solubility (5 in 50) ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
pH of a 1 in 100 Solution 4.2-4.7
Arsenic (As) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 0.0015%
Lead (Pb) ..... max. 2 ppm
Insoluble Substances ..... max. 0.2%
Fluoride (F) ..... max. 10 ppm
Loss on Drying at 105°C ..... max. 1.0%

CAS: 7778-77-0

Potassium Phosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Phosphate, Dibasic, Anhydrous

cGMP

USP-GenAR
Suitable for Use in Biotechnology

7787-04	POLYSTORMOR	500 g	ge	137.10	
		12 x 500 g	ge	109.65	1315.80
7787-06	Poly	2.5 kg	ge	482.70	
		4 x 2.5 kg	ge	386.15	1544.60
7787-88	Poly Pail	12 kg	bs	Inquire	

K_2HPO_4 FW: 174.18

Meets USP Requirements

Assay (K_2HPO_4) (dried basis) 98.0-100.5%
Arsenic (As) ..... max. 3 ppm
Carbonate (CO_3) ..... Passes Test
Chloride (Cl) ..... max. 0.03%
Endotoxin Concentration (2.5 EU/g max.) ..... Passes Test
Fluoride (F) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Substances ..... max. 0.2%
Iron (Fe) ..... max. 0.003%
Loss on Drying ..... max. 1.0%
Mono-or Tri-Basic Salt ..... Passes Test
pH (1 in 20) 8.5-9.6
Sodium (Na) ..... Passes Test
Sulfate (SO_4) ..... max. 0.1%

Meets BP/Ph.Eur. Chemical Specifications

Appearance of Solution ..... Passes Test
Assay (K_2HPO_4) (dried basis) 98.0-101.0%
Arsenic (As) ..... max. 2 ppm
Chloride (Cl) ..... max. 200 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Iron (Fe) ..... max. 10 ppm
Loss on Drying ..... max. 2.0%
Reducing Substances ..... Passes Test
Monopotassium phosphate ..... max. 0.025
Sodium (Na) ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.1%

CAS: 7758-11-4

Potassium Phosphate, Dibasic, Trihydrate, Crystal

AR

7088-04	POLYSTORMOR	500 g	gd	139.95	
		12 x 500 g	gd	111.95	1343.40
7088-06	Poly	2.5 kg	gd	438.70	
		4 x 2.5 kg	gd	350.95	1403.80

$K_2HPO_4 \cdot 3H_2O$ FW: 228.23

Solubility (10 in 100) ..... Passes Test
Chloride (Cl) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Nitrogen (N) ..... max. 0.001%
Sodium (Na) ..... max. 0.02%
Sulfate (SO_4) ..... max. 0.005%
pH of 0.1M Solution at 25°C 9.0-9.4
Water (H_2O) ..... Actual Value Reported

Product Information (not specifications):
Appearance (colorless crystals)

CAS: 16788-57-1

Potassium Phthalate, Crystal

AR (ACS) Primary Standard

6704-02	Glass	125 g	gd	97.45	
		12 x 125 g	gd	77.95	935.40
6704-04	Glass	500 g	gd	160.75	
		12 x 500 g	gd	128.60	1543.20
6704-20	STAKMOR	12 kg	bs	Inquire	

1-$KOCOC_6H_4$-2-COOH FW: 204.22

Meets ACS Specifications

Assay (1-$KOCOC_6H_4$-2-COOH) 99.95-100.05%
Chlorine Compounds (as Cl) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
pH of 0.05M Solution at 25°C 4.00-4.02
Sodium (Na) ..... max. 0.005%
Sulfur Compounds (as S) ..... max. 0.002%

Traceable to NIST
Product Information (not specifications):
Appearance (white crystals)

CAS: 877-24-7

Potassium Pyrosulfate

See Potassium Hydrogen Sulfate

Potassium Pyrosulfite

See Potassium Metabisulfite

Potassium Sodium Tartrate, 4-Hydrate, Crystal

AR (ACS)

2367-04	POLYSTORMOR	500 g	gd	128.65	
		12 x 500 g	gd	102.90	1234.80
2367-06	Poly	2.5 kg	gd	440.50	
		4 x 2.5 kg	gd	352.40	1409.60
2367-20	STAKMOR	12 kg	bs	Inquire	

$KOCO(CHOH)_2COONa \cdot 4H_2O$ FW: 282.22

Meets ACS Specifications

Assay ($KNaC_4H_4O_6 \cdot 4H_2O$) 99.0-102.0%
Ammonium (NH_4) ..... max. 0.002%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.002%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfate (SO_4) ..... max. 0.005%
pH of 5% Solution at 25°C 6.0-8.5
Product Information (not specifications):
Appearance (fine, colorless or white crystals)
CAS: 6381-59-5

Potassium Sodium Tartrate, 4-Hydrate, Powder
cGMP
USP
(Rochelle Salt)

2370-04	POLYSTORMOR	500 g	fg	171.20	
		12 x 500 g	fg	136.95	1643.40
2370-06	Poly	2.5 kg	fg	544.75	
		4 x 2.5 kg	fg	435.80	1743.20
2370-20	STAKMOR	12 kg	bs	Inquire	

$KOCO(CHOH)_2COONa{\cdot}4H_2O$ FW: 282.22

Meets USP Requirements
Assay ($C_4H_3KNaO_6$) (anhydrous basis) 99.0-102.0%
Alkalinity ..... Passes Test
Limit of Ammonia (NH_3) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Water (H_2O) 21.0-27.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Solubility (10 in 100) ..... Passes Test
Product Information (not specifications):
Appearance (white, crystalline powder)
CAS: 6381-59-5

Potassium Sulfate, Anhydrous, Low Nitrogen, Granular
Technical

7148-06	Poly	2.5 kg	gd	111.40	
		4 x 2.5 kg	gd	89.10	356.40
7148-28		100 kg	bp	Inquire	

K_2SO_4 FW: 174.26

Chloride (Cl) ..... max. 0.10%
Identification A ..... Passes Test
Identification B ..... Passes Test
Total Nitrogen Compounds (as NO_3) ..... max. 0.001%
Solubility (5 in 100) ..... Passes Test
Mesh:
Thru U.S. No. 30 Sieve ..... min. 99%
On U.S. No. 80 Sieve ..... min. 98%
On U.S. No. 100 Sieve ..... min. 99%
Product Information (not specifications):
Appearance (fine, dry, white free-flowing crystalline granules)
CAS: 7778-80-5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Potassium Sulfate, Granular
AR (ACS)

7140-20	STAKMOR	12 kg	bs	Inquire	

K_2SO_4 FW: 174.26

Meets ACS Specifications
Assay (K_2SO_4) ..... min. 99.0%
Solubility ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 5 ppm
Magnesium (Mg) ..... max. 0.005%
Nitrogen Compounds (as N) ..... max. 5 ppm
Sodium (Na) ..... max. 0.02%
pH of 5% Solution at 25°C 5.5-8.5
Product Information (not specifications):
Appearance (white granules)
CAS: 7778-80-5

Potassium Thiocyanate
AR (ACS)
(sulfocyanate)

7168-02	POLYSTORMOR	125 g	gd	57.70	
		12 x 125 g	gd	46.15	553.80
7168-04	POLYSTORMOR	500 g	gd	134.85	
		12 x 500 g	gd	107.85	1294.20
7168-06	Poly	2.5 kg	gd	574.85	
		4 x 2.5 kg	gd	459.85	1839.40
7168-20	STAKMOR	12 kg	bs	Inquire	

KSCN FW: 97.18

Meets ACS Specifications
Assay (KSCN) (by Ag titrn) ..... min. 98.5%
Appearance (colorless or white crystals) ..... Passes Test
Solubility (10 in 50) ..... Passes Test
Ammonium (NH_4) ..... max. 0.003%
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble in H_2O ..... max. 0.005%
Iodine Consuming Substances (meq/g) ..... max. 0.004
Iron (Fe) ..... max. 0.0002%
Sodium (Na) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.005%
pH of 5% Solution at 25°C 5.3-8.7
CAS: 333-20-0

Precipitated Chalk
See Calcium Carbonate

Propanediol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

1,2-Propanediol
OR
(propylene glycol)

1925-61	Glass	1 kg	so	49.55	

$CH_3CH(OH)CH_2OH$ FW: 76.10

Assay .....min. 99.5%
Appearance (clear, colorless viscous liquid) .....Passes Test
Identification .....Passes Test
Specific Gravity at 25°/25°C .....Actual Value Reported

CAS: 57-55-6 DENSITY: 1 L = 1.0361 kg FLASH POINT: 99°C

Propanic Acid
See Propionic Acid

2-Propanol
See Isopropyl Alcohol

2-Propanone
See Acetone

Propionic Acid
AR

7179-04	Glass	500 mL	ra	41.90	
		12 x 500 mL	ra	33.50	402.00
7179-08	Glass	8 pt	ra	146.60	
		4 x 8 pt	ra	117.25	469.00

CH_3CH_2COOH FW: 74.08

Assay (CH_3CH_2COOH) (by acidimetry) .....min. 99.0%
Residue after Evaporation .....max. 0.010%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.15%
Boiling Range (1-95 mL) .....max. 2.0 °C.
Density (g/mL) at 25°C 0.986-0.990
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 79-09-4 DENSITY: 1 L = 0.99 kg IMO: 8:3463
FLASH POINT: 52°C

Acid Spill Cleanup Products available. See pp. 378.

n-Propyl Alcohol
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

5351-60	Glass	1 L	sp	134.45	
		6 x 1 L	sp	91.45	548.70
5351-08	Glass	4 L	sp	162.75	
		4 x 4 L	sp	110.70	442.80

$CH_3(CH_2)_2OH$ FW: 60.10

Assay ($CH_3(CH_2)_2OH$) (by GC, corrected for water) .....min. 99.5%
Residue (mg/L) .....max. 3
Water (H_2O)(by Karl Fischer titrn) .....max. 0.08%
Optical Absorbance (1-cm path vs water):
210 nm .....max. 1.00
225 nm .....max. 0.50
250 nm .....max. 0.05
300 nm .....max. 0.005
400 nm .....max. 0.005
Filtered through a 0.2 micron filter.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 71-23-8 DENSITY: 1 L = 0.804 kg IMO: 3:1274
FLASH POINT: 23°C

Solvent Spill Cleanup Products available. See pp. 378.

n-Propyl Alcohol
AR

7169-04	Glass	500 mL	gs	34.30	
		12 x 500 mL	gs	27.70	332.40
7169-08	Glass	4 L	gs	144.55	
		4 x 4 L	gs	116.80	467.20
7169-19	Steel Pail	20 L	sb	401.30	

$CH_3(CH_2)_2OH$ FW: 60.10

Assay ($CH_3(CH_2)_2OH$) (by GC, corrected for water) .....min. 99.0%
Acidity (as CH_3CH_2COOH) .....max. 0.015%
Alkalinity (as NH_3) .....max. 0.002%
Residue after Evaporation .....max. 0.005%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 71-23-8 DENSITY: 1 L = 0.804 kg IMO: 3:1274
FLASH POINT: 23°C

Solvent Spill Cleanup Products available. See pp. 378.

Propyl Alcohol, Secondary
See Isopropyl Alcohol

Propylcarbinol
See Butyl Alcohol Normal

Propylene Glycol
USP, FCC

cGMP

6263-19	Lined Steel Dr	20 L	bs	Inquire	

$CH_3CHOHCH_2OH$ FW: 76.10

Meets USP & FCC Requirements

Assay ($CH_3CHOHCH_2OH$) (by GC) .....min. 99.5%
Identification .....Passes Test
Specific Gravity at 25°/25°C 1.035-1.037
Distilling Range: .....185-189 °C.
Acidity .....Passes Test
Lead (Pb) .....max 1 mg/kg
Water (H_2O)(by Karl Fischer titrn) .....max. 0.2%
Residue on Ignition .....max. 0.007%
Chloride (Cl) .....max. 0.007%
Sulfate (SO_4) .....max. 0.006%
Heavy Metals (as Pb) .....max. 5 ppm
Product Information (not specifications):
Appearance (clear, colorless viscous liquid)

CAS: 57-55-6 DENSITY: 1 L = 1.0361 kg FLASH POINT: 99°C

Propylene Glycol
See also 1,2-Propanediol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Pyridine
AR (ACS)

7180-04	Glass	500 mL	gs	143.80	
		12 x 500 mL	gs	116.20	1394.40
7180-08	Glass	4 L	gs	943.25	
		4 x 4 L	gs	762.20	3048.80
7180-19	Steel Pail	20 L	sb	3057.10	

C_5H_5N FW: 79.10

Meets ACS Specifications

Assay (C_5H_5N) (by GC, corrected for water) .....min. 99.0%
Solubility in H_2O .....Passes Test
Residue after Evaporation .....max. 0.002%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.001%
Ammonia (as NH_3) .....max. 0.002%
Copper (Cu) .....max. 5 ppm
Reducing Substances .....Passes Test

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 110-86-1 DENSITY: 1 L = 0.98 kg IMO: 3:1282
FLASH POINT: 20°C

Solvent Spill Cleanup Products available. See pp. 378.

Pyridine
AR (ACS)

7181-10	SAFEMOR	4 L	gs	1011.15	
		4 x 4 L	gs	817.10	3268.40

C_5H_5N FW: 79.10

Meets ACS Specifications

Assay (C_5H_5N) (by GC, corrected for water) .....min. 99.0%
Solubility in H_2O .....Passes Test
Residue after Evaporation .....max. 0.002%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.1%
Chloride (Cl) .....max. 0.001%
Sulfate (SO_4) .....max. 0.001%
Ammonia (as NH_3) .....max. 0.002%
Copper (Cu) .....max. 5 ppm
Reducing Substances .....Passes Test

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 110-86-1 DENSITY: 1 L = 0.98 kg IMO: 3:1282
FLASH POINT: 20°C

Solvent Spill Cleanup Products available. See pp. 378.

Pyroxylin Purified
See Parlodion

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Pyruvic Acid, Sodium Salt, 96%
OR

2694-57	Glass	100 g	so	130.85	

$CH_3COCOONa$ FW: 110.04

Assay ($CH_3COCOONa$) .....min. 96%
pH of 10% Solution at 25°C 4.0-8.0
Infrared Spectrum .....Conforms to Reference Standard

Product Information (not specifications):
Appearance (white to pale yellow crystals or powder)

CAS: 113-24-6

Quicksilver
See Mercury

Reactive Blue #4 (Procion Brilliant Blue MR)
OR
(C.I. 61205)

8132-03	Poly	1 kg	so	523.60	

$C_{23}H_{14}Cl_2N_6O_8S_2$ FW: 637.44

Appearance .....Passes Test
Identification .....Passes Test
UV Absorbance at 280 nm and 253 nm .....Passes Test

CAS: 13324-20-4

Reagent Alcohol, Absolute
AR (ACS)
(Made from Specially Denatured Alcohol Formula 3A)

7019-02	Poly	500 mL	gs	33.90	
		12 x 500 mL	gs	27.40	328.80
7019-10	Poly	4 L	gs	118.80	
		4 x 4 L	gs	96.00	384.00
7019-28	Poly Drum	200 L	bp	Inquire	

CH_3CH_2OH FW: 46.07

Meets ACS Specifications

Assay (SDA 3A (EtOH + MeOH))(v/v) 94.0-96.0%
Methanol (CH_3OH)(v/v) 3.5-5.5%
Isopropyl Alcohol (2-propanol)(v/v) 4.0-6.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Specific Gravity at 25°C 0.782-0.793
Water (H_2O) .....max. 0.5%

SDA Formula 3A consists of 5 volumes of methanol and 100 volumes of 200 proof ethanol.

Product Information (not specifications):
Appearance (clear, colorless liquid)

DENSITY: 1 L = 0.79 kg IMO: 3:1987 FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

Reagent Alcohol

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Reagent Alcohol, Absolute

AR (ACS)
(Made from Specially Denatured Alcohol Formula 3A)

6183-10	SAFEMOR	4 L	gs	140.55	
		4 x 4 L	gs	113.55	454.20

CH_3CH_2OH FW: 46.07

Meets ACS Specifications

Assay (SDA 3A (EtOH + MeOH))(v/v) 94.0-96.0%
Methanol (CH_3OH)(v/v) 3.5-5.5%
Isopropyl Alcohol (2-propanol)(v/v) 4.0-6.0%
Color (APHA) ..... max. 10
Residue after Evaporation ..... max. 0.001%
Specific Gravity at 25°C 0.782-0.793
Water (H_2O) ..... max. 0.5%

SDA Formula 3A consists of 5 volumes of methanol and 100 volumes of 200 proof ethanol.

Product Information (not specifications):
Appearance (clear, colorless liquid)

DENSITY: 1 L = 0.79 kg IMO: 3:1987 FLASH POINT: 13°C

Solvent Spill Cleanup Products available. See pp. 378.

Resorcinol, Fine Powder

cGMP

USP

7232-02	Glass	125 g	fg	150.20	
		12 x 125 g	fg	120.15	1441.80
7232-20	Lined Fiber Dr	12 kg	bs	Inquire	

$C_6H_4(OH)_2$ FW: 110.11

Meets USP Requirements

Assay ($C_6H_6O_2$)(USP) (dried basis) 99.0-100.5%
Catechol ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Loss on Drying ..... max. 1.0
Melting Range ..... 109-111 °C.
Ordinary Impurities ..... max. 1.0%
Phenol (C_6H_5OH) ..... Passes Test
Residue on Ignition ..... max. 0.05%
Solubility (5 in 50) ..... Passes Test

Product Information (not specifications):
Appearance (white or nearly white powder)
Preserve in tight, light-resistant containers.

CAS: 108-46-3 IMO: 6.1:2876 FLASH POINT: 127°C

Rochelle Salt

See Potassium Sodium Tartrate

Find the Macron Fine Chemicals chemical you need with the CHEMCHOICE cross reference system. Visit www.avantormaterials.com

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Rose Bengal

Certified OR
Certified for Use in Bacteriology (Staining) (C.I. 45440)

E051-03	Glass	25 g	so	52.90	

$C_{20}H_2Cl_4I_4Na_2O_5$ FW: 1017.65

Certified by the Biological Stain Commission

Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm ..... Actual Value Reported
Absorbance at Maximum (1.0 mg/200 mL in 0.01% Na_2CO_3,1-cm path) ..... Actual Value Reported
Biological Test ..... Passes Test

CAS: 11121-48-5 MERCK INDEX: 13,8343

Saccharin Sodium, Soluble

cGMP

USP, FCC

7260-01	Glass	125 g	fg	Inquire
7260-05	STAKMOR	2.5 kg	fg	Inquire

$C_7H_4NNaO_3S{\cdot}2H_2O$ FW: 241.20

Meets USP & FCC Requirements

Assay (as $C_7H_4NNaO_3S$) (calculated on anhydrous basis) 99.0-101.0%
Appearance (white, crystalline powder) ..... Passes Test
Solubility (5 in 100) ..... Passes Test
Clarity of Solution ..... Passes Test
Color of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Lead (Pb) ..... max 2 mg/kg
Limit of Benzoate and Salicylate ..... Passes Test
Readily Carbonizable Substances ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... max. 15%
Selenium (Se) ..... max. 0.003%

Limit of Toluenesulfonamides (USP)
o-Toluenesulfonamide ..... max. 10 ppm
p-Toluenesulfonamide ..... max. 10 ppm

Preserve in well-closed containers.

CAS: 6155-57-3

Saccharose

See Sucrose

Safranin O

Certified OR
Certified by Biological Stain Commission

E008-55	Glass	25 g	so	86.25	

$C_{20}H_{19}ClN_4$ FW: 350.85

Total Dye Content ..... Actual Value Reported
Absorbance Maximum, nm 518-548

Product Information (not specifications):
Appearance (reddish, dark-green powder)

CAS: 477-73-6

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Safranine O
Certified OR
Certified for Use in Histology, Cytology and Bacteriology (Staining) (C.I. 50240)

E057-03	Glass	25 g	so	57.70	
E057-05	Glass	100 g	so	144.30	

$C_{20}H_{19}C1N_4$ FW: 350.85

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum (0.6 mg/200 mL in 50% C_2H_5OH, 1-cm path) .....Actual Value Reported
Biological Test .....Passes Test
CAS: 477-73-6

Salicylaldehyde
OR

1952-59	Glass Single Shipper	500 g	so	116.10	

2-HOC_6H_4CHO FW: 122.13

Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (colorless to reddish oily liquid)
CAS: 90-02-8 DENSITY: 1 L = 1.17 kg FLASH POINT: 78°C

Salicylic Acid, Powder
USP

2020-02	POLYSTORMOR	125 g	fg	84.60	
		12 x 125 g	fg	67.65	811.80
2020-03	POLYSTORMOR	500 g	fg	109.40	

$C_7H_6O_3$ FW: 138.12

Meets USP Requirements
Assay ($C_7H_6O_3$) (dried basis) 99.5-101.0%
Chloride (Cl) .....max. 0.014%
Heavy Metals (as Pb)(µg/g) .....max. 20
Identification .....Passes Test
Loss on Drying .....max. 0.5%
Melting Range .....158-161 °C.
Residue on Ignition .....max. 0.05%
Sulfate (SO_4) .....max. 0.02%
Related Compounds:
4-hydroxybenzoic acid .....max. 0.1%
4-hydroxyisothalic .....max. 0.05%
Phenol (C_6H_5OH) .....max. 0.02%
Other Impurities .....max. 0.05%
Total Impurities .....max. 0.2%
Product Information (not specifications):
Appearance (fluffy, white, crystalline powder)
CAS: 69-72-7 FLASH POINT: 157°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sand, Washed and Dried

7062-04	POLYSTORMOR	500 g	gd	40.45	
		12 x 500 g	gd	32.35	388.20
7062-06	Poly	2.5 kg	gd	133.70	
		4 x 2.5 kg	gd	106.95	427.80

Substances Soluble in HCl .....max. 0.16%
Product Information (not specifications):
Appearance (fine, off-white to gray granules)
CAS: 14808-60-7

Saponin
OR

H277-57	POLYSTORMOR	100 g	so	101.25	
H277-59	POLYSTORMOR	500 g	so	347.65	

pH (20% saturated solution,Water) at 25°C 4.2-5.2
Residue on Ignition .....max. 10%
Water (by Karl Fischer titrn) .....max. 5%
Product Information (not specifications):
Appearance (white to off-white powder)
CAS: 74499-23-3

Schiff's Reagent
Lab Grade

H278-59	Glass Single Shipper	500 g	so	119.80	

Application Test .....Passes Test
Solubility (20 in 100) .....Passes Test
Product Information (not specifications):
Appearance (clear, slightly yellow solution)
DENSITY: 1 L = 1.00 kg IMO: 8:3264

Schiff Reagent, Hotchkiss and McManus
OR
(4.54 g/L Basic Fuchsin (95%), 7.5 mL/L HCl, 4.543 g/L sodium bisulfite in H_2O) For Periodic Acid-Schiff Reaction

E070-01	Glass Single Shipper	500 mL	so	61.20	

pH at 25°C 1.1-1.5
Absorbance at 545 nm (10-mm path vs water) .....max. 0.02
Sensitivity for Aldehyde .....Passes Test
Suitability for Periodic Acid-Schiff Staining .....Passes Test
DENSITY: 1 L = 1.00 kg MERCK INDEX: 13,8470 IMO: 8:3264

Sieves, Molecular
See Molecular Sieves

Silica Gel

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silica Gel, Indicating, Grade 42 (6-16 Mesh)

Silica Gel Desiccant, indicating

4471-04	POLYSTORMOR	500 g	sg	93.15	
		6 x 500 g	sg	74.50	447.00
4471-06	Poly	2.5 kg	sg	366.40	
		4 x 2.5 kg	sg	293.10	1172.40

Moisture Holding Ability ..... Passes Test
Mesh: ..... Passes Test
On U.S. No. 6 Sieve ..... Actual Value Reported
Thru U.S. No. 6 Sieve ..... Actual Value Reported
On U.S. No. 16 Sieve ..... Actual Value Reported
Product Information (not specifications):
Appearance (dark blue crystals)
CAS: 1343-98-2

Silica Gel 30 (100-200 Mesh)(75-150 Microns)

SilicAR

V152-02	POLYSTORMOR	250 g	sg	141.90	
		4 x 250 g	sg	113.50	454.00
V152-13	Poly	5 lb	sg	1075.00	
		4 x 5 lb	sg	731.30	2925.20

Assay (SiO_2, dry basis) ..... min. 99.7%
pH of 5% Slurry in Water 5.5-7.0
Total Volatiles ..... max. 10.0%
Surface Area (m^2/g) 430-530
Mesh:
On U.S. No. 60 Sieve ..... max.%
On U.S. No. 80 Sieve ..... max. 1.2%
On U.S. No. 100 Sieve ..... max. 5.0%
Thru U.S. No. 200 Sieve ..... max. 15.0%
Product Information (not specifications):
Appearance (fine, white powder)
CAS: 63231-67-4

Silica Gel 60 (40-63 Microns)

SilicAR
Special for Column Chromatography
230-400 mesh

V150-10	Poly	1 kg	sg	506.80	
		4 x 1 kg	sg	344.75	1379.00
V150-64	Poly Pail	5 kg	sg	1030.80	
V150-23	Poly Drum	25 kg	sg	2848.85	

Assay (SiO_2, dry basis) ..... min. 99.4%
pH of 5% Slurry in Water 6.5-8.0
Total Volatiles ..... max. 13.0%
Surface Area (m^2/g) 500-600
Pore Volume (cc/g) 0.80-1.0
Pore Diameter (Å), Average 55-77
Average Particle Size (µm) 47-61
Mesh:
Less than 31 Microns ..... max. 17%
On U.S. No. 200 Sieve ..... max. 2.0%
Product Information (not specifications):
Appearance (fine, white powder)
CAS: 63231-67-4

Silica Gel 60 (230-400 Mesh)

SilicAR
For Column Chromatography
60Å, 40-63 micron

V120-01	Poly	1 kg	sg	211.70	
		4 x 1 kg	sg	144.00	576.00
V120-05	Poly Pail	5 kg	sg	685.50	
V120-25	Poly Drum	25 kg	sg	1474.75	

Appearance (white powder) ..... Passes Test
Specific Surface Area, m^2/g 450-550
Pore Volume (mL/g) 0.65-0.85
Mean Pore Diameter, A 50-70
Particle Size Distribution, um
<25 µm ..... max. 15%
>71 µm ..... max. 7%
pH 6.0-7.5
Water Content ..... max. 9%
CAS: 63231-67-4

Silica Gel (35-60 Mesh) Type 60Å

SilicAR
Special for Column Chromatography
250-500 micron particle size

6462-02	Glass	250 g	sg	127.75	
		4 x 250 g	sg	86.90	347.60

Loss on Ignition ..... max. 12%
Mesh:
On U.S. No. 35 Sieve ..... max. 5%
On U.S. No. 60 Sieve ..... min. 95%
Product Information (not specifications):
Appearance (fine, white powder)
CAS: 1343-98-2

Silica Gel (60-100 Mesh) Type 60Å

SilicAR
Special for Column Chromatography
150-250 µ particle size

6451-02	Glass	250 g	sg	172.60	
		4 x 250 g	sg	117.40	469.60

Loss on Ignition ..... max. 12%
Mesh:
On U.S. No. 60 Sieve ..... max. 5%
On U.S. No. 100 Sieve ..... min. 95%
Product Information (not specifications):
Appearance (fine, white powder)
CAS: 1343-98-2

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silica Gel (100-200 Mesh) Type 60Å
SilicAR
Special for Column Chromatography
75-150 µ particle size

6447-02	Glass	250 g	sg	158.70	
		4 x 250 g	sg	107.95	431.80

Loss on Ignition .....max. 12%
Mesh:
On U.S. No. 100 Sieve .....max. 5%
On U.S. No. 200 Sieve .....min. 95%
Product Information (not specifications):
Appearance (fine, white powder)
CAS: 1343-98-2

Silica Gel, Grade 62 (60-200 Mesh)
SilicAR
150Å, 75-250 µ particle size

6551-02	Glass	250 g	sg	164.95	
		4 x 250 g	sg	112.20	448.80
6551-05	Poly Pail	2.5 kg	sg	624.90	

Loss on Ignition .....max. 12%
Mesh:
On U.S. No. 60 Sieve .....max. 5%
On U.S. No. 200 Sieve .....min. 95%
Product Information (not specifications):
Appearance (fine, white powder)
CAS: 1343-98-2

Silica Gel (100-200 Mesh) Type 150Å
SilicAR
Special for Column Chromatography
75-150 micron particle size

6512-02	Glass	250 g	sg	159.90	
		4 x 250 g	sg	108.75	435.00

Loss on Ignition .....max. 12%
Mesh:
On U.S. No. 100 Sieve .....max. 5%
On U.S. No. 200 Sieve .....min. 95%
Product Information (not specifications):
Appearance (fine, white powder)
CAS: 1343-98-2

SilicAR CC-4
Special for Column Chromatography
60Å, 60-200 mesh, 75-250 µ particle size

7086-12	Glass	500 g	sg	530.00	
		4 x 500 g	sg	360.55	1442.20

Chloride (Cl) .....max. 0.02%
Heavy Metals (as Pb) .....max. 0.004%
Iron (Fe) .....max. 0.01%
Loss on Ignition .....max. 15%
Nonvolatile with HF .....max. 0.30%
pH of 5% Slurry at (w/v) 3-5
Product Information (not specifications):
Appearance (white powder)
CAS: 1343-98-2

Silicic Acid, n-Hydrate, Powder
AR

2844-20	Lined Fiber Dr	12 kg	bs	Inquire	

$SiO_2 \cdot nH_2O$

Chloride (Cl) .....max. 0.01%
Sulfate (SO_4) .....max. 0.005%
Loss on Ignition .....max. 16%
Nonvolatile with HF .....max. 0.40%
Heavy Metals (as Pb) .....max. 0.002%
Iron (Fe) .....max. 0.01%
Product Information (not specifications):
Appearance (white powder)
CAS: 63231-67-4

Silver Metal, Precipitated, Powder
AR

2118-01	Glass	4 oz	rp	1082.50	

Ag AW: 107.87

Chloride (Cl) .....max. 0.005%
Iron (Fe) .....max. 0.002%
Copper (Cu) .....max. 0.001%
Foreign Heavy Metals (as Pb) .....max. 0.002%
Sulfate (SO_4) .....max. 0.06%
Product Information (not specifications):
Appearance (coarse gray powder)
CAS: 7440-22-4

Silver Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silver Chloride
AR

2142-01	Glass	4 oz	rp	420.10	
2142-03	Glass	16 oz	rp	1295.65	

$AgCl$ FW: 143.32

Solubility ..... Passes Test
Copper (Cu) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Nitrate (NO_3) ..... max. 0.001%
Product Information (not specifications):
Appearance (white powder, darkening on exposure to light)
CAS: 7783-90-6

Silver Diethyldithiocarbamate
AR (ACS)

7110-55	Glass	25 g	rp	226.65	

$C_5H_{10}AgNS_2$ FW: 256.14

Meets ACS Specifications
Solubility in Pyridine ..... Passes Test
Suitability for Arsenic Determination ..... Passes Test
Product Information (not specifications):
Appearance (pale yellow powder)
CAS: 1470-61-7

Silver Nitrate Crystal
AR (ACS)

2169-34	Glass	1 oz	rp	163.00	
2169-01	Glass	4 oz	rp	331.35	
2169-03	Glass	16 oz	rp	935.45	

$AgNO_3$ FW: 169.87

Meets ACS Specifications
Assay ($AgNO_3$) ..... min. 99.0%
Clarity of Solution ..... Passes Test
Chloride (Cl) ..... max. 5 ppm
Free Acid ..... Passes Test
Substances not Precipitated by HCl ..... max. 0.01%
Sulfate (SO_4) ..... max. 0.002%
Copper (Cu) ..... max. 2 ppm
Iron (Fe) ..... max. 2 ppm
Lead (Pb) ..... max. 0.001%
Product Information (not specifications):
Appearance (colorless, transparent crystals)
CAS: 7761-88-8 IMO: 5.1:1493

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Silver Nitrate, 0.171 Normal Volumetric Solution
StandARd

H391-05	Glass	1 L	rp	158.20	

Normality 0.1705-0.1715
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7761-88-8 DENSITY: 1 L = 1.00 kg

Silver Nitrate, 0.10 Normal (N/10) Volumetric Solution
StandARd

6142-60	Glass	1 L	rp	73.50	
6142-01	Glass	4 L	rp	243.00	
6142-09	Cubitainer	20 L	rp	973.05	

Normality 0.095-0.105
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7761-88-8 DENSITY: 1 L = 1.00 kg

Silver Nitrate, 0.0171 Normal Volumetric Solution
StandARd

H394-09	Cubitainer	20 L	rp	398.30	

Normality 0.0166-0.0176
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7761-88-8 DENSITY: 1 L = 1.00 kg

Silver Nitrate, 0.0141 Normal Volumetric Solution (APHA)
StandARd

H383-05	Glass	1 L	rp	33.85	

Normality 0.0136-0.0146
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7761-88-8 DENSITY: 1 L = 1.00 kg

Soda Caustic
See Sodium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Acetate, Anhydrous
AR (ACS)

7372-12	POLYSTORMOR	500 g	gd	88.15	
		4 x 500 g	gd	70.50	282.00
7372-05	STAKMOR	2.5 kg	gd	368.10	
7372-20	Lined Fiber Dr	12 kg	bs	Inquire	
7372-88	Poly Pail	12 kg	bs	Inquire	
7372-24	Lined Fiber Dr	100 lb	bp	Inquire	

CH_3COONa FW: 82.03

Meets ACS Requirements

Assay (CH_3COONa) ..... min. 99.0%
pH of 5% Solution at 25°C 7.0-9.2
Insoluble Matter ..... max. 0.01%
Loss on Drying at 120°C ..... max. 1.0%
Chloride (Cl) ..... max. 0.002%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%

Product Information (not specifications):
Appearance (fine, white powder)
For Laboratory, Research or Manufacturing Use

CAS: 127-09-3

Sodium Acetate, Anhydrous
GenAR
Suitable for Use in Biotechnology

7800-12	POLYSTORMOR	500 g	ge	59.90	
		4 x 500 g	ge	47.90	191.60

CH_3COONa FW: 82.03

Assay (CH_3COONa) ..... Actual Value Reported
Solubility ..... Passes Test
Calcium, Magnesium, and R_2O_3 Precipitate ..... max. 0.01%
Chloride (Cl) ..... max. 0.002%
Free Acid ..... max. 0.025%
Free Alkali (as Na_2CO_3) ..... max. 0.04%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Loss on Drying at 120°C ..... max. 1.0%
Phosphate (PO_4) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.003%
pH of 5% Solution at 25°C 7.0-9.2
Endotoxin Concentration (EU/g) ..... max. 2.5
Enzyme Activity:
DNase Activity ..... Passes Test
RNase Activity ..... Passes Test
Protease Activity ..... Passes Test

Product Information (not specifications):
Appearance (white powder)

CAS: 127-09-3

Sodium Acetate, Trihydrate, Granular
AR (ACS)

7364-04	POLYSTORMOR	500 g	gd	52.95	
		12 x 500 g	gd	42.35	508.20
7364-06	Poly	2.5 kg	gd	167.40	
		4 x 2.5 kg	gd	133.90	535.60
7364-20	STAKMOR	12 kg	bs	Inquire	
7364-88	Poly Pail	12 kg	bs	Inquire	
7364-26	Lined Fiber Dr	275 lb	bp	Inquire	

$CH_3COONa·3H_2O$ FW: 136.08

Meets ACS Specifications

Assay ($CH_3COONa·3H_2O$) 99.0-101%
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 5 ppm
Magnesium (Mg) ..... max. 0.002%
Phosphate (PO_4) ..... max. 5 ppm
Potassium (K) ..... max. 0.005%
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... max. 0.002%
pH of 5% Solution at 25°C 7.5-9.2

Product Information (not specifications):
Appearance (fine, colorless granules)

CAS: 6131-90-4

Sodium Acetate, Trihydrate
cGMP
USP-GenAR
Suitable for Use in Biotechnology

7768-88	Poly Pail	12 kg	bs	Inquire	

$CH_3COONa·3H_2O$ FW: 136.08

Meets USP & FCC Requirements

Assay (as CH_3COONa) (dried basis) 99.0-101.0%
Appearance ..... Passes Test
Alkalinity (as Na_2CO_3) ..... max. 0.05%
Calcium and Magnesium ..... Passes Test
Chloride (Cl) ..... max. 0.035%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Matter ..... max. 0.05%
Lead (Pb) ..... max 2 mg/kg
Loss on Drying at 120°C 38.0-41.0%
pH 7.5-9.0
Potassium (K) ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%

Meets BP/Ph.Eur. Chemical Specifications

Assay (as CH_3COONa) (dried basis) 99.0-101.0%
Appearance of Solution (clear and colorless) ..... Passes Test
Arsenic (As) ..... max. 2 ppm
Calcium and Magnesium (as Ca) (by EDTA titration) ..... max. 50 ppm
Chlorides (Cl) ..... max. 200 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Iron (Fe) ..... max. 10 ppm

Sodium Acetate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Loss on Drying 39.0-40.5%
pH 7.5-9.0
Reducing Substances .....Passes Test
Sulfate (SO_4) .....max. 200 ppm

Meets JP Chemical Specifications

Assay (as CH_3COONa) (dried basis) .....min. 99.5%
Identification A .....Passes Test
Identification B .....Passes Test
Acidity or Alkalinity .....Passes Test
Arsenic (As) .....max. 2 ppm
Calcium and Magnesium (mL) .....max. 0.5
Clarity and Color of Solution .....Passes Test
Chloride (Cl) .....max. 0.011%
Heavy Metals (as Pb) .....max. 10 ppm
Loss on Drying 39.0-40.5%
Reducing Substances .....Passes Test
Sulfate (SO_4) .....max. 0.017%

CAS: 6131-90-4

Sodium Acetate, Trihydrate, Granular

USP, FCC cGMP

7356-02	POLYSTORMOR	500 g	fg	66.00	
		12 x 500 g	fg	52.80	633.60
7356-06	Poly	2.5 kg	fg	215.25	
		4 x 2.5 kg	fg	172.20	688.80
7356-20	STAKMOR	12 kg	bs	Inquire	

$CH_3COONa·3H_2O$ FW: 136.08

Meets USP & FCC Requirements

Assay (CH_3COONa) (dried basis) 99.0-101.0%
Solubility (10 in 50) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Appearance .....Passes Test
pH of 5% Solution at 25°C 7.5-9.2
Lead (Pb) .....max 2 mg/kg
Loss on Drying 38.0-41.0%
Insoluble Matter .....max. 0.05%
Alkalinity (as Na_2CO_3) .....max. 0.05%
Chloride (Cl) .....max. 0.035%
Sulfate (SO_4) .....max. 0.005%
Calcium and Magnesium .....Passes Test
Heavy Metals (as Pb) .....max. 10 ppm
Potassium Compounds .....Passes Test

CAS: 6131-90-4

Sodium Acid Metaphosphate

See Phosphoric Acid

Sodium Acid Phosphate

See Sodium Phosphate Monobasic

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Arsenite, Powder

AR

7392-04	Glass	500 g	gd	885.60	
		12 x 500 g	gd	708.45	8501.40

$NaAsO_2$ FW: 129.91

Assay ($NaAsO_2$) .....min. 98.0%
Chloride (Cl) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.015%
Identification .....Passes Test
Iron (Fe) .....max. 0.002%
Sulfide (S) .....max. 0.0005%
Sulfate (SO_4) .....max. 0.02%
Product Information (not specifications):
Appearance (white to off-white crystalline powder)

CAS: 7784-46-5 IMO: 6.1:2027

Sodium Azide

OR

1953-57	Poly	100 g	so	57.40	
1953-59	Poly	500 g	so	113.10	
1953-09	Poly Pail	5 kg	so	840.55	
1953-15	Poly Pail	15 kg	so	1674.75	

NaN_3 FW: 65.01

Assay (NaN_3) .....min. 99.7
Loss on Drying at 105°C .....max. 0.1%
Product Information (not specifications):
Appearance (white, crystalline powder)

CAS: 26628-22-8 IMO: 6.1:1687

Sodium Benzoate

NF, FCC cGMP

0168-04	POLYSTORMOR	500 g	fg	89.40	
		6 x 500 g	fg	71.50	429.00
0168-05	STAKMOR	2.5 kg	fg	347.30	

C_6H_5COONa FW: 144.11

Meets NF & FCC Requirements

Assay (C_6H_5COONa) (dried basis) 99.0-100.5%
Alkalinity (as NaOH) .....max. 0.04%
Arsenic (As) .....max. 3 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Identification A .....Passes Test
Identification B .....Passes Test
Lead (Pb) .....max 2 mg/kg
Solubility .....Passes Test
Water (H_2O)(by Karl Fischer titrn) .....max. 1.5%
Product Information (not specifications):
Appearance (white granules or powder)

CAS: 532-32-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Bicarbonate
AR (ACS)

7412-12	POLYSTORMOR	500 g	gd	34.50	
		4 x 500 g	gd	27.60	110.40
7412-06	Poly	2.5 kg	gd	75.70	
		4 x 2.5 kg	gd	60.55	242.20
7412-20	STAKMOR	12 kg	bs	Inquire	
7412-28	Lined Fiber Dr	300 lb	bp	Inquire	

$NaHCO_3$ FW: 84.01

Meets ACS Specifications

Assay ($NaHCO_3$) (by acidimetry) 99.7-100.3%
Ammonium (NH_4) .....max. 5 ppm
Calcium (Ca) .....max. 0.02%
Chloride (Cl) .....max. 0.003%
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 0.015%
Iron (Fe) .....max. 0.001%
Magnesium (Mg) .....max. 0.005%
Phosphate (PO_4) .....max. 0.001%
Potassium (K) .....max. 0.005%
Sulfur Compounds (as SO_4) .....max. 0.003%
Product Information (not specifications):
Appearance (white, crystalline powder)

CAS: 144-55-8

Sodium Bicarbonate, Powder
USP-GenAR
Suitable for Use in Biotechnology

cGMP

7749-06	Poly	2.5 kg	ge	109.45	
		4 x 2.5 kg	ge	87.55	350.20
7749-88	Poly Pail	12 kg	bs	Inquire	
7749-24	Poly Drum	100 lb	bp	Inquire	

$NaHCO_3$ FW: 84.01

Meets USP & FCC Requirements

Assay ($NaHCO_3$) (dried basis) 99.0-100.5%
Limit of Ammonia (NH_3) .....Passes Test
Limit of Sulfur Compounds .....max. 0.015%
Arsenic (As) .....max. 2 ppm
Normal Carbonate .....Passes Test
Chloride (Cl) .....max. 0.015%
Heavy Metals (as Pb) .....max. 5 ppm
Identification A (Sodium) .....Passes Test
Identification B (Bicarbonate) .....Passes Test
Insoluble Substances .....Passes Test
Lead (Pb) .....max 2 mg/kg
Loss on Drying .....max. 0.25%

Meets BP/Ph.Eur. Chemical Specifications

Assay ($NaHCO_3$) 99.0-101.0%
Ammonium (NH_4) .....max. 20 ppm
Appearance of Solution .....Passes Test
Arsenic (As) .....max. 2 ppm
Calcium (Ca) .....max. 100 ppm
Carbonate (pH) .....max. 8.6
Chloride (Cl) .....max. 150 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Iron (Fe) .....max. 20 ppm
Sulfate (SO_4) .....max. 150 ppm

Meets JP Chemical Specifications

Assay ($NaHCO_3$) 99.0-101.0%
Identification .....Passes Test
pH (1 in 20) 7.9-8.4
Clarity and Color of Solution .....Passes Test
Chloride (Cl) .....max. 0.040%
Carbonate (CO_3) .....Passes Test
Ammonium (NH_4) .....Passes Test
Heavy Metals (as Pb) .....max. 5 ppm
Arsenic (As) .....max. 2 ppm
Endotoxin Concentration (EU/g) .....max. 5.0
Product Information (not specifications):
Appearance (white, crystalline powder)

CAS: 144-55-8

Sodium Bicarbonate, Powder
USP, FCC
Suitable for Use in Hemodialysis

cGMP

7396-04	POLYSTORMOR	500 g	fg	50.25	
		12 x 500 g	fg	40.20	482.40
7396-06	Poly	2.5 kg	fg	100.10	
		4 x 2.5 kg	fg	80.05	320.20
7396-20	STAKMOR	12 kg	bs	Inquire	
7396-88	Poly Pail	12 kg	bs	Inquire	
7396-08	Poly Pail	25 kg	bp	Inquire	
7396-26	Lined Fiber Dr	300 lb	bp	Inquire	

$NaHCO_3$ FW: 84.01

Meets USP Requirements

Assay ($NaHCO_3$) (dried basis)(by acidimetry) 99.0-100.5%
Aluminum (Al) .....max. 2 ppm
Arsenic (As) .....max. 2 ppm
Calcium (Ca) .....max. 0.01%
Carbonate (CO_3) .....max. 0.23%
Chloride (Cl) .....max. 0.015%
Copper (Cu) .....max. 1 ppm
Heavy Metals (as Pb)(µg/g) .....max. 5
Identification A .....Passes Test
Identification B .....Passes Test
Insoluble Substances .....Passes Test
Iron (Fe) .....max. 5 ppm
Limit of Ammonia (NH_3) .....Passes Test
Limit of Sulfur Compounds .....max. 0.015%
Loss on Drying .....max. 0.25%
Magnesium (Mg) .....max. 0.004%
Normal Carbonate .....Passes Test
Limit of Organics .....max. 0.01%

Meets FCC Requirements

Assay ($NaHCO_3$) (dried basis)(by acidimetry) 99-100.5%
Ammonia (as NH_3) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Insoluble Substances .....Passes Test
Lead (Pb) .....max 2 mg/kg
Loss on Drying .....max. 0.25%
Product Information (not specifications):
Appearance (white, crystalline powder)
Preserve in well-closed containers.

CAS: 144-55-8

Sodium Biphosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Biphosphate

See Sodium Phosphate Monobasic

Sodium Bisulfate, Monohydrate, Crystal

AR

7432-12	POLYSTORMOR	500 g	gd	126.70	
		4 x 500 g	gd	101.35	405.40
7432-20	STAKMOR	12 kg	bs	Inquire	

$NaHSO_4 \cdot H_2O$ FW: 138.08

Solubility (10 in 50) ..... Passes Test
Chloride (Cl) ..... max. 0.001%
Acidity (as H_2SO_4) 35-36.5%
Arsenic (As) ..... max. 0.0001%
Insoluble Matter and NH_4OH Precipitate ..... max. 0.005%
Calcium and Magnesium Precipitate ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.0005%
Iron (Fe) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%

Product Information (not specifications):
Appearance (white crystals)

CAS: 10034-88-5 IMO: 8:3260

Sodium Bisulfite

FCC, Purified

FOOD GRADE

7444-03	POLYSTORMOR	500 g	gd	45.30	
7444-06	Poly	2.5 kg	gd	158.60	
		6 x 2.5 kg	gd	126.85	761.10
7444-20	STAKMOR	12 kg	bs	Inquire	

$NaHSO_3$ FW: 104.06

Meets FCC Requirements

Assay (as $(Na_2S_2O_5)$) ..... min. 90%
Assay (SO_2) 58.5-67.4%
Solubility ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Matter ..... max. 0.005%
Thiosulfate (S_2O_3) ..... max. 0.05%
Arsenic (As) ..... max. 1 ppm
Lead (Pb) ..... max 2 mg/kg
Iron (Fe) ..... max. 0.002%
Selenium (Se) ..... max 5 mg/kg
Chloride (Cl) ..... max. 0.02%

Product Information (not specifications):
Appearance (white granules)

CAS: 7631-90-5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Bisulfite, Granular

AR (ACS)

7448-12	POLYSTORMOR	500 g	gd	48.35	
		4 x 500 g	gd	38.65	154.60
7448-06	Poly	2.5 kg	gd	193.85	
		4 x 2.5 kg	gd	155.05	620.20
7448-20	STAKMOR	12 kg	bs	Inquire	
7448-24	Lined Fiber Dr	100 lb	bp	Inquire	

$NaHSO_3$ FW: 104.06

Meets ACS Specifications

Assay (as SO_2) ..... min. 58.5%
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.002%

Product Information (not specifications):
Appearance (white granules)

CAS: 7631-90-5

Sodium Borate, 10-Hydrate

NF-GenAR
Suitable for Use in Biotechnology

cGMP

7792-88	Poly Pail	12 kg	bs	Inquire	

$Na_2B_4O_7 \cdot 10H_2O$ FW: 381.37

Meets NF Requirements

Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.0-105.0%
Carbonate and Bicarbonate ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test

Meets BP/Ph.Eur. Chemical Specifications

Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.0-103.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance of Solution ..... Passes Test
pH of 4% Solution at 25°C 9.0-9.6
Sulfate (SO_4) ..... max. 50 ppm
Ammonium (NH_4) ..... max. 10 ppm
Arsenic (As) ..... max. 5 ppm
Calcium (Ca) ..... max. 100 ppm
Heavy Metals (as Pb) ..... max. 25 ppm

Meets JP Chemical Specifications

Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.0-103.0%
Arsenic (As) ..... max. 5 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
pH (1 in 20) 9.1-9.6
Clarity and Color of Solution ..... Passes Test
Carbonate and Bicarbonate ..... Passes Test
Heavy Metals (as Pb) ..... max. 20 ppm

Product Information (not specifications):
Appearance (colorless, efflorescent, crystals or crystalline masses or white crystalline powder)
Preserve in Tight Containers

CAS: 1303-96-4

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Borate, 10-Hydrate, Granular
AR (ACS)

7457-06	Poly	2.5 kg	gd	177.65	
		4 x 2.5 kg	gd	142.10	568.40
7457-20	STAKMOR	12 kg	bs	Inquire	

$Na_2B_4O_7 \cdot 10H_2O$ FW: 381.37

Meets ACS Specifications

Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.5-105.0%
pH of 0.01M Solution at 25°C 9.15-9.20
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 5 ppm

Product Information (not specifications):
Appearance (white granules)

CAS: 1303-96-4

Sodium Borate, 10-Hydrate, Powder
AR (ACS)

7460-20	STAKMOR	12 kg	bs	Inquire	

$Na_2B_4O_7 \cdot 10H_2O$ FW: 381.37

Meets ACS Specifications

Assay ($Na_2B_4O_7 \cdot 10H_2O$) 99.5-105.0%
pH of 0.01M Solution at 25°C 9.15-9.20
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 5 ppm

Product Information (not specifications):
Appearance (white powder)

CAS: 1303-96-4

Sodium Borohydride

E823-55	Poison Pack	25 g	so	67.95	
E823-57	Poison Pack	100 g	so	125.75	

$NaBH_4$ FW: 37.83

Assay ($NaBH_4$) ..... min. 96%
Identification ..... Passes Test

Product Information (not specifications):
Appearance (fine, white powder)

CAS: 16940-66-2 IMO: 4.3:1426

Sodium Bromide, Granular
AR

0535-20	STAKMOR	12 kg	bs	Inquire	

NaBr FW: 102.89

Alkalinity (as Na_2CO_3) ..... max. 0.015%
Barium (Ba) ..... max. 0.002%
Bromate (BrO_3) ..... max. 0.001%
Chloride (Cl) ..... max. 0.25%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.005%
Solubility (20 in 150) ..... Passes Test
Sulfate (SO_4) ..... max. 0.003%

Product Information (not specifications):
Appearance (white granules)

CAS: 7647-15-6

Sodium Carbonate, Anhydrous, Granular
AR (ACS)

7527-04	POLYSTORMOR	500 g	gd	64.50	
		12 x 500 g	gd	51.60	619.20
7527-06	Poly	2.5 kg	gd	199.25	
		4 x 2.5 kg	gd	159.40	637.60
7527-20	Lined Fiber Dr	12 kg	bs	Inquire	
7527-26		250 lb	bp	Inquire	

Na_2CO_3 FW: 105.99

Meets ACS Specifications

Assay (Na_2CO_3) (dried basis)(by acidimetry) ..... min. 99.5%
Insoluble Matter ..... max. 0.01%
Loss on Heating at 285°C ..... max. 1.0%
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Silica (SiO_2) ..... max. 0.005%
Sulfur Compounds (as SO_4) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Calcium (Ca) ..... max. 0.03%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%

Product Information (not specifications):
Appearance (white granules)

CAS: 497-19-8

Sodium Carbonate, Anhydrous, Granular
AR (ACS) Primary Standard

7528-04	Glass	500 g	gd	92.95	
		12 x 500 g	gd	74.35	892.20
7528-20	Poly Pail	12 kg	bs	Inquire	

Na_2CO_3 FW: 105.99

Meets ACS Specifications

Assay (Na_2CO_3 (after 2 hr at 285°C) 99.95-100.05%
Calcium (Ca) ..... max. 0.02%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.0005%
Insoluble Matter ..... max. 0.01%

Sodium Carbonate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iron (Fe) ..... max. 0.0005%
Loss on Heating at 285°C ..... max. 1.0%
Magnesium (Mg) ..... max. 0.004%
Phosphate (PO_4) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Silica (SiO_2) ..... max. 0.005%
Sulfur Compounds (as SO_4) ..... max. 0.003%
Solubility (8 in 50) ..... Passes Test
Product Information (not specifications):
Appearance (white granules)

CAS: 497-19-8

Sodium Carbonate, Anhydrous, Powder
AR (ACS)

7521-20	Lined Fiber Dr	12 kg	bs	Inquire	
7521-88	Poly Pail	12 kg	bs	Inquire	

Na_2CO_3 FW: 105.99

Meets ACS Specifications

Assay (Na_2CO_3) (dried basis)(by acidimetry) ..... min. 99.5%
Insoluble Matter ..... max. 0.01%
Loss on Heating at 285°C ..... max. 1.0%
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 0.001%
Silica (SiO_2) ..... max. 0.005%
Sulfur Compounds (as SO_4) ..... max. 0.003%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Calcium (Ca) ..... max. 0.03%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Product Information (not specifications):
Appearance (white powder)

CAS: 497-19-8

Sodium Carbonate, Monohydrate, Granular
AR (ACS)

7516-04	POLYSTORMOR	500 g	gd	58.40	
		12 x 500 g	gd	46.70	560.40
7516-06	Poly	2.5 kg	gd	144.25	
		4 x 2.5 kg	gd	115.40	461.60
7516-20	STAKMOR	12 kg	bs	Inquire	

$Na_2CO_3 \cdot H_2O$ FW: 124.00

Meets ACS Specifications

Assay ($Na_2CO_3 \cdot H_2O$) (by acidimetry) ..... min. 99.5%
Loss on Drying at 150°C 13.0-15.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Phosphate (PO_4) ..... max. 5 ppm
Silica (SiO_2) ..... max. 0.005%
Sulfur Compounds (as SO_4) ..... max. 0.004%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Calcium (Ca) ..... max. 0.03%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.005%
Product Information (not specifications):
Appearance (white granules)

CAS: 5968-11-6

Sodium Chloride, Crystal
AR (ACS)

7581-12	POLYSTORMOR	500 g	gd	32.15	
		4 x 500 g	gd	25.70	102.80
7581-06	Poly	2.5 kg	gd	88.35	
		4 x 2.5 kg	gd	70.65	282.60
7581-20	STAKMOR	12 kg	bs	Inquire	
7581-19	Poly Pail	12 kg	bs	Inquire	
7581-24	Lined Fiber Dr	100 lb	bp	Inquire	
7581-60	Flowmor	50 kg	bp	Inquire	

NaCl FW: 58.44

Meets ACS Specifications

Assay (NaCl) (by Ag titrn) ..... min. 99.0%
pH of 5% Solution at 25°C 5.0-9.0
Insoluble Matter ..... max. 0.005%
Iodide (I) ..... max. 0.002%
Bromide (Br) ..... max. 0.01%
Chlorate and Nitrate (as NO_3) ..... max. 0.003%
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.004%
Barium (Ba) ..... Passes Test
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 2 ppm
Calcium (Ca) ..... max. 0.002%
Magnesium (Mg) ..... max. 0.001%
Potassium (K) ..... max. 0.005%
Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 7647-14-5

Sodium Chloride, Granular
USP-GenAR
Intended for Hemodialysis Use

cGMP

7713-04	POLYSTORMOR	500 g	ge	44.40	
		12 x 500 g	ge	35.50	426.00
7713-06	Poly	2.5 kg	ge	149.75	
		4 x 2.5 kg	ge	119.80	479.20
7713-20	STAKMOR	12 kg	bs	Inquire	
7713-88	Poly Pail	12 kg	bs	Inquire	
7713-25	Poly Drum	110 lb	bp	Inquire	
7713-29	Poly Drum	220 lb	bp	Inquire	

NaCl FW: 58.44

Meets USP & FCC Requirements

Assay (NaCl)(USP) (dried basis) 99.0-100.5%
Assay (as NaCl) (FCC) (ignited basis) 99.0-100.5%
Appearance of Solution ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Loss on Drying at 105°C ..... max. 0.5%
Iodide (I) ..... Passes Test
Aluminum (Al) ..... max. 0.2 ppm
Magnesium and Alkaline Earth Metals (as Ca) ..... max. 0.01%
Arsenic (As) ..... max. 1 ppm
Barium (Ba) ..... Passes Test
Ferrocyanide ..... Passes Test
Sulfate (SO_4) ..... max. 0.020%
Iron (Fe) ..... max. 2 ppm
Nitrite (NO_2) ..... max. 0.01
Heavy Metals (as Pb) (USP) ..... max. 5 ppm
Limit of Bromide ..... max. 0.010%
Limit of Phosphate ..... max. 0.0025%
Limit of Potassium ..... max. 0.05%
Calcium and Magnesium (FCC) ..... max. 0.35%
Heavy Metals (as Pb)(FCC) ..... max 2 mg/kg

Meets BP/Ph.Eur. Chemical Specifications

Assay (NaCl) (dried basis) 99.0-100.5%
Appearance of Solution ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Bromide (Br) ..... max. 100 ppm
Ferrocyanide ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Iodide (I) ..... Passes Test
Nitrite (NO_2) ..... max. 0.01
Phosphate (PO_4) ..... max. 25 ppm
Sulfate (SO_4) ..... max. 200 ppm
Aluminum (Al) ..... max. 0.2 ppm
Arsenic (As) ..... max. 1 ppm
Barium (Ba) ..... Passes Test
Iron (Fe) ..... max. 2 ppm
Magnesium and Alkaline Earth Metals (as Ca) ..... max. 100 ppm
Potassium (K) ..... max. 500 ppm
Heavy Metals ..... max. 5 ppm
Loss on Drying at 105°C ..... max. 0.5%
Endotoxin Concentration, ... Passes Test
Endotoxin Concentration (EU/g) ..... max. 2.5

Meets JP Chemical Specifications

Assay 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Bromide (Br) ..... Passes Test
Iodide (I) ..... Passes Test
Ferrocyanide ..... Passes Test
Iron (Fe) ..... Passes Test
Heavy Metals (as Pb) ..... max. 3 ppm
Barium (Ba) ..... Passes Test
Magnesium and Alkaline Earth Metals ..... Passes Test
Phosphate (PO_4) ..... Passes Test
Sulfates (as SO_4) ..... Passes Test
Arsenic (As) ..... max. 2 ppm
Loss on Drying at 105°C ..... max. 0.5%

Preserve in well-closed containers.
Must be subjected to further processing during the preparation of injectable dosage forms.

CAS: 7647-14-5

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Chloride, Granular
USP, FCC

cGMP

4577-88	Poly Pail	12 kg	bs	Inquire	

NaCl FW: 58.44

Meets USP & FCC Requirements

Assay (NaCl)(FCC) 99.0-100.5%
Assay (NaCl)(USP) (dried basis) 99.0-100.5%
Acidity or Alkalinity ..... Passes Test
Aluminum (Al) ..... max. 0.2
Arsenic (As) (µg/g) ..... max. 1
Barium (Ba) ..... Passes Test
Calcium and Magnesium (as Ca) ..... max. 0.35%
Bromide (Br) ..... max. 0.010%
Iodide (I) ..... Passes Test
Heavy Metals (as Pb) ..... max. 2 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Iron (Fe) ..... max. 2 ppm
Loss on Drying at 105°C ..... max. 0.5%
pH of a 0.9% (w/v) Solution 5.0-6.9
Ferrocyanide ..... Passes Test
Solubility (10 in 50) ..... Passes Test
Sulfate (SO_4) ..... max. 0.020%
Appearance of Solution ..... Passes Test
Magnesium and Alkaline Earth Metals (as Ca) ..... max. 0.01%
Phosphate (PO_4) ..... max. 0.0025%
Nitrite (NO_2) ..... max. 0.01
Potassium (K) ..... max. 0.05%

Product Information (not specifications):
Appearance (white granules)
Preserve in well-closed containers.
Must be subjected to further processing during the preparation of injectable dosage forms.

CAS: 7647-14-5

Sodium Chloride, Granular
USP, FCC

cGMP

7532-04	POLYSTORMOR	500 g	fg	38.25	
		12 x 500 g	fg	30.60	367.20
7532-06	Poly	2.5 kg	fg	113.95	
		6 x 2.5 kg	fg	91.15	546.90
7532-20	STAKMOR	12 kg	bs	Inquire	
7532-19	Poly Pail	12 kg	bs	Inquire	
7532-32	Bag	50 lb	bp	Inquire	
7532-25	Lined Fiber Dr	110 lb	bp	Inquire	
7532-13	Poly Drum	220 lb	bp	Inquire	
7532-28		350 lb	bp	Inquire	

NaCl FW: 58.44

Meets USP & FCC Requirements

Assay (NaCl)(USP) (dried basis) 99.0-100.5%
Assay (as NaCl) (FCC) (ignited basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Solubility (10 in 50) ..... Passes Test
Loss on Drying at 105°C ..... max. 0.5%
Acidity or Alkalinity ..... Passes Test
Iodide (I) ..... Passes Test
Barium (Ba) ..... Passes Test

Sodium Chloride

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium and Alkaline Earth Metals (as Ca) .....max. 100 ppm
Calcium and Magnesium .....max. 0.35%
Arsenic (As) .....max. 1 ppm
Nitrite (NO_2) .....max. 0.01
Heavy Metals (as Pb) .....max. 2 ppm
Sulfate (SO_4) .....max. 0.020%
Phosphate (PO_4) .....max. 25 ppm
Iron (Fe) .....max. 2 ppm
Bromide (Br) .....max. 0.010%
Appearance of Solution .....Passes Test
Ferrocyanide .....Passes Test
Aluminum (Al) .....max. 0.2 ppm
Potassium (K) .....max. 0.05%

Product Information (not specifications):
Appearance (white, crystalline granules, slightly hygroscopic)
Preserve in well-closed containers.
Must be subjected to further processing during the preparation of injectable dosage forms.

CAS: 7647-14-5

Sodium Chloride, Granular
CP

7544-06	Poly	2.5 kg	gd	97.35	
		6 x 2.5 kg	gd	77.85	467.10
7544-20	STAKMOR	12 kg	bs	Inquire	

NaCl FW: 58.44

Assay (NaCl) (dried basis) 99.5-100.5%
Appearance (white, crystalline granules) .....Passes Test
Solubility (10 in 50) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Loss on Drying at 105°C .....max. 0.5%
Acidity or Alkalinity .....Passes Test
Limit of Bromide .....max. 0.010%
Calcium and Magnesium (as Ca) .....max. 0.005%
Magnesium and Alkaline Earth Metals (as Ca) .....max. 0.01%
Phosphate (PO_4) .....max. 0.0025%
Barium (Ba) .....Passes Test
Arsenic (As) .....max. 0.0001%
Heavy Metals (as Pb) .....max. 0.0005%
Iron (Fe) .....max. 0.0002%
Sulfate (SO_4) .....max. 200 ppm
Iodide (I) .....Passes Test
Copper (Cu) .....max. 0.0002%
Sodium Ferrocyanide .....Passes Test

CAS: 7647-14-5

See Drug Development and Manufacturing section for more information about scale-up and process chromatography products, starting on page 64.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Chloride, Powder
USP-GenAR cGMP

7540-04	POLYSTORMOR	500 g	fg	42.20	
		12 x 500 g	fg	33.75	405.00
7540-06	Poly	2.5 kg	fg	138.85	
		4 x 2.5 kg	fg	111.05	444.20
7540-88	Poly Pail	12 kg	bs	Inquire	
7540-26	Flowmor	100 lb	bp	Inquire	

NaCl FW: 58.44

Meets USP Requirements
Assay (NaCl) (dried basis) 99.0-100.5%
Appearance of Solution .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Acidity or Alkalinity .....Passes Test
Iodide (I) .....Passes Test
Limit of Bromide .....max. 0.010%
Loss on Drying at 105°C .....max. 0.5%
Aluminum (Al)(µg/g) .....max. 0.2
Barium (Ba) .....Passes Test
Magnesium and Alkaline Earth Metals (as Ca) .....max. 0.01%
Arsenic (As) .....max. 1 ppm
Heavy Metals (as Pb) .....max. 5 ppm
Ferrocyanide .....Passes Test
Iron (Fe) .....max. 2 ppm
Potassium (K) .....max. 500 ppm
Sulfate (SO_4) (USP) .....max. 0.020%
Nitrite (NO_2) .....max. 0.01
Limit of Phosphate .....max. 25 ppm
Solubility (5 in 50) .....Passes Test
Mesh:
Thru U.S. No. 20 Sieve .....min. 100%
On U.S. No. 80 Sieve 30-50%

Meets BP/Ph.Eur. Chemical Specifications
Assay (NaCl) (dried basis) 99.0-100.5%
Acidity or Alkalinity .....Passes Test
Aluminum (Al) .....max. 0.2 ppm
Bromide (Br) .....max. 100 ppm
Barium (Ba) .....Passes Test
Iodide (I) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Loss on Drying at 100-105°C .....max. 0.5%
Sulfate (SO_4) .....max. 200 ppm
Appearance of Solution .....Passes Test
Magnesium and Alkaline Earth Metals (as Ca) .....max. 100 ppm
Arsenic (As) .....max. 1 ppm
Endotoxin Concentration, ...Passes Test
Heavy Metals (as Pb) .....max. 5 ppm
Iron (Fe) .....max. 2 ppm
Ferrocyanide .....Passes Test
Nitrite (NO_2) .....max. 0.01
Potassium (K) .....max. 500 ppm
Limit of Phosphate .....max. 25 ppm

Meets JP Chemical Specifications
Assay (NaCl) (dried basis) 99.0-100.5%
Acidity or Alkalinity .....Passes Test
Arsenic (As) .....max. 2 ppm
Barium (Ba) .....Passes Test
Bromide (Br) .....Passes Test
Ferrocyanide .....Passes Test
Iron (Fe) .....Passes Test
Iodide (I) .....Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Magnesium and Alkaline Earth Metals ..... Passes Test
Phosphate (PO_4) ..... Passes Test
Sulfates (as SO_4) ..... Passes Test
Clarity and Color ..... Passes Test
Heavy Metals (as Pb) ..... max. 3 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Loss on Drying at 105°C ..... max. 0.5%
Product Information (not specifications):
Appearance (white, crystalline powder)
Preserve in well-closed containers.
Must be subjected to further processing during the preparation of injectable dosage forms.

CAS: 7647-14-5

Sodium Citrate, Dihydrate, Crystal
AR (ACS)

0754-12	POLYSTORMOR	500 g	gd	54.35	
		4 x 500 g	gd	43.45	173.80
0754-06	Poly	2.5 kg	gd	170.50	
		4 x 2.5 kg	gd	136.40	545.60
0754-20	Poly Pail	12 kg	bs	Inquire	

$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$ FW: 294.10

Meets ACS Specifications
Assay ($HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$) ..... min. 99.0%
pH of 5% Solution at 25°C 7.0-9.0
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.003%
Sulfate (SO_4) ..... max. 0.005%
Ammonia (as NH_3) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Product Information (not specifications):
Appearance (colorless or white crystals)

CAS: 6132-04-3

Sodium Citrate, Dihydrate, Crystal
USP-GenAR
Suitable for Use in Biotechnology

7773-04	Glass	500 g	ge	73.25	
		12 x 500 g	ge	58.60	703.20
7773-06	Glass	2.5 kg	ge	215.85	
		4 x 2.5 kg	ge	172.65	690.60
7773-88	Poly Pail	12 kg	bs	Inquire	
7773-20	Poly Drum	100 lb	bp	Inquire	

$C_6H_5Na_3O_7 \cdot 2H_2O$ FW: 294.10

Meets USP Requirements
Assay ($C_6H_5Na_3O_7$) (anhydrous basis) 99.0-100.5%
Alkalinity ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Tartrate ..... Passes Test
Water (H_2O) 10.0-13.0%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Meets BP/Ph.Eur. Chemical Specifications
Assay ($C_6H_5Na_3O_7$) (calculated on the anhydrous basis) 99.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Acidity or Alkalinity ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Chloride (Cl) ..... max. 50 ppm
Oxalate (C_2O_4) ..... max. 300 ppm
Sulfate (SO_4) ..... max. 150 ppm
Readily Carbonizable Substances ..... Passes Test
Water (H_2O) 11.0-13.0%
Appearance of Solution ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 5
Product Information (not specifications):
Appearance (fine, white to slightly yellow crystals)

CAS: 6132-04-3

Sodium Citrate, Dihydrate, Crystal
USP, FCC cGMP

0734-04	Glass	500 g	fg	63.25	
		12 x 500 g	fg	50.60	607.20
0734-06	Glass	2.5 kg	fg	201.20	
		4 x 2.5 kg	fg	160.95	643.80
0734-23	STAKMOR	12 kg	bs	Inquire	
0734-88	Poly Pail	12 kg	bs	Inquire	

$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$ FW: 294.10

Meets USP Requirements
Assay (anhydrous basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Water (H_2O) 10.0-13.0%
Alkalinity ..... Passes Test
Tartrate ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Meets FCC Requirements
Assay (anhydrous basis) 99.0-100.5%
Identification ..... Passes Test
Alkalinity ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Water (H_2O) 10.0-13.0%
Mesh:
Thru U.S. No. 50 Sieve ..... Actual Value Reported
Solubility (5 in 50) ..... Passes Test
Product Information (not specifications):
Appearance (colorless or white to slightly yellow crystals)

CAS: 6132-04-3

Sodium Cyanide, Granular
AR (ACS)

7616-25		9 kg	gd	518.70	

NaCN FW: 49.01

Meets ACS Specifications
Assay (NaCN) (by Ag titrn) ..... min. 95.0%
Phosphate (PO_4) ..... max. 0.02%
Chloride (Cl) ..... max. 0.15%
Sulfate (SO_4) ..... max. 0.05%

Sodium Dodecyl Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfide (S) ..... max. 0.005%
Thiocyanate (SCN) ..... max. 0.02%
Total Iron (Fe) ..... max. 0.005%
Lead (Pb) ..... max. 5 ppm
Product Information (not specifications):
Appearance (white, deliquescent granules)
CAS: 143-33-9 IMO: 6.1:1689

Sodium Dodecyl Sulfate, 20% Solution

GenAR
Suitable for Use in Biotechnology

V113-02	Poly	200 mL	ge	55.50	
		4 x 200 mL	ge	49.85	199.40

Sodium Dodecyl Sulfate (20g/100 mL) ..... Passes Test
Filtered through a 0.2 micron filter.
CAS: 151-21-3

Sodium Ethylenediaminetetraacetate

See (Ethylenedinitrilo)Tetraacetic Acid

Sodium Fluoride, Powder

AR (ACS)

7636-20	STAKMOR	12 kg	bs	Inquire	

NaF FW: 41.99

Meets ACS Specifications

Assay (NaF) ..... min. 99%
Insoluble Matter ..... max. 0.02%
Loss on Drying at 150°C ..... max. 0.3%
Chloride (Cl) ..... max. 0.005%
Titrable Acid (meq/g) ..... max. 0.03
Titrable Base (meq/g) ..... max. 0.01
Sodium Fluosilicate (Na_2SiF_6) ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.03%
Sulfite (SO_3) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.003%
Iron (Fe) ..... max. 0.003%
Potassium (K) ..... max. 0.02%
Product Information (not specifications):
Appearance (white powder)
CAS: 7681-49-4 IMO: 6.1:1690

Sodium Hexametaphosphate

E024-61	Glass	1 kg	so	71.55	

Phosphorus Pentoxide (P_2O_5) 66.5-68.0%
pH of 1% Solution at 25°C 6.7-7.2
Product Information (not specifications):
Appearance (clear, glass-like crystals)
CAS: 10124-56-8

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, Pellet

AR (ACS)

7708-10	POLYSTORMOR	500 g	gd	45.70	
		4 x 500 g	gd	36.55	146.20
7708-12	POLYSTORMOR	1 kg	gd	81.00	
		6 x 1 kg	gd	64.80	388.80
7708-06	Poly	2.5 kg	gd	116.75	
		4 x 2.5 kg	gd	93.40	373.60
7708-20	STAKMOR	12 kg	bs	Inquire	
7708-88	Poly Pail	12 kg	sd	309.60	
7708-28		25 kg	bp	Inquire	

NaOH FW: 40.00

Meets ACS Specifications

Assay (NaOH) (by acidimetry) ..... min. 98%
Identification ..... Passes Test
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Copper (Cu) ..... max. 0.001%
Heavy Metals (as Ag) ..... max. 0.001%
Insoluble Matter ..... max. 0.003%
Iron (Fe) ..... max. 0.0003%
Magnesium (Mg) ..... max. 0.002%
Mercury (Hg) ..... max. 0.1 ppm
Nickel (Ni) ..... max. 0.0005%
Nitrogen Compounds (as N) ..... max. 0.0003%
Phosphate (PO_4) ..... max. 0.0002%
Potassium (K) ..... max. 0.02%
Sodium Carbonate (Na_2CO_3) ..... max. 0.4%
Sulfate (SO_4) ..... max. 0.0005%
Product Information (not specifications):
Appearance (white hygroscopic pellets)
CAS: 1310-73-2 IMO: 8:1823

Sodium Hydroxide, Pellet

cGMP

NF-GenAR
Suitable for Use in Biotechnology

7772-06	Poly	2.5 kg	ge	171.50	
		4 x 2.5 kg	ge	137.20	548.80
7772-88	Poly Pail	12 kg	bs	Inquire	
7772-28		25 kg	bp	Inquire	
7772-25	Poly Drum	110 lb	bp	Inquire	
7772-26	Lined Fiber Dr	110 lb	bp	Inquire	
7772-30	Poly Drum	220 lb	bp	Inquire	

NaOH FW: 40.00

Meets NF & FCC Requirements

Assay (Total alkali as NaOH) 95.0-100.5%
Insoluble Substances and Organic Matter ..... Passes Test
Identification ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%
Potassium (K) ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg)(mg/kg) ..... max. 0.1
Arsenic (As)(mg/kg) ..... max. 3
Carbonate (as Na_2CO_3) ..... max. 2.0%
Endotoxin Concentration (EU/g) ..... max. 5

Meets BP/Ph.Eur. Chemical Specifications

Assay (Total alkali as NaOH) 97.0-100.5%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Heavy Metals (as Pb) ..... max. 20 ppm
Iron (Fe) ..... max. 10 ppm
Carbonate (as Na_2CO_3) ..... max. 2.0%
Chloride (Cl) ..... max. 50 ppm
Sulfate (SO_4) ..... max. 50 ppm
Appearance of Solution ..... Passes Test

Meets JP Chemical Specifications

Assay 95.0-101.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Clarity and Color of Solution ..... Passes Test
Chloride (Cl) ..... max. 0.050%
Heavy Metals (as Pb) ..... max. 30 ppm
Potassium (K) ..... Passes Test
Carbonate (as Na_2CO_3) ..... max. 2.0%
Mercury (Hg) ..... Passes Test

Product Information (not specifications):
Appearance (white hygroscopic pellets)

CAS: 1310-73-2 IMO: 8:1823

Sodium Hydroxide, Pellet

NF, FCC

cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7680-04	POLYSTORMOR	500 g	fg	67.40	
		12 x 500 g	fg	53.90	646.80
7680-06	Poly	2.5 kg	fg	161.10	
		4 x 2.5 kg	fg	128.85	515.40
7680-20	STAKMOR	12 kg	bs	Inquire	
7680-88	Poly Pail	12 kg	bs	Inquire	
7680-28		25 kg	bp	Inquire	
7680-25	Lined Fiber Dr	110 lb	bp	Inquire	

NaOH FW: 40.00

Meets NF Requirements

Assay (Total alkali as NaOH) (by acidimetry) 95.0-100.5%
Appearance (white hygroscopic pellets) ..... Passes Test
Insoluble Substances and Organic Matter ..... Passes Test
Identification ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.003%
Potassium (K) ..... Passes Test
Sodium Carbonate (Na_2CO_3) ..... max. 3.0%

Meets FCC Requirements

Assay (Total alkali as NaOH) (by acidimetry) 95.0-100.5%
Identification ..... Passes Test
Insoluble Substances and Organic Matter ..... Passes Test
Lead (Pb) ..... max 2 mg/kg
Mercury (Hg) ..... max 0.1 mg/kg
Arsenic (As) ..... max 3 mg/kg
Sodium Carbonate (Na_2CO_3) ..... max. 3.0%

CAS: 1310-73-2 IMO: 8:1823

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, 50% Solution

AR

7705-04	Poly	500 mL	gs	65.70	
		12 x 500 mL	gs	53.10	637.20
7705-06	Poly	1 L	gs	86.25	
		6 x 1 L	gs	69.70	418.20
7705-08	Poly	4 L	gs	135.10	
		4 x 4 L	gs	109.15	436.60
7705-18	Poly Pail	19 L	sb	415.00	
7705-27	Poly Drum	600 lb	bp	Inquire	

NaOH

Assay (NaOH) 49.5-52%
Identification ..... Passes Test
Ammonium Hydroxide Precipitate ..... max. 0.010%
Chloride (Cl) ..... max. 0.0025%
Heavy Metals (as Ag) ..... max. 0.0015%
Iron (Fe) ..... max. 0.0005%
Nitrogen Compounds (as N) ..... max. 0.0005%
Potassium (K) ..... max. 0.025%
Phosphate (PO_4) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.0025%
Sodium Carbonate (Na_2CO_3) ..... max. 0.1%

Product Information (not specifications):
Appearance (clear, colorless liquid)
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 10.0 Normal Volumetric Solution

StandARd

H385-05	Poly	1 L	st	33.65	
H385-07	Poly	4 L	st	58.45	

Normality 9.95-10.05
Identification ..... Passes Test

Product Information (not specifications):
Appearance (clear, colorless solution)
IMPORTANT: Material will freeze if stored below 41°F (5°C).
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 1.0 Normal Volumetric Solution

StandARd

4693-60	Poly	1 L	st	22.00	
4693-01	Cubitainer	4 L	st	62.60	
4693-09	Cubitainer	20 L	st	213.70	

Normality 0.995-1.005

Product Information (not specifications):
Appearance (clear, colorless solution)
Protect from air to avoid absorption of carbon dioxide.

CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Hydroxide, 0.5 Normal (N/2) Volumetric Solution

StandARd

H380-09	Cubitainer	20 L	st	215.00	

Normality 0.499-0.501
Product Information (not specifications):
Appearance (clear, colorless solution)
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2 IMO: 8:1824

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hydroxide, 0.10 Normal (N/10) Volumetric Solution

StandARd

6146-60	Poly	1 L	st	20.70	
6146-01	Cubitainer	4 L	st	56.50	
6146-09	Cubitainer	20 L	st	143.65	

Normality 0.0995-0.1005
Product Information (not specifications):
Appearance (clear, colorless solution)
Protect from air to avoid absorption of carbon dioxide.
CAS: 1310-73-2

Caustic Spill Cleanup Products available. See pp. 378.

Sodium Hypochlorite Solution

AR
(10% Available Chlorine)

7216-14	Poly	500 mL	gs	47.20	
		6 x 500 mL	gs	38.15	228.90
7216-08	Poly	4 L	gs	222.20	
		4 x 4 L	gs	179.55	718.20

Calcium (Ca) .....max. 0.001%
Phosphate (PO_4) .....max. 0.0005%
Available Chlorine .....min. 10%
Trace Impurities (in ppm):
Copper (Cu) .....max. 1 ppm
Iron (Fe) .....max. 1 ppm
Lead (Pb) .....max. 1 ppm
Nickel (Ni) .....max. 1 ppm
Product Information (not specifications):
Appearance (clear, pale greenish-yellow solution)
CAS: 7681-52-9 DENSITY: 1 L = 1.173 kg IMO: 8:1791

Sodium Hyposulfite

See Sodium Thiosulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Iodide, Granular

AR

1141-02	Glass	125 g	gd	106.00	
		12 x 125 g	gd	84.80	1017.60
1141-12	Glass	500 g	gd	327.40	
		4 x 500 g	gd	261.90	1047.60
1141-06	Glass	2.5 kg	gd	1255.25	
		4 x 2.5 kg	gd	1004.20	4016.80

NaI FW: 149.89

Alkalinity (as NaOH) .....max. 0.02%
Aluminum (Al) .....max. 0.0005%
Barium (Ba) .....max. 0.002%
Chloride and Bromide (as Cl) .....max. 0.01%
Heavy Metals (as Pb) .....max. 0.0005%
Insoluble Matter .....max. 0.005%
Iodate (IO_3) .....max. 0.0003%
Iron (Fe) .....max. 5 ppm
Lead (Pb) .....Actual Value Reported
Nitrogen Compounds (as N) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Potassium (K) .....max. 0.01%
Sulfate (SO_4) .....max. 0.005%
Solubility .....Passes Test
Hydrazine Monohydrate .....max. 0.5 ppm
Product Information (not specifications):
Appearance (coarse, white granules and powder all finer than 4 mesh)
CAS: 7681-82-5

Sodium Lauryl Sulfate

See Dodecyl Sodium Sulfate and Sodium Dodecyl Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Metabisulfite, Granular

AR (ACS)

7777-20	STAKMOR	12 kg	bs	Inquire	
7777-27	Lined Fiber Dr	400 lb	bp	Inquire	

$Na_2S_2O_5$ FW: 190.11

Meets ACS Specifications
Assay ($Na_2S_2O_5$) .....min. 97.0%
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.05%
Thiosulfate (S_2O_3) .....max. 0.05%
Heavy Metals (as Pb) .....max. 0.001%
Iron (Fe) .....max. 0.002%
CAS: 7681-57-4

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Metabisulfite, Granular

cGMP

NF, FCC

7776-06	Poly	2.5 kg	fg	156.85	
		4 x 2.5 kg	fg	125.45	501.80
7776-26	Lined Fiber Dr	400 lb	bp	Inquire	

$Na_2S_2O_5$ FW: 190.11

Meets NF & FCC Requirements
Assay (SO_2) 65.0-67.4%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Assay ($Na_2S_2O_5$) 96.5-100.0%
Identification A ..... Passes Test
Identification B ..... Passes Test
Solubility (10 in 100) ..... Passes Test
Thiosulfate (S_2O_3) ..... max. 0.05%
Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 0.002%
Lead (Pb) ..... max 2 mg/kg
Selenium (Se) ..... max 5 mg/kg
Chloride (Cl) ..... max. 0.05%

Product Information (not specifications):
Appearance (white or yellowish white crystalline granules)

CAS: 7681-57-4

Sodium Molybdate, Dihydrate
AR (ACS)

7782-06	Poly	2.5 kg	gd	1593.35	
		4 x 2.5 kg	gd	1274.65	5098.60

$Na_2MoO_4 \cdot 2H_2O$ FW: 241.95

Meets ACS Requirements

Assay ($Na_2MoO_4 \cdot 2H_2O$) 99.5-103.0%
Solubility (5 in 50) ..... Passes Test
Ammonium (NH_4) ..... max. 0.001%
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Nitrate (NO_3) ..... max. 0.005%
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.015%
pH of 5% Solution at 25°C 7.0-10.5
Appearance ..... Passes Test

CAS: 10102-40-6

Sodium Nitrate, Granular
AR (ACS)

7808-20	Flowmor	12 kg	bs	Inquire	

$NaNO_3$ FW: 84.99

Meets ACS Specifications

Assay ($NaNO_3$) ..... min. 99.0%
pH of 5% Solution at 25°C 5.5-8.3
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Iodate (IO_3) ..... max. 5 ppm
Nitrite (NO_2) ..... max. 0.001%
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 3 ppm

CAS: 7631-99-4 IMO: 5.1:1498

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Nitrite, Granular
AR (ACS)

7824-04	POLYSTORMOR	500 g	gd	89.75	
		12 x 500 g	gd	71.80	861.60
7824-06	Poly	2.5 kg	gd	399.75	
		4 x 2.5 kg	gd	319.80	1279.20
7824-20	Lined Fiber Dr	12 kg	bs	Inquire	

$NaNO_2$ FW: 69.00

Meets ACS Specifications

Assay ($NaNO_2$) ..... min. 97.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Potassium (K) ..... max. 0.005%

Product Information (not specifications):
Appearance (white or yellowish white crystalline granules)

CAS: 7632-00-0 IMO: 5.1:1500

Sodium Peroxide, Granular
AR (ACS)

7864-01	Metal Can	125 g	gd	149.65	
7864-04	Metal Can	500 g	gd	486.75	
		12 x 500 g	gd	389.40	4672.80

Na_2O_2 FW: 77.98

Meets ACS Specifications

Assay (Na_2O_2) (by $KMnO_4$ titrn) ..... min. 93.0%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.002%
Iron (Fe) ..... max. 0.005%
Phosphate (PO_4) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.001%

Product Information (not specifications):
Appearance (white to pale yellow, hygroscopic granules)

CAS: 1313-60-6 IMO: 5.1:1504

Sodium Phosphate, Monobasic, Monohydrate, Granular
AR (ACS)

7892-02	POLYSTORMOR	125 g	gd	72.95	
		12 x 125 g	gd	58.35	700.20
7892-04	POLYSTORMOR	500 g	gd	93.50	
		12 x 500 g	gd	74.80	897.60
7892-06	Poly	2.5 kg	gd	370.10	
		4 x 2.5 kg	gd	296.05	1184.20
7892-20	STAKMOR	12 kg	bs	Inquire	

$NaH_2PO_4 \cdot H_2O$ FW: 137.99

Meets ACS Specifications

Appearance (small, white granules) ..... Passes Test
Assay ($NaH_2PO_4 \cdot H_2O$) 98.0-102.0%
Calcium (Ca) ..... max. 0.005%

Sodium Phosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Chloride (Cl) ..... max. 5 ppm
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
pH of 5% Solution at 25°C 4.1-4.5
Potassium (K) ..... max. 0.01%
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.003%

CAS: 10049-21-5

Sodium Phosphate, Monobasic, Monohydrate

USP-GenAR
Suitable for Use in Biotechnology

cGMP

7774-04	POLYSTORMOR	500 g	ge	113.85	
		12 x 500 g	ge	91.05	1092.60
7774-06	Poly	2.5 kg	ge	333.45	
		4 x 2.5 kg	ge	266.75	1067.00
7774-88	Poly Pail	12 kg	bs	Inquire	

$NaH_2PO_4 \cdot H_2O$ FW: 137.99

Meets USP & FCC Requirements

Assay (NaH_2PO_4) (anhydrous basis) 98.0-102.0%
Solubility (5 in 50) ..... Passes Test
Insoluble Substances ..... max. 0.2%
Identification A ..... Passes Test
Identification B ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) 10.0-15.0%
Chloride (Cl) ..... max. 0.014%
Sulfate (SO_4) ..... max. 0.15%
Aluminum, Calcium, and Related Elements ..... Passes Test
Arsenic (As) ..... max. 3 ppm
Heavy Metals (as Pb) ..... max. 10 ppm
Fluoride (F) ..... max. 0.005%
pH of 5% Solution at 25°C 4.1-4.5
Endotoxin Concentration (EU/g) ..... max. 2.5
Lead (Pb) ..... max 4 mg/kg
Loss on Drying (FCC) 10.0-15.0%

The following test results are derived from testing Sodium Phosphate, Monobasic, Monohydrate, USP to the EP Chemical specifications for Sodium Dihydrogen Phosphate Dihydrate.

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Assay (anhydrous basis) 98.0-100.5%
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Arsenic (As) ..... max. 2 ppm
Reducing Substances ..... Passes Test
Heavy Metals (as Pb) ..... max. 10 ppm
Endotoxin Concentration (EU/g) ..... max. 2.5
Iron (Fe) ..... max. 10 ppm
Appearance of Solution ..... Passes Test
pH 4.2-4.5

Meets BP Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Identification D ..... Passes Test
Acidity 4.2-4.5
Clarity and Color of Solution ..... Passes Test
Arsenic (As) ..... max. 2 ppm

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Heavy Metals (as Pb) ..... max. 10 ppm
Iron (Fe) ..... max. 10 ppm
Chloride (Cl) ..... max. 200 ppm
Sulfate (SO_4) ..... max. 300 ppm
Reducing Substances ..... Passes Test
Loss on Drying at 130°C 11.5-14.5%
Assay (anhydrous basis) 98.0-100.5%

Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 10049-21-5

Sodium Phosphate, Monobasic, Monohydrate, Granular

USP, FCC

cGMP

7868-12	POLYSTORMOR	500 g	fg	113.95	
		4 x 500 g	fg	91.15	364.60
7868-06	Poly	2.5 kg	fg	329.45	
		4 x 2.5 kg	fg	263.55	1054.20
7868-20	STAKMOR	12 kg	bs	Inquire	
7868-88	Poly Pail	12 kg	bs	Inquire	

$NaH_2PO_4 \cdot H_2O$ FW: 137.99

Meets USP & FCC Requirements

Assay (NaH_2PO_4) (anhydrous basis) 98.0-103.0%
Aluminum, Calcium, and Related Elements ..... Passes Test
Arsenic (As) ..... max 3 mg/kg
Chloride (Cl) ..... max. 0.014%
Fluoride (F) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Substances ..... max. 0.2%
Lead (Pb) ..... max 4 mg/kg
Loss on Drying (FCC) 10.0-15.0%
pH of 5% Solution at 25°C 4.1-4.5
Solubility (5 in 50) ..... Passes Test
Sulfate (SO_4) ..... max. 0.15%
Water (USP) 10.0-15.0%

Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 10049-21-5

Customer Service: 1-855-282-6867 **Technical Service: 1-800-669-8230**

Sodium Phosphate, Dibasic, Anhydrous, Granular
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7917-02	Glass	125 g	gd	48.75	
		12 x 125 g	gd	39.00	468.00
7917-04	Glass	500 g	gd	73.10	
		12 x 500 g	gd	58.45	701.40
7917-06	Glass	2.5 kg	gd	282.35	
		4 x 2.5 kg	gd	225.85	903.40
7917-20	STAKMOR	12 kg	bs	Inquire	
7917-88	Poly Pail	12 kg	bs	Inquire	

Na_2HPO_4 FW: 141.96

Meets ACS Specifications

Appearance ..... Passes Test
Assay (Na_2HPO_4) ..... min. 99.0%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.002%
Loss on Drying at 105°C ..... max. 0.2%
pH of 5% Solution at 25°C 8.7-9.3
Solubility (10 in 100) ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%

CAS: 7558-79-4

Sodium Phosphate, Dibasic, Anhydrous
USP-GenAR
Suitable for Use in Biotechnology

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7771-04	Glass	500 g	ge	96.40	
		12 x 500 g	ge	77.10	925.20
7771-06	Glass	2.5 kg	ge	311.00	
		4 x 2.5 kg	ge	248.80	995.20
7771-88	Poly Pail	12 kg	bs	Inquire	

Na_2HPO_4 FW: 141.96

Meets USP Requirements

Assay (Na_2HPO_4) (dried basis)(by acidimetry) 98.0-100.5%
Arsenic (As) ..... max. 15 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Solubility ..... Passes Test
Insoluble Substances ..... max. 0.38%
Loss on Drying at 130°C ..... max. 5.0%
Chloride (Cl) ..... max. 0.05%
Sulfate (SO_4) ..... max. 0.19%
Heavy Metals (as Pb) ..... max. 0.002%
Endotoxin Concentration (EU/g) ..... max. 2.5
Product Information (not specifications):
Appearance (white powder)

CAS: 7558-79-4

Sodium Phosphate, Dibasic, Heptahydrate
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7914-04	POLYSTORMOR	500 g	gd	63.50	
		12 x 500 g	gd	50.80	609.60
7914-06	Poly	2.5 kg	gd	249.15	
		4 x 2.5 kg	gd	199.30	797.20
7914-20	STAKMOR	12 kg	bs	Inquire	

$Na_2HPO_4 \cdot 7H_2O$ FW: 268.07

Meets ACS Specifications

Assay ($Na_2HPO_4 \cdot 7H_2O$) 98.0-102.0%
Appearance (colorless or white powder or crystalline granules) ..... Passes Test
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
pH of 5% Solution at 25°C 8.7-9.3
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%

CAS: 7782-85-6

Sodium Phosphate, Dibasic, 7-Hydrate, Granular
USP-GenAR

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
7393-06	Poly	2.5 kg	ge	332.45	
		4 x 2.5 kg	ge	265.95	1063.80
7393-88	Poly Pail	12 kg	bs	Inquire	

$Na_2HPO_4 \cdot 7H_2O$ FW: 268.07

Meets USP Requirements

Assay (as Na_2HPO_4) 98.0-100.5%
Chloride (Cl) ..... max. 0.03%
Endotoxin Concentration (EU/g) ..... max. 5.0
Iron (Fe) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
pH of 5% Solution at 25°C ..... Actual Value Reported
Heavy Metals (as Pb) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.1%
Loss on Drying at 130°C 43.0-50.0%
Insoluble Substances ..... max. 0.2%
Solubility (10 in 100) ..... Passes Test
Arsenic (As) ..... max. 8 ppm
Product Information (not specifications):
Appearance (white granules)

CAS: 7782-85-6

Sodium Phosphate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Phosphate, Dibasic, 7-Hydrate, Granular
USP cGMP

7896-04	Glass	500 g	fg	92.90	
		12 x 500 g	fg	74.30	891.60
7896-88	Poly Pail	12 kg	bs	Inquire	

$Na_2HPO_4 \cdot 7H_2O$ FW: 268.07

Meets USP Requirements

Assay (Na_2HPO_4) (dried basis) 98.0-100.5%
Appearance (colorless or white granular salt) ..... Passes Test
Arsenic (As) ..... max. 8 ppm
Chloride (Cl) ..... max. 0.03%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Substances ..... max. 0.2%
Loss on Drying 43.0-50.0%
pH at 25°C ..... Actual Value Reported
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.1%

CAS: 7782-85-6

Sodium Phosphate, Tribasic, 12-Hydrate, Crystal
AR (ACS)

7940-04	POLYSTORMOR	500 g	gd	72.20	
		12 x 500 g	gd	57.75	693.00
7940-06	Poly	2.5 kg	gd	299.35	
		4 x 2.5 kg	gd	239.45	957.80
7940-20	STAKMOR	12 kg	bs	Inquire	

$Na_3PO_4 \cdot 12H_2O$ FW: 380.12

Meets ACS Specifications

Assay ($Na_3PO_4 \cdot 12H_2O$) 98.0-102.0%
Chloride (Cl) ..... max. 0.001%
Excess Alkali (as NaOH) ..... max. 2.5%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Sulfate (SO_4) ..... max. 0.01%
Product Information (not specifications):
Appearance (colorless or white crystals)

CAS: 10101-89-0

Sodium Potassium Tartrate
See Potassium Sodium Tartrate

Sodium Pyrophosphate, 10-Hydrate, Crystal
AR (ACS)

7960-20	STAKMOR	12 kg	bs	Inquire	

$Na_4P_2O_7 \cdot 10H_2O$ FW: 446.06

Meets ACS Specifications

Assay ($Na_4P_2O_7 \cdot 10H_2O$) 99.0-103.0%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.001%
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 0.001%
pH of 5% Solution at 25°C 9.5-10.5
Solubility (5 in 100) ..... Passes Test
Sulfate (SO_4) ..... max. 0.005%
Product Information (not specifications):
Appearance (colorless crystals)

CAS: 13472-36-1

Sodium Pyrosulfite
See Sodium Metabisulfite

Sodium Salicylate, Powder
USP cGMP

2094-12	Glass	500 g	fg	97.10	
		4 x 500 g	fg	77.65	310.60
2094-08	Poly Pail	2.5 kg	fg	278.00	
2094-05	STAKMOR	2.5 kg	fg	264.10	

$2\text{-}HOC_6H_4COONa$ FW: 160.10

Meets USP Requirements

Assay ($2\text{-}HOC_6H_4COONa$) (dried basis) 99.5-100.5%
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Solubility (5 in 50) ..... Passes Test
Sulfite or Thiosulfate ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... max. 0.5%
Product Information (not specifications):
Appearance (colorless to white powder having a pale pink or pale violet tinge)

CAS: 54-21-7

Sodium Succinate, Granular

7980-03	POLYSTORMOR	500 g	gd	126.95	
7980-05	Poly	2.5 kg	gd	498.80	

$Na_2C_4H_4O_4 \cdot 6H_2O$ FW: 270.16

Assay ..... Actual Value Reported
Chloride (Cl) ..... max. 0.02%
Heavy Metals (as Pb) ..... max. 0.002%
pH of 0.4M Solution 6.0-9.0
Solubility ..... Passes Test
Substances Reducing Permanganate ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 6106-21-4

Sodium Sulfate, Anhydrous
USP cGMP

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
8028-12	POLYSTORMOR	500 g	fg	53.10	
		4 x 500 g	fg	42.45	169.80
8028-06	Poly	2.5 kg	fg	163.65	
		4 x 2.5 kg	fg	130.90	523.60
8028-20	STAKMOR	12 kg	bs	Inquire	
8028-88	Poly Pail	12 kg	bs	Inquire	
8028-27	Lined Fiber Dr	200 lb	bp	Inquire	

Na_2SO_4 FW: 142.04

Meets USP Requirements

Assay (Na_2SO_4) (dried basis) ..... min. 99.0%
Acidity or Alkalinity (mL) ..... max. 0.50
Appearance (colorless crystals or fine, white powder) ..... Passes Test
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Insoluble Matter ..... max. 0.01%
Loss on Drying at 105°C ..... max. 0.5%
Mesh:
Thru U.S. No. 50 Sieve ..... min. 99%

CAS: 7757-82-6

Sodium Sulfate, Anhydrous, Granular (10-60 Mesh)
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
8024-04	Glass	500 g	gd	41.60	
		12 x 500 g	gd	33.25	399.00
8024-06	Glass	2.5 kg	gd	121.25	
		4 x 2.5 kg	gd	97.00	388.00
8024-20	STAKMOR	12 kg	sd	357.80	
8024-24		200 lb	sp	972.35	
8024-25		200 lb	bp	Inquire	

Na_2SO_4 FW: 142.04

Meets ACS Specifications

Appearance (white, crystalline granules) ..... Passes Test
Assay (Na_2SO_4) ..... min. 99.0%
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Magnesium (Mg) ..... max. 0.005%
Loss on Ignition ..... max. 0.5%
Nitrogen Compounds (as N) ..... max. 5 ppm
pH of 5% Solution at 25°C 5.2-9.2
Phosphate (PO_4) ..... max. 0.001%
Potassium (K) ..... max. 0.01%
Solubility and Foreign Matter ..... Passes Test
Mesh:
On U.S. No. 10 Sieve ..... max. 1%
On U.S. No. 60 Sieve ..... min. 80%
Thru U.S. No. 60 Sieve ..... max. 19%
Thru U.S. No. 100 Sieve ..... max. 10%
Extraction-Concentration Suitability ..... Passes Test

CAS: 7757-82-6

Sodium Sulfate, Anhydrous, Low Nitrogen, Crystalline, Powder
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
8016-06	Glass	2.5 kg	gd	138.25	
		4 x 2.5 kg	gd	110.60	442.40
8016-20	STAKMOR	12 kg	sd	484.30	

Na_2SO_4 FW: 142.04

Meets ACS Specifications

Assay (Na_2SO_4) ..... min. 99.0%
pH of 5% Solution at 25°C 5.2-9.2
Insoluble Matter ..... max. 0.01%
Loss on Ignition ..... max. 0.5%
Chloride (Cl) ..... max. 0.001%
Nitrogen Compounds (as N) ..... max. 5 ppm
Phosphate (PO_4) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 0.001%
Calcium (Ca) ..... max. 0.01%
Magnesium (Mg) ..... max. 0.005%
Potassium (K) ..... max. 0.002%
Bulk (fl. oz/lb) 9-12
Mesh:
Thru U.S. No. 20 Sieve ..... min. 90%
Thru U.S. No. 100 Sieve ..... max. 20%
Product Information (not specifications):
Appearance (fine, white, free-flowing crystalline powder)

CAS: 7757-82-6

Sodium Sulfate, Anhydrous, Powder
AR (ACS)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
8020-06	Glass	2.5 kg	gd	139.60	
		4 x 2.5 kg	gd	111.65	446.60
8020-20	STAKMOR	12 kg	sd	437.50	

Na_2SO_4 FW: 142.04

Meets ACS Specifications

Assay (Na_2SO_4) ..... min. 99.0%
Appearance (white, crystalline powder) ..... Passes Test
Solubility and Foreign Matter ..... Passes Test
Calcium (Ca) ..... max. 0.01%
Chloride (Cl) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Loss on Ignition ..... max. 0.5%
Magnesium (Mg) ..... max. 0.005%
Nitrogen Compounds (as N) ..... max. 5 ppm
pH of 5% Solution at 25°C 5.2-9.2
Phosphate (PO_4) ..... max. 0.001%
Potassium (K) ..... max. 0.002%
Mesh:
Thru U.S. No. 50 Sieve ..... min. 99.0%

CAS: 7757-82-6

Sodium Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Sulfate, Anhydrous, Powder

cGMP

USP-GenAR
Suitable for Use in Biotechnology

7803-88	Poly Pail	12 kg	bs	Inquire	

Na_2SO_4 FW: 142.04

Meets USP Requirements

Assay (Na_2SO_4) (dried basis) ..... min. 99.0%
Acidity or Alkalinity ..... Passes Test
Chloride (Cl) ..... max. 0.005%
Heavy Metals (as Pb) ..... max. 0.001%
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Loss on Drying at 105°C ..... max. 0.5%
Mesh:
Thru U.S. No. 50 Sieve ..... min. 99%
Solubility (5 in 100) ..... Passes Test

Meets BP/Ph.Eur. Chemical Specifications

Assay (Na_2SO_4) 98.5-101.0%
Acidity or Alkalinity ..... Passes Test
Appearance of Solution ..... Passes Test
Chloride (Cl) ..... max. 450 ppm
Heavy Metals (as Pb) ..... max. 45 ppm
Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test

CAS: 7757-82-6

Sodium Sulfite, Anhydrous, Granular

AR (ACS)

8064-04	POLYSTORMOR	500 g	gd	36.75	
		12 x 500 g	gd	29.40	352.80
8064-06	Poly	2.5 kg	gd	107.20	
		4 x 2.5 kg	gd	85.75	343.00
8064-20	STAKMOR	12 kg	bs	Inquire	

Na_2SO_3 FW: 126.04

Meets ACS Specifications

Assay (Na_2SO_3) ..... min. 98.0%
Chloride (Cl) ..... max. 0.02%
Free Acid ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.001%
Titrable Free Base (meq/g) ..... max. 0.03
Insoluble Matter ..... max. 0.005%
Solubility ..... Passes Test
Product Information (not specifications):
Appearance (fine, white, free-flowing crystalline granules)

CAS: 7757-83-7

Sodium Tartrate, Dihydrate, Granular

AR (ACS)

2386-04	POLYSTORMOR	500 g	gd	116.65	
		12 x 500 g	gd	93.30	1119.60
2386-06	Poly	2.5 kg	gd	452.00	
		4 x 2.5 kg	gd	361.60	1446.40
2386-20	STAKMOR	12 kg	bs	Inquire	

$NaOCO(CHOH)_2COONa \cdot 2H_2O$ FW: 230.08

Meets ACS Specifications

Assay ($Na_2C_4H_4O_6 \cdot 2H_2O$) 99.0-101.0%
Loss on Drying at 150°C 15.61-15.71%
pH of 5% Solution at 25°C 7.0-9.0
Insoluble Matter ..... max. 0.005%
Chloride (Cl) ..... max. 5 ppm
Phosphate (PO_4) ..... max. 5 ppm
Sulfate (SO_4) ..... max. 0.005%
Ammonium (NH_4) ..... max. 0.003%
Calcium (Ca) ..... max. 0.01%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 0.001%
Product Information (not specifications):
Appearance (colorless, transparent crystals)

CAS: 6106-24-7

Sodium Tetraphenylborate

AR (ACS)

8082-55	Glass	25 g	gd	227.70	
8082-01	Glass	125 g	gd	848.65	

$(C_6H_5)_4BNa$ FW: 342.22

Meets ACS Specifications

Assay ($(C_6H_5)_4BNa$) ..... min. 99.5%
Solubility in Ethanol ..... Passes Test
Clarity of Solution ..... Passes Test
Loss on Drying ..... max. 0.5%
Product Information (not specifications):
Appearance (colorless or slightly pinkish crystalline powder)

CAS: 143-66-8

Sodium Thiosulfate, 5-Hydrate, Crystal

cGMP

USP, FCC

7763-06	Poly	2.5 kg	fg	211.95	
7763-20	STAKMOR	12 kg	bs	Inquire	

$Na_2S_2O_3 \cdot 5H_2O$ FW: 248.19

Meets USP & FCC Requirements

Assay (as $Na_2S_2O_3$) (calculated on anhydrous basis) 99.0-100.5%
Calcium (Ca) ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Water (H_2O) 32.0-37.0%
Solubility (10 in 100) ..... Passes Test

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Lead (Pb) ..... max 2 mg/kg
Selenium (Se) ..... max. 0.003%
Product Information (not specifications):
Appearance (colorless, deliquescent crystals)
CAS: 10102-17-7

Sodium Thiosulfate, 5-Hydrate, Crystal
AR

8100-04	POLYSTORMOR	500 g	gd	46.00	
		12 x 500 g	gd	36.80	441.60
8100-06	Poly	2.5 kg	gd	151.70	
		4 x 2.5 kg	gd	121.35	485.40
8100-20	STAKMOR	12 kg	bs	Inquire	

$Na_2S_2O_3 \cdot 5H_2O$ FW: 248.19

Assay ($Na_2S_2O_3 \cdot 5H_2O$) 99.5-101.0
Appearance (colorless, transparent crystals) ..... Passes Test
Insoluble Matter ..... max. 0.005%
Nitrogen Compounds (as N) ..... max. 0.002%
pH of 5% Solution at 25°C 6.0-8.4
Solubility ..... Passes Test
Sulfate and Sulfite (as SO_4) ..... max. 0.1%
Sulfide (S) ..... Passes Test
Water (H_2O)(by Karl Fischer titrn) ..... Actual Value Reported
CAS: 10102-17-7

Sodium Thiosulfate, 1.0 Normal Volumetric Solution
StandARd

6840-09	Cubitainer	20 L	st	329.95	

Normality 0.995-1.005
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7772-98-7 DENSITY: 1 L = 1.01-1.14 kg

Sodium Thiosulfate, 0.20 Normal (N/5) Volumetric Solution
StandARd

5531-60	Poly	1 L	st	32.95	
5531-05	Cubitainer	20 L	st	425.70	

Normality 0.199-0.201
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7772-98-7 DENSITY: 1 L = 1.01-1.14 kg

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sodium Thiosulfate, 0.1 Normal (N/10) Volumetric Solution
StandARd

4682-60	Poly	1 L	st	24.40	
4682-01	Cubitainer	4 L	st	89.30	
4682-05	Cubitainer	20 L	st	259.10	

Normality 0.0995-0.1005
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7772-98-7 DENSITY: 1 L = 1.01-1.14 kg

Sodium Thiosulfate, 0.025 Normal (N/40) Volumetric Solution
StandARd

H371-05	Poly	1 L	st	27.95	
H371-07	Poly	4 L	st	59.75	

Normality 0.0245-0.0255
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7772-98-7 DENSITY: 1 L = 1.01-1.14 kg

Sodium Thiosulfate, 0.01 Normal (N/100) Volumetric Solution
StandARd

H362-05	Poly	1 L	st	20.90	
H362-07	Poly	4 L	st	47.45	

Normality 0.0095-0.0105
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7772-98-7 DENSITY: 1 L = 1.01-1.14 kg

Stannous Chloride Crystal, Dihydrate
AR

8176-02	POLYSTORMOR	125 g	gd	85.10	
		12 x 125 g	gd	68.05	816.60
8176-04	POLYSTORMOR	500 g	gd	228.10	
		12 x 500 g	gd	182.45	2189.40
8176-06	Poly	2.5 kg	gd	1024.50	
		4 x 2.5 kg	gd	819.60	3278.40
8176-20	STAKMOR	12 kg	bs	Inquire	
8176-25	Leverpack	50 kg	bp	Inquire	

$SnCl_2 \cdot 2H_2O$ FW: 225.63

Assay ($SnCl_2 \cdot 2H_2O$) 98.0-103.0%
Mercury (Hg) ..... max. 0.05 ppm
Solubility in HCl ..... Passes Test
Sulfate (SO_4) ..... Passes Test
Sodium (Na) ..... max. 0.01%
Potassium (K) ..... max. 0.005%
Iron (Fe) ..... max. 0.003%
Calcium (Ca) ..... max. 0.005%
Lead (Pb) ..... max. 0.01%
Product Information (not specifications):
Appearance (colorless to slightly yellow (but definitely not green) crystals)
CAS: 10025-69-1

Starch Indicator

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Starch Indicator, 0.5% (w/v) Aqueous (APHA)

StandARd

H365-05	Poly	1 L	st	36.90	

Sensitivity ..... Passes Test

Product Information (not specifications):

Appearance (colorless, clear to slightly opalescent solution)

DENSITY: 1 L = 1.0 kg

Stearic Acid, Powder

cGMP

NF-GenAR
Vegetable Grade, 50

2236-04	POLYSTORMOR	500 g	ge	66.45	
		12 x 500 g	ge	53.15	637.80
2236-24		100 lb	bp	Inquire	

$C_{18}H_{36}O_2$ FW: 284.48

Meets NF Requirements

Stearic and Palmitic Acids ..... min. 90.0%
Palmitic Acid ..... min. 40.0%
Stearic Acid ..... min. 40.0%
Congealing Temperature ..... min. 54 °C.
Heavy Metals (as Pb) ..... max. 0.001%
Iodine Value ..... max. 4
Mineral Acids ..... Passes Test
Neutral Fats or Paraffin ..... Passes Test
Residue on Ignition ..... max. 0.1%

Meets BP/Ph.Eur. Chemical Specifications

Identification A ..... Passes Test
Identification B ..... Passes Test
Identification C ..... Passes Test
Appearance ..... Passes Test
Acidity ..... Passes Test
Iodine Value ..... max. 4.0
Freezing Point ..... 53-59 °C.
Nickel (Ni) ..... max. 1 ppm
Stearic Acid 40.0-60.0%
Stearic and Palmitic Acids ..... min. 90.0%

Meets JP Chemical Specifications

Acid Value 194-210
Iodine Value ..... max. 4.0
Mineral Acids ..... Passes Test
Heavy Metals (as Pb) ..... max. 20 ppm
Fat and Paraffin ..... Passes Test
Residue on Ignition ..... max. 0.10%

Particle Size:

Mesh:

Thru U.S. No. 30 Sieve 99.5-100.0%
Thru U.S. No. 60 Sieve ..... Actual Value Reported
Thru U.S. No. 100 Sieve 95.0-100.0%
Thru U.S. No. 200 Sieve ..... Actual Value Reported

Preserve in a well-closed container.

Product Information (not specifications):

Appearance (fine, white or yellowish-white powder)

CAS: 57-11-4 FLASH POINT: 190°C

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Stearic Acid 50, Powder

cGMP

NF-GenAR

2216-04	POLYSTORMOR	500 g	fg	62.10	
		12 x 500 g	fg	49.65	595.80
2216-05	STAKMOR	2.5 kg	fg	182.75	
2216-24	Leverpak	100 lb	bp	Inquire	

$C_{18}H_{36}O_2$ FW: 284.48

Meets NF & FCC Requirements

Stearic and Palmitic Acids ..... min. 90.0%
Palmitic Acid ..... min. 40.0%
Stearic Acid ..... min. 40.0%
Congealing Temperature (solidification point-FCC) ..... 54.5-69 °C.
Heavy Metals (as Pb) ..... max. 0.001%
Iodine Value ..... max. 4
Lead (Pb) ..... max 2 mg/kg
Mineral Acids ..... Passes Test
Neutral Fats or Paraffin ..... Passes Test
Residue on Ignition ..... max. 0.1%
Acid Value 196-211
Saponification Value 197-212
Unsaponifiable Matter ..... max. 1.5%
Water (H_2O) ..... max. 0.2%

Meets BP/Ph.Eur. Chemical Specifications

Appearance ..... Passes Test
Acidity ..... Passes Test
Identification A ..... 53-59 °C.
Identification B 194-212
Identification C ..... Passes Test
Iodine Value ..... max. 4.0
Nickel (Ni) ..... max. 1 ppm
Stearic Acid 40.0-60.0%
Stearic and Palmitic Acids ..... min. 90.0%

Preserve in a well-closed container.

Product Information (not specifications):

Appearance (fine, white or yellowish-white powder)

CAS: 57-11-4 FLASH POINT: 190°C

Strontium Nitrate, Anhydrous

AR (ACS)

8256-02	POLYSTORMOR	125 g	gd	54.65	
		12 x 125 g	gd	43.70	524.40
8256-04	POLYSTORMOR	500 g	gd	128.70	
		12 x 500 g	gd	102.95	1235.40
8256-06	Poly	2.5 kg	gd	711.35	
		4 x 2.5 kg	gd	569.05	2276.20

$Sr(NO_3)_2$ FW: 211.63

Meets ACS Specifications

Assay ($Sr(NO_3)_2$) ..... min. 99.0%
Barium (Ba) ..... max. 0.05%
Calcium (Ca) ..... max. 0.05%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 5 ppm
Insoluble Matter ..... max. 0.01%
Iron (Fe) ..... max. 5 ppm
Loss on Drying at 105°C ..... max. 0.1%
Magnesium (Mg) ..... max. 0.10%
Sodium (Na) ..... max. 0.10%
Sulfate (SO_4) ..... max. 0.005%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

pH of 5% Solution at 25°C 5.0-7.0
Product Information (not specifications):
Appearance (crystalline)
CAS: 10042-76-9 IMO: 5.1:1507

Succinic Acid, Granular
AR (ACS)

2860-04	POLYSTORMOR	500 g	gd	114.85	
		12 x 500 g	gd	91.85	1102.20
2860-06	Poly	2.5 kg	gd	400.70	
		4 x 2.5 kg	gd	320.55	1282.20
2860-24	Fiber Drum	50 kg	bp	Inquire	

$HOCOCH_2CH_2COOH$ FW: 118.09

Meets ACS Specifications
Assay ($HOCOCH_2CH_2COOH$) .....min. 99.0%
Appearance (white granules) .....Passes Test
Chloride (Cl) .....max. 0.001%
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 0.01%
Iron (Fe) .....max. 5 ppm
Melting Range (within 2° range of specification limits) ...185.0-191.0 °C.
Nitrogen Compounds (as N) .....max. 0.001%
Phosphate (PO_4) .....max. 0.001%
Residue after Ignition .....max. 0.020%
Solubility (10 in 150) .....Passes Test
Sulfate (SO_4) .....max. 0.003%
CAS: 110-15-6

Sucrose, Crystal
AR (ACS)

8360-04	POLYSTORMOR	500 g	gd	48.45	
		12 x 500 g	gd	38.75	465.00
8360-06	Poly	2.5 kg	gd	139.50	
		4 x 2.5 kg	gd	111.60	446.40
8360-20	STAKMOR	12 kg	bs	Inquire	
8360-24	Lined Fiber Dr	100 lb	bp	Inquire	

$C_{12}H_{22}O_{11}$ FW: 342.30

Meets ACS Specifications
Solubility .....Passes Test
Insoluble Matter .....max. 0.005%
Chloride (Cl) .....max. 0.005%
Heavy Metals (as Pb) .....max. 5 ppm
Iron (Fe) .....max. 5 ppm
Titrable Acid (meq/g) .....max. 0.0008
Invert Sugar .....max. 0.05%
Loss on Drying at 105°C .....max. 0.03%
Residue after Ignition .....max. 0.01%
Sulfate and Sulfite (as SO_4) .....max. 0.005%
Specific Rotation $[\alpha]^{25}_D$ .....+66.3 - +66.8°
Product Information (not specifications):
Appearance (colorless, transparent crystals)
CAS: 57-50-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sucrose
NF-GenAR
Suitable for Use in Biotechnology

7723-04	POLYSTORMOR	1 kg	ge	74.45	
		4 x 1 kg	ge	66.85	267.40
7723-08	Poly	2.5 kg	ge	96.50	
		4 x 2.5 kg	ge	86.65	346.60
7723-05	STAKMOR	5 kg	ge	163.20	
7723-88	Poly Pail	12 kg	bs	Inquire	
7723-24	Poly Drum	100 lb	bp	Inquire	

$C_{12}H_{22}O_{11}$ FW: 342.30

Meets NF Requirements
Calcium (Ca) .....Passes Test
Chloride (Cl) .....max. 0.0035%
Heavy Metals (as Pb) .....max. 5 ppm
Invert Sugar (Cu_2O)(mg) .....max. 112
Residue on Ignition .....max. 0.05%
Specific Rotation $[\alpha]^{25}_D$ .....min. 65.9°
Sulfate (SO_4) .....max. 0.006%
Meets BP/Ph.Eur. Chemical Specifications
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Appearance of Solution .....Passes Test
Colour Value .....max. 45
Conductivity, µS cm^{-1} .....max. 35
Optical Rotation .....+66.3 - +67.0°
Sulfite (SO_2) .....max. 10 ppm
Loss on Drying at 105°C .....max. 0.1%
Endotoxin Concentration (EU/g) .....max. 25
Reducing Sugars .....Passes Test
Product Information (not specifications):
Appearance (colorless, transparent crystals)
CAS: 57-50-1

Sudan IV
Certified OR
Certified for use in Fat Staining (C.I. 26105)

E067-03	Glass	25 g	so	43.30	

$CH_3C_6H_4N{:}NC_6H_3(CH_3)N{:}NC_{10}H_6OH$ FW: 380.45

Certified by the Biological Stain Commission
Total Dye Content .....Actual Value Reported
Absorbance Maximum, nm .....Actual Value Reported
Absorbance at Maximum
(0.4 mg/200 mL in C_6H_6, 1-cm path) .....Actual Value Reported
Biological Test .....Passes Test
CAS: 85-83-6 MERCK INDEX: 13,8469

Sugar

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sugar
See Sucrose

Sulfamic Acid, 99%

1931-59	Glass	500 g	so	116.10	
1931-05	Glass	2.5 kg	so	198.35	

NH_2SO_3H FW: 97.09

Solubility (5 in 100) ..... Passes Test
Identification ..... Passes Test
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.0005%
Product Information (not specifications):
Appearance (colorless or white crystals)

CAS: 5329-14-6 IMO: 8:2967

Sulfanilic Acid, Powder
AR (ACS)

2864-12	Glass	500 g	gd	268.00	
		4 x 500 g	gd	214.40	857.60
2864-20	Lined Fiber Dr	12 kg	bs	Inquire	

$4\text{-}NH_2C_6H_4SO_3H$ FW: 173.19

Meets ACS Specifications
Assay ($4\text{-}NH_2C_6H_4SO_3H$) 98.0-102.0%
Chloride (Cl) ..... max. 0.002%
Heavy Metals (as Pb) ..... max. 0.005%
Insoluble in Na_2CO_3 Solution ..... max. 0.02%
Nitrite (NO_2) ..... max. 0.00005%
Solubility (1 in 30) ..... Passes Test
Sulfate (SO_4) ..... max. 0.01%
Residue after Ignition ..... max. 0.01%
Product Information (not specifications):
Appearance (white to off-white crystalline powder)

CAS: 121-57-3

See Histopathology section for more information about stains and buffers, starting on page 87.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfuric Acid
AR (ACS)

2876-05	Poly	500 mL	ur	27.85	
		12 x 500 mL	ur	22.25	267.00
2876-14	Glass	500 mL	ra	49.30	
		6 x 500 mL	ra	29.00	174.00
2876-46	Glass	2.5 L	ra	74.10	
		6 x 2.5 L	ra	43.60	261.60
2876-18	Poly	2.5 L	ur	73.15	
		6 x 2.5 L	ur	54.85	329.10
2876-45	Poly	4 L	ur	83.60	
		4 x 4 L	ur	66.85	267.40
2876-23	Glass Carboy	95 lb	bp	Inquire	
2876-21	Poly Drum	225 lb	bp	Inquire	
2876-25	Poly Drum	440 lb	bp	Inquire	
2876-28	Poly Drum	750 lb	bp	Inquire	

H_2SO_4 FW: 98.08

Meets ACS Specifications
Appearance ..... Passes Test
Assay (H_2SO_4) 95.0-98.0%
Color (APHA) ..... max. 10
Residue after Ignition ..... max. 5 ppm
Chloride (Cl) ..... max. 0.2 ppm
Nitrate (NO_3) ..... max. 0.5 ppm
Ammonium (NH_4) ..... max. 2 ppm
Substances Reducing Permanganate (as SO_2) ..... max. 2 ppm
Arsenic (As) ..... max. 0.01 ppm
Heavy Metals (as Pb) ..... max. 1 ppm
Iron (Fe) ..... max. 0.2 ppm
Mercury (Hg) ..... max. 5 ppb
Boron (B) ..... max. 0.01

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid
AR Select (ACS)
For Trace Element Analysis

5557-14	Glass	500 mL	as	71.50	
		6 x 500 mL	as	44.70	268.20
5557-46	SAFEMOR	2.5 L	as	101.20	
		6 x 2.5 L	as	63.25	379.50

H_2SO_4 FW: 98.08

Meets ACS Specifications
Assay (H_2SO_4) (by acidimetry) 95.0-98.0%
Appearance ..... Passes Test
Ammonium (NH_4) ..... max. 0.5 ppm
Arsenic and Antimony (as As) ..... max. 0.003 ppm
Chloride (Cl) ..... max. 0.05 ppm
Color (APHA) ..... max. 8
Heavy Metals (as Pb) ..... max. 0.1 ppm
Nitrate (NO_3) ..... max. 0.1 ppm
Residue after Ignition ..... max. 1.0 ppm
Substances Reducing Permanganate (as SO_2) ..... max. 2 ppm
Trace Impurities (in ppb):
Determined by Flame Photometry & ICP
Aluminum (Al) ..... max. 50

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Barium (Ba) ..... max. 10
Beryllium (Be) ..... max. 50
Bismuth (Bi) ..... max. 100
Boron (B) ..... max. 10
Cadmium (Cd) ..... max. 5
Calcium (Ca) ..... max. 50
Chromium (Cr) ..... max. 10
Cobalt (Co) ..... max. 5
Copper (Cu) ..... max. 5
Gallium (Ga) ..... max. 100
Germanium (Ge) ..... max. 100
Gold (Au) ..... max. 100
Iron (Fe) ..... max. 50
Lead (Pb) ..... max. 1
Lithium (Li) ..... max. 10
Magnesium (Mg) ..... max. 50
Manganese (Mn) ..... max. 5
Mercury (Hg) ..... max. 1
Molybdenum (Mo) ..... max. 10
Nickel (Ni) ..... max. 5
Potassium (K) ..... max. 50
Silicon (Si) ..... max. 100
Silver (Ag) ..... max. 10
Sodium (Na) ..... max. 500
Strontium (Sr) ..... max. 10
Thallium (Tl) ..... max. 200
Tin (Sn) ..... max. 50
Vanadium (V) ..... max. 10
Zinc (Zn) ..... max. 5
Zirconium (Zr) ..... max. 10

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 93%
Technical

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2900-14	Glass	6 x 500 mL	ra	30.80	184.80
2900-10	Poly	15 lb	ra	73.40	
		4 x 15 lb	ra	58.70	234.80

H_2SO_4 FW: 98.08

Assay (H_2SO_4) (by acidimetry) ..... min. 93%
Arsenic (As) ..... max. 0.0008%
Product Information (not specifications):
Appearance (colorless to clear, slightly yellow solution)

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, Fuming 20%
AR

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2886-03	Glass	500 g	ra	178.90	

Assay (free SO_3) (by acidimetry) 18.0-24.0%
Appearance ..... Passes Test
Arsenic (As) ..... Actual Value Reported
Iron (Fe) ..... Actual Value Reported
Nitrate (NO_3) ..... Actual Value Reported
Residue after Ignition ..... Actual Value Reported

CAS: 8014-95-7 DENSITY: 1 L = 1.92 kg IMO: 8:1831

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfuric Acid Babcock
FOOD GRADE cGMP
FCC
(For Use in Butterfat Determination)

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
3780-08	Poly	15 lb	ra	86.65	
		4 x 15 lb	ra	69.30	277.20

H_2SO_4 FW: 98.08

Meets FCC Requirements
Assay (H_2SO_4)(w/w) 91.0-92.0%
Appearance (clear, colorless liquid)
Color (APHA) ..... max. 15
Identification ..... Passes Test
Specific Gravity at 20°/20°C 1.823-1.827
Chloride (Cl) ..... max. 0.005%
Nitrate (NO_3) ..... max 10 mg/kg
Reducing Substances (as SO_2) ..... Passes Test
Arsenic (As) ..... max 3 mg/kg
Iron (Fe) ..... max. 0.02%
Lead (Pb) ..... max 5 mg/kg
Selenium (Se) ..... max. 0.002%

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 10% (w/v) R.S.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
H378-05	Poly	1 L	st	32.60	
H378-07	Poly	4 L	st	75.55	
H378-09	Cubitainer	20 L	st	301.40	

Assay (H_2SO_4)(g/100 mL) 9.5-10.5
Product Information (not specifications):
Appearance (clear, colorless solution)

CAS: 7664-93-9 DENSITY: 1 L = 1.40 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 18 Normal
AR

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
2878-46	Glass	2.5 L	st	146.60	
		6 x 2.5 L	st	117.25	703.50

H_2SO_4 FW: 98.08

Ammonium (NH_4) ..... max. 0.0002%
Appearance (clear, colorless liquid) ..... Passes Test
Arsenic (As) ..... max. 0.000001%
Chloride (Cl) ..... max. 0.00002%
Heavy Metals (as Pb) ..... max. 0.0001%
Iron (Fe) ..... max. 0.00002%
Nitrate (NO_3) ..... max. 0.00005%
Normality 17.5-18.5
Residue after Ignition ..... max. 0.0005%
Substances Reducing Permanganate (as SO_2) ..... Passes Test

CAS: 7664-93-9 DENSITY: 1 L = 1.84 kg IMO: 8:1830

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfuric Acid, 10.0 Normal Volumetric Solution
StandARd

H379-05	Poly	1 L	st	29.05	
H379-09	Cubitainer	20 L	st	352.45	

Normality 9.95-10.05
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7664-93-9 DENSITY: 1 L = 1.40 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 2.0 Normal Volumetric Solution
StandARd

H381-05	Poly	1 L	st	27.55	
H381-07	Poly	4 L	st	63.15	

Normality 1.95-2.05
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfuric Acid, 1.0 Normal Volumetric Solution
StandARd

7610-09	Cubitainer	20 L	st	222.70	

Normality 0.995-1.005
Product Information (not specifications):
Appearance (clear, colorless solution)
CAS: 7664-93-9 DENSITY: 1 L = 1.0 kg IMO: 8:2796

Acid Spill Cleanup Products available. See pp. 378.

Sulfurous Acid
AR (ACS)

2920-14	Glass	500 mL	ra	95.10	
		6 x 500 mL	ra	76.05	456.30
2920-46	Glass	2.5 L	ra	214.35	
		6 x 2.5 L	ra	171.45	1028.70

Meets ACS Specifications
Assay (as SO_2) .....min. 6.0%
Chloride (Cl) .....max. 5 ppm
Heavy Metals (as Pb) .....max. 2 ppm
Iron (Fe) .....max. 5 ppm
Residue after Ignition .....max. 0.005%
CAS: 7782-99-2 DENSITY: 1 L = 1.03 kg IMO: 8:1833

Acid Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Talc
USP cGMP

8476-04	POLYSTORMOR	500 g	fg	57.35	
		12 x 500 g	fg	45.85	550.20

Meets USP Requirements
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Microbiological (cfu/g)
Total Aerobic Bacterial Count .....max. 100
Total Molds and Yeasts .....max. 50
Acidity and Alkalinity .....Passes Test
Loss on Ignition .....max. 7.0%
Water-Insoluble Substances .....max. 0.1%
Iron (Fe) .....max. 0.25%
Lead (Pb) .....max. 0.001%
Calcium (Ca) .....max. 0.9%
Aluminum (Al) .....max. 2.0%
Absence of Asbestos (Method B) .....Passes Test
Magnesium (as MgO) 17.0-19.5%
Product Information (not specifications):
Appearance (fine, ointment-like, white to grayish-white powder)
Preserve in well-closed containers.
CAS: 14807-96-6

Talcum
See Talc

Tannic Acid
FCC FOOD GRADE cGMP

1674-02	POLYSTORMOR	125 g	gd	160.45	
		12 x 125 g	gd	128.35	1540.20
1674-12	Poly	500 g	gd	380.35	
		4 x 500 g	gd	304.25	1217.00
1674-21		25 kg	bp	Inquire	

Meets FCC Requirements
Assay (dried basis) (FCC) .....min. 96.0%
Appearance (fluffy, light tan to brown powder) .....Passes Test
Solubility .....Passes Test
Gums or Dextrin .....Passes Test
Resinous Substances .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Loss on Drying at 105°C .....max. 7.0%
Residue on Ignition .....max. 1.0%
Lead (Pb) .....max 2 mg/kg
CAS: 1401-55-4 FLASH POINT: 198°C

Tannin
See Tannic Acid

Tartar Emetic
See Antimony Potassium Tartrate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tartaric Acid, Fine Granular
NF, FCC cGMP

2307-04	POLYSTORMOR	500 g	fg	189.20	
		12 x 500 g	fg	151.35	1816.20

$HOCO(CHOH)_2COOH$ FW: 150.09

Meets NF & FCC Requirements

Assay ($HOCO(CHOH)_2COOH$) (dried basis)(by acidimetry) . . .99.7-100.5%
Solubility (20 in 100) .....Passes Test
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Lead (Pb) .....max 2 mg/kg
Loss on Drying .....max. 0.5%
Residue on Ignition .....max. 0.1%
Limit of Oxalate .....Passes Test
Sulfate (SO_4) .....Passes Test
Heavy Metals (as Pb) .....max. 0.001%
Specific Rotation $[\alpha]^{25}_D$ .....+12.2 - +13.0°
Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 87-69-4

Tartaric Acid, Granular
AR (ACS)

2312-04	POLYSTORMOR	500 g	gd	125.00	
		12 x 500 g	gd	100.00	1200.00
2312-06	Poly	2.5 kg	gd	399.40	
		4 x 2.5 kg	gd	319.50	1278.00
2312-20	STAKMOR	12 kg	bs	Inquire	

$HOCO(CHOH)_2COOH$ FW: 150.09

Meets ACS Requirements

Assay .....min. 99.0%
Chloride (Cl) .....max. 0.001%
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 5 ppm
Oxalate (C_2O_4) .....Passes Test
Phosphate (PO_4) .....max. 0.001%
Residue after Ignition .....max. 0.02%
Sulfur Compounds (as S) .....max. 0.002%
Product Information (not specifications):
Appearance (fine, colorless crystalline granules)

CAS: 87-69-4

Tartaric Acid, Powder
AR (ACS)

2314-12	POLYSTORMOR	500 g	gd	148.90	
		4 x 500 g	gd	119.10	476.40

$HOCO(CHOH)_2COOH$ FW: 150.09

Meets ACS Requirements

Assay .....min. 99.0%
Chloride (Cl) .....max. 0.001%
Heavy Metals (as Pb) .....max. 5 ppm
Insoluble Matter .....max. 0.005%

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Iron (Fe) .....max. 5 ppm
Oxalate (C_2O_4) .....Passes Test
Phosphate (PO_4) .....max. 0.001%
Residue after Ignition .....max. 0.02%
Sulfur Compounds (as S) .....max. 0.002%
Product Information (not specifications):
Appearance (white powder)

CAS: 87-69-4

2′,4′,5′,7′-Tetrabromofluorescein
See Eosin Y (Yellowish)

3,3′,5,5′-Tetrabromophenolsulfonphthalein, Sodium Salt
See Bromophenol Blue, Sodium Salt

Tetrabutylammonium Hydroxide, 40% in Water

E224-80	Glass S/S	100 mL	so	141.20	

$(CH_3CH_2CH_2CH_2)_4NOH$ FW: 259.48

Assay ($(CH_3CH_2CH_2CH_2)_4NOH$) 38-42%
Warm product to 30°C and shake prior to use.
Product Information (not specifications):
Appearance (clear, slightly yellow solution)

CAS: 2052-49-5 DENSITY: 1 L = 0.980 kg IMO: 8:3267

Tetrachloroethylene
OR

1933-63		4 kg	so	153.30	

$Cl_2C{:}CCl_2$ FW: 165.83

Assay ($Cl_2C{:}CCl_2$) (by GC) .....min. 98%
Color (APHA) .....max. 15
Boiling Range .....119-122 °C.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 127-18-4 DENSITY: 1 L = 1.62 kg IMO: 6.1:1897

Tetrahydrofuran
AR (ACS)
(Stabilized)

8498-04	Glass	500 mL	gs	74.25	
		12 x 500 mL	gs	60.00	720.00
8498-08	Glass	4 L	gs	321.35	
		4 x 4 L	gs	259.65	1038.60
8498-19	Steel Pail	20 L	sb	666.00	
8498-26	Steel Drum	400 lb	bp	Inquire	

C_4H_8O FW: 72.11

Meets ACS Specifications

Appearance (clear, colorless liquid) .....Passes Test
Assay (C_4H_8O) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 20
Peroxide (as H_2O_2)(at time of packaging) .....max. 0.015%
Residue after Evaporation .....max. 0.03%

Tetrahydrofuran

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Contains 0.025% Butylated Hydroxytoluene as a stabilizer.

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg IMO: 3:2056
FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetrahydrofuran
AR (ACS)
(Stabilized)

8497-04	AR-CAN	950 mL	gs	115.65	
		6 x 950 mL	gs	93.45	560.70

C_4H_8O FW: 72.11

Meets ACS Specifications
Assay (C_4H_8O) (by GC, corrected for water) .....min. 99.0%
Color (APHA) .....max. 20
Peroxide (as H_2O_2)(at time of packaging) .....max. 0.015%
Residue after Evaporation .....max. 0.03%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.05%
Product Information (not specifications):
Appearance (clear, colorless liquid)
Contains 0.025% Butylated Hydroxytoluene as a stabilizer.

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg IMO: 3:2056
FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetrahydrofuran
UltimAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

V558-10	Glass	4 L	sp	278.05	
		4 x 4 L	sp	189.15	756.60

C_4H_8O FW: 72.11

Meets ACS Specifications
Assay (C_4H_8O) (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Peroxide (as H_2O_2)(at time of packaging) .....max. 0.005%
Residue after Evaporation .....max. 2 ppm
Water (H_2O)(by KF, coulometric) .....max. 0.02%
Optical Absorbance (1-cm path vs water):
212 nm .....max. 1.00
230 nm .....max. 0.40
254 nm .....max. 0.15
280 nm .....max. 0.03
320-400 nm .....max. 0.005
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg IMO: 3:2056
FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tetrahydrofuran
ChromAR
(Contains no Preservative)
Suitable for Liquid Chromatography and UV-Spectrophotometry

2858-08	Glass	1 L	sp	92.35	
		6 x 1 L	sp	62.80	376.80
2858-06	Glass	4 L	sp	237.05	
		4 x 4 L	sp	161.25	645.00

C_4H_8O FW: 72.11

Meets ACS Specifications
Assay (C_4H_8O) (by GC, corrected for water) .....min. 99.8%
Peroxide (as H_2O_2) .....max. 0.015%
Residue after Evaporation .....max. 5 ppm
Water (H_2O)(by KF, coulometric) .....max. 0.03%
Optical Absorbance (1-cm path vs water):
212 nm .....max. 1.00
225 nm .....max. 0.50
250 nm .....max. 0.17
300 nm .....max. 0.01

CAS: 109-99-9 DENSITY: 1 L = 0.88 kg IMO: 3:2056
FLASH POINT: -14°C

Solvent Spill Cleanup Products available. See pp. 378.

Tetramethylene Oxide
See Tetrahydrofuran

THAM
See Tris(Hydroxymethyl)Aminomethane

Thiamine Hydrochloride
USP

cGMP

2722-57	Glass	100 g	fg	134.70	

$C_{12}H_{17}ClN_4OS{\cdot}HCl$ FW: 337.27

Meets USP Requirements
Assay ($C_{12}H_{17}ClN_4OS{\cdot}HCl$) (anhydrous basis) 98.0-102.0%
Identification A .....Passes Test
Identification B .....Passes Test
pH of 1% Aqueous Solution at 25°C 2.7-3.4
Water (H_2O)(by Karl Fischer titrn) .....max. 5.0%
Residue on Ignition .....max. 0.2%
Absorbance of Solution (AU) .....max. 0.025
Limit of Nitrate .....Passes Test
Chromatographic Purity .....max. 1.0%
Product Information (not specifications):
Appearance (small, white to yellowish white crystals, or crystalline powder)

CAS: 67-03-8

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Thioacetamide
AR (ACS)

1864-55	Glass	25 g	gd	74.15	

CH_3CSNH_2 FW: 75.13

Meets ACS Specifications

Assay (CH_3CSNH_2) .....min. 99.0%
Melting Point .....111-114 °C.
Residue after Ignition .....max. 0.05%
Clarity of 2% Solution .....Passes Test
Appearance (white to off-white solid) .....Passes Test

CAS: 62-55-5

Thioglycolic Acid
See Mercaptoacetic Acid

Thymol, Crystal
NF cGMP

8528-02	POLYSTORMOR	125 g	fg	190.60	
		12 x 125 g	fg	152.45	1829.40
8528-03	POLYSTORMOR	500 g	fg	325.75	
8528-05	Poly	2.5 kg	fg	1179.55	

$(CH_3)_2CHC_6H_3$-1-CH_3-3-OH FW: 150.22

Meets NF Requirements

Assay ($(CH_3)_2CHC_6H_3$-1-CH_3-3-OH) 99.0-101.0%
Melting Point .....48-51 °C.
Nonvolatile Residue .....max. 0.05%
Identification A .....Passes Test
Identification B .....Passes Test
Identification C .....Passes Test
Solubility in Alcohol .....Passes Test
Product Information (not specifications):
Appearance (small, colorless granules)
Preserve in tight, light-resistant containers.

CAS: 89-83-8

Tin Salts
See under Stannous

Toluene
AR (ACS)

8608-02	Poly	500 mL	ur	26.00	
		12 x 500 mL	ur	21.00	252.00
8608-16	Poly	4 L	ur	69.75	
		4 x 4 L	ur	56.35	225.40
8608-22	Steel Pail	20 L	ur	152.10	
8608-26	Steel Drum	200 L	bp	Inquire	

$C_6H_5CH_3$ FW: 92.14

Meets ACS Specifications

Assay ($C_6H_5CH_3$) (by GC) .....min. 99.5%
Benzene (C_6H_6) .....Actual Value Reported
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (H_2O)(by KF, coulometric) .....max. 0.03%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 108-88-3 DENSITY: 1 L = 0.86 kg IMO: 3:1294
FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Toluene
UltimAR
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V560-06	Glass	1 L	sp	57.20	
		6 x 1 L	sp	38.90	233.40
V560-10	Glass	4 L	sp	123.70	
		4 x 4 L	sp	84.15	336.60

$C_6H_5CH_3$ FW: 92.14

Meets ACS Specifications

Assay ($C_6H_5CH_3$) (by GC, corrected for water) .....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0002%
Substances Darkened by H_2SO_4 .....Passes Test
Water (H_2O)(by KF, coulometric) .....max. 0.02%
Sulfur Compounds (as S) .....max. 0.003%
Optical Absorbance (1-cm path vs water):
285 nm .....max. 1.00
286 nm .....max. 0.70
288 nm .....max. 0.40
293 nm .....max. 0.20
300 nm .....max. 0.10
310 nm .....max. 0.05
335 nm .....max. 0.02
400-350 nm .....max. 0.01
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol)
Single Peak (µg/L) .....max. 10
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 108-88-3 DENSITY: 1 L = 0.86 kg IMO: 3:1294
FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Toluene
ChromAR
Suitable for Liquid Chromatography and UV Spectrophotometry

4483-10	Glass	4 L	sp	124.50	
		4 x 4 L	sp	84.70	338.80

$C_6H_5CH_3$ FW: 92.14

Meets ACS Specifications

Assay ($C_6H_5CH_3$) (by GC) .....min. 99.7%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 4 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (H_2O)(by KF, coulometric) .....max. 0.03%

Toluene

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Optical Absorbance (1-cm path vs water): .....Passes Test
285 nm .....max. 1.00
286 nm .....max. 0.70
288 nm .....max. 0.40
293 nm .....max. 0.20
300 nm .....max. 0.10
310 nm .....max. 0.05
335 nm .....max. 0.02
350-400 nm .....max. 0.01
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 108-88-3 DENSITY: 1 L = 0.86 kg IMO: 3:1294
FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Toluene
Purified

8604-08	Glass	4 L	gs	109.70	
		4 x 4 L	gs	88.65	354.60

$C_6H_5CH_3$ FW: 92.14

Specific Gravity at 25°/25°C 0.861-0.865
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 108-88-3 DENSITY: 1 L = 0.86 kg IMO: 3:1294
FLASH POINT: 7°C

Solvent Spill Cleanup Products available. See pp. 378.

Toluol
See Toluene

Total Acid Number Titration Solvent Mixture (ASTM D664)

V015-10	Glass	4 L	st	118.75	
		4 x 4 L	st	95.00	380.00
V015-19	Lined Steel Dr	5 gl	sb	305.90	

Assay:
Isopropyl Alcohol (v/v) 48.5-50.5%
Toluene (v/v) 49-51%
Water (H_2O)(by Karl Fischer titrn)(v/v) 0.45-0.55%
Density (g/mL) at 25°C 0.821-0.831
IMO: 3:1993 FLASH POINT: 4°C

Total Base Number Titration Solvent Mixture (ASTM D4739)

V068-10	Glass	4 L	st	118.75	
		4 x 4 L	st	95.00	380.00
V068-19	Lined Steel Dr	5 gl	sb	300.55	

Density (g/mL) at 25°C 1.030-1.040
Water (v/v) 0.9-1.1%
Assay (by GLC)
Isopropanol (v/v) 32-34%
Toluene (v/v) 32-34%
Chloroform (v/v) 32-34%
IMO: 3:1992 FLASH POINT: 17.8°C

Triacetin
OR

H279-61		1 L	so	100.30	

$CH_3COOCH(CH_2OCOCH_3)_2$ FW: 218.21

Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (colorless to slightly colored, oily liquid)
CAS: 102-76-1 DENSITY: 1 L = 1.1562 kg FLASH POINT: 138°C

Tributyl Phosphate
OR

1940-61	Glass	1 kg	so	121.95	

$(CH_3CH_2CH_2CH_2O)_3PO$ FW: 266.32

Color (APHA) .....max. 50
Infrared Spectrum .....Conforms to Reference Standard
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 126-73-8 DENSITY: 1 L = 0.98 kg FLASH POINT: 120°C

Trichloroacetic Acid, Crystal
AR (ACS)

2928-08	Glass	125 g	gd	94.20	
		4 x 125 g	gd	75.35	301.40
2928-10	Glass	500 g	gd	157.90	
		4 x 500 g	gd	126.30	505.20

Cl_3CCOOH FW: 163.39

Meets ACS Specifications
Assay (Cl_3CCOOH) (dried basis)(by acidimetry) 99.0-100.0%
Clarity of Solution .....Passes Test
Insoluble Matter .....max. 0.01%
Residue after Ignition .....max. 0.03%
Chloride (Cl) .....max. 0.002%
Nitrate (NO_3) .....max. 0.002%
Phosphate (PO_4) .....max. 5 ppm
Sulfate (SO_4) .....max. 0.02%
Heavy Metals (as Pb) .....max. 0.002%
Iron (Fe) .....max. 0.001%
Substances Darkened by H_2SO_4 .....Passes Test
CAS: 76-03-9 IMO: 8:1839

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Trichloroacetic Acid, Crystal
Purified cGMP

2924-34	Glass	30 g	gd	50.65	
2924-08	Glass	125 g	gd	76.00	
		4 x 125 g	gd	60.80	243.20

Cl_3CCOOH FW: 163.39

Assay (Cl_3CCOOH) (dried basis)(by acidimetry) 99.0-100.5
Chloride (Cl) .....max. 0.035%
Residue on Ignition .....max. 0.05%
Solubility (5 in 50) .....Passes Test
Sulfate (SO_4) .....max. 0.080%
Loss on Drying .....max. 1.0%
Product Information (not specifications):
Appearance (colorless, deliquescent crystals)
CAS: 76-03-9 IMO: 8:1839

Trichloroethene
See Trichloroethylene

Trichloroethylene, Stabilized
AR (ACS)

8600-04	Glass	500 mL	gs	41.70	
		12 x 500 mL	gs	33.70	404.40
8600-08	Glass	4 L	gs	232.85	
		4 x 4 L	gs	188.15	752.60
8600-22	Steel Drum	200 L	bp	Inquire	

$ClCH{:}CCl_2$ FW: 131.39

Meets ACS Specifications
Assay ($ClCH{:}CCl_2$) (by GC, corrected for water) .....min. 99.5%
Titrable Acid (meq/g) .....max. 0.0001
Titrable Base (meq/g) .....max. 0.0003
Free Halogens .....Passes Test
Heavy Metals (as Pb) .....max. 0.00001%
Residue after Evaporation .....max. 0.0005%
Water (H_2O)(by coulometry) .....max. 0.02%
Color (APHA) .....max. 10
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 79-01-6 DENSITY: 1 L = 1.47 kg IMO: 6.1:1710

Triethanolamine
See 2,2,2-Nitrilotriethanol

See the Academic section for research and chemical stockroom product information, starting on page 91.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Triethylamine
OR

1961-59	Glass	500 g	so	47.20	
1961-19	Steel Pail	20 L	sb	515.15	

$(CH_3CH_2)_3N$ FW: 101.19

Assay ($(CH_3CH_2)_3N$) .....min. 99.5%
Color (APHA) .....max. 15
Water (H_2O) .....max. 0.2%
Product Information (not specifications):
Appearance (clear, colorless liquid free from foreign matter)
CAS: 121-44-8 DENSITY: 1 L = 0.73 kg IMO: 3:1296
FLASH POINT: -9°C

Solvent Spill Cleanup Products available. See pp. 378.

Trifluoroacetic Acid
OR

1942-57	Glass in Can	100 g	so	89.80	
1942-59	Glass S/S	500 g	so	202.15	

F_3CCOOH FW: 114.03

Assay (F_3CCOOH) .....min. 99%
Product Information (not specifications):
Appearance (colorless to light straw fuming liquid)
CAS: 76-05-1 DENSITY: 1 L = 1.53 kg IMO: 8:2699

Acid Spill Cleanup Products available. See pp. 378.

3,4,5-Trihydroxybenzoic Acid
See Gallic Acid

Trihydroxypropane
See Glycerol

Triiodoethane
See Iodoform

Trimethylcarbinol
See tert-Butyl Alcohol

2,2,4-Trimethylpentane
AR (ACS)
(iso-octane)

1943-59	Glass	500 g	gs	68.65	

$(CH_3)_3CCH_2CH(CH_3)_2$ FW: 114.23

Meets ACS Specifications
Assay ($(CH_3)_3CCH_2CH(CH_3)_2$) (by GC, corrected for water) ....min. 99.0%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.001%
Sulfur Compounds (as S) .....max. 0.005%
Water-Soluble Titrable Acid (meq/g) .....max. 0.0003
Product Information (not specifications):
Appearance (clear, colorless liquid)
CAS: 540-84-1 DENSITY: 1 L = 0.69 kg IMO: 3:1262
FLASH POINT: -12°C

Solvent Spill Cleanup Products available. See pp. 378.

Trimethylpentane

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

2,2,4-Trimethylpentane
UltimAR
(iso-octane)
Suitable for LC, Extraction/Concentration, UV-Spectrophotometry

V559-10	Glass	4 L	sp	173.60	
		4 x 4 L	sp	118.10	472.40

$(CH_3)_3CCH_2CH(CH_3)_2$ FW: 114.23

Meets ACS Specifications for UV Spectrophotometry

Assay ($(CH_3)_3CCH_2CH(CH_3)_2$) (by GC, corrected for water) ....min. 99.8%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0001%
Sulfur Compounds (as S) .....max. 0.003%
Water (H_2O)(by KF, coulometric) .....max. 0.01%
Water-Soluble Titrable Acid (meq/g) .....max. 0.0003
Ultraviolet Absorbance (1.00-cm cell vs. water):
205 nm .....max. 1.00
210 nm .....max. 1.00
220 nm .....max. 0.20
225 nm .....max. 0.10
230 nm .....max. 0.10
240 nm .....max. 0.04
250-400 nm .....max. 0.01
Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.3
at Emission Maximum for Impurities .....max. 1.0
GC-ECD Sensitive Impurities (as Heptachlor Epoxide)
Single Peak (ng/L) .....max. 10
GC-FID Sensitive Impurities (as 2-Octanol) Single Peak (µg/L) ....max. 5
Sum of the Peaks (µg/L) .....max. 10
Neat Solvent Front Characterization .....Passes Test
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 540-84-1 DENSITY: 1 L = 0.69 kg IMO: 3:1262
FLASH POINT: -12°C

Solvent Spill Cleanup Products available. See pp. 378.

2,2,4-Trimethylpentane
ChromAR
(iso-octane)
Suitable for Liquid Chromatography and UV-Spectrophotometry

6043-10	Glass	4 L	sp	158.10	
		4 x 4 L	sp	107.55	430.20

$(CH_3)_3CCH_2CH(CH_3)_2$ FW: 114.23

Meets ACS Specifications

Assay ($(CH_3)_3CCH_2CH(CH_3)_2$) (by GC, corrected for water) ....min. 99.5%
Color (APHA) .....max. 10
Residue after Evaporation .....max. 0.0003%
Sulfur Compounds (as S) .....max. 0.005%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.02%
Water-Soluble Titrable Acid (meq/g) .....max. 0.0003
Ultraviolet Absorbance (1.00-cm cell vs. water):
205 nm .....max. 1.00
210 nm .....max. 1.00
220 nm .....max. 0.20
230 nm .....max. 0.10
240 nm .....max. 0.04
250-400 nm .....max. 0.01
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 540-84-1 DENSITY: 1 L = 0.69 kg IMO: 3:1262
FLASH POINT: -12°C

Solvent Spill Cleanup Products available. See pp. 378.

2,2,4-Trimethylpentane, 99%
(iso-octane)

6052-19	Steel Pail	20 L	sb	547.30	

C_8H_{18} FW: 114.23

Specific Gravity at 25°/25°C .....Actual Value Reported

CAS: 540-84-1 DENSITY: 1 L = 0.69 kg IMO: 3:1262
FLASH POINT: -12°C

Solvent Spill Cleanup Products available. See pp. 378.

TRIS
GenAR
(tris(hydroxymethyl)aminomethane)
Suitable for Use in Biotechnology

7732-10	Poly Pail	10 kg	ge	933.45	
7732-88	Poly Pail	12 kg	bs	Inquire	

$NH_2C(CH_2OH)_3$ FW: 121.14

Assay ($NH_2C(CH_2OH)_3$) (dried basis) 99.8-100.2%
Absorbance at 290 nm (au) .....max. 0.2
Enzyme Activity:
DNase Activity .....Passes Test
RNase Activity .....Passes Test
Protease Activity .....Passes Test
Heavy Metals (as Pb) .....max. 0.0005%
Iron (Fe) .....max. 0.0005%
Insoluble Matter .....max. 0.005%
Loss on Drying at 105°C .....max. 1.0%
Melting Point .....168-172 °C.
pH of 0.05M Solution at 25°C 10.3-10.5
Residue after Ignition .....max. 0.1%
Water (H_2O)(by Karl Fischer titrn) .....max. 2%
Product Information (not specifications):
Appearance (white crystalline powder or granules)

CAS: 77-86-1

Tris-Borate-EDTA, 10X
GenAR
Suitable for Use in Biotechnology

V110-02	Poly	1 L	ge	80.10	
		4 x 1 L	ge	71.95	287.80

pH of 1X Solution at 23°C 8.3-8.5
Composition of 10X Solution:
0.89 M Tris Base
0.89 M Boric Acid
0.02 M EDTA
Filtered through a 0.2 micron filter.

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tris Borate EDTA (TBE), 10X, Powder
GenAR
(Pre-Weighed Powder to Make 1L of 10X Solution)
Suitable for Use in Biotechnology

V293-01		172.1 g	ge	87.05	

pH of 1X Solution at 23°C 8.3-8.5
Composition of 10X Solution after Dilution to 1 Liter:
0.89 M Tris Base
0.89 M Boric Acid
0.02 M EDTA

Tris Hydrochloride
GenAR
Suitable for Use in Biotechnology

H590-88	Poly Pail	12 kg	bs	Inquire	

$NH_2C(CH_2OH)_3 \cdot HCl$ FW: 157.60

Assay ($NH_2C(CH_2OH)_3 \cdot HCl$) (anhydrous basis) ..... min. 99.90%
Absorbance at 290 nm (au) ..... max. 0.05
Appearance of a 40% Solution (w/v) (clear and colorless) ..... Passes Test
Endotoxin Concentration (EU/g) ..... max. 2.5
Heavy Metals ..... max. 0.0005%
Loss on Drying at 100°C ..... max. 0.5%
Residue after Ignition ..... max. 0.1%
Enzyme Activity:
DNase Activity ..... Passes Test
RNase Activity ..... Passes Test
Protease Activity ..... Passes Test
Product Information (not specifications):
Appearance (white, crystalline granules)
CAS: 1185-53-1

Tris(Hydroxymethyl)Aminomethane
AR (ACS)

1806-57	Glass	100 g	gd	104.85	
1806-10	Glass	500 g	gd	211.60	
		6 x 500 g	gd	169.25	1015.50
1806-11	STAKMOR	5 kg	gd	877.30	
1806-88	Poly Pail	12 kg	bs	Inquire	

$NH_2C(CH_2OH)_3$ FW: 121.14

Meets ACS Specifications
Assay ($NH_2C(CH_2OH)_3$) (dried basis) 99.8-100.1%
Insoluble Matter ..... max. 0.005%
Loss on Drying at 105°C ..... max. 1.0%
pH of 0.05M Solution at 25°C 10.3-10.5
Water (H_2O)(by Karl Fischer titrn) ..... max. 2%
Heavy Metals (as Pb) ..... max. 5 ppm
Iron (Fe) ..... max. 5 ppm
Absorbance ..... Passes Test
Product Information (not specifications):
Appearance (white crystalline granules or powder)
CAS: 77-86-1

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Tri Sodium Phosphate
See Sodium Phosphate, Tribasic

Tween 80
See Polysorbate 80

Urea
GenAR
Suitable for Use in Biotechnology

7729-08	Poly Pail	5 kg	ge	244.10	
7729-88	Poly Pail	12 kg	bs	Inquire	

NH_2CONH_2 FW: 60.06

Assay (NH_2CONH_2) 99.0-100.5%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.0005%
Sulfate (SO_4) ..... max. 0.001%
Heavy Metals (as Pb) ..... max. 0.001%
Iron (Fe) ..... max. 0.0002%
Copper (Cu) ..... max. 0.0002%
Reaction to Litmus ..... Passes Test
Melting Point ..... 132-135 °C.
Residue after Ignition ..... max. 0.01%
Optical Density (280 nm) (au) ..... max. 0.06
Optical Density (260 nm) (au) ..... max. 0.05
Enzyme Activity:
DNase Activity ..... Passes Test
RNase Activity ..... Passes Test
Protease Activity ..... Passes Test
Product Information (not specifications):
Appearance (colorless to white prismatic crystals, or white crystalline powder, or small white pellets)
CAS: 57-13-6

Urea
cGMP
USP-GenAR
Suitable for Use in Biotechnology

7816-06	Poly	2 kg	ge	214.85	
		4 x 2 kg	ge	171.85	687.40
7816-88	Poly Pail	12 kg	bs	Inquire	
7816-09	Poly Drum	50 kg	bp	Inquire	

NH_2CONH_2 FW: 60.06

Meets USP Requirements
Assay (NH_2CONH_2) 99.0-100.5%
Appearance (colorless to white prismatic crystals, or white crystalline powder, or small white pellets) ..... Passes Test
Alcohol Insoluble Matter ..... max. 0.04%
Chloride (Cl) ..... max. 0.007%
Endotoxin Concentration (EU/g) ..... max. 5.0
Heavy Metals (as Pb) ..... max. 0.002%
Identification A ..... Passes Test
Identification B ..... Passes Test
Melting Range ..... 132-135 °C.
Residue on Ignition ..... max. 0.1%
Sulfate (SO_4) ..... max. 0.010%
Enzyme Activity:
DNase Activity ..... Passes Test

Urea

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

RNase Activity .....Passes Test
Protease Activity .....Passes Test

Meets BP/Ph.Eur. Chemical Specifications

Assay (NH_2CONH_2) (dried basis) 98.5-101.5%
Identification A .....Passes Test
Identification B .....Passes Test
Appearance of Solution .....Passes Test
Alkalinity .....Passes Test
Biuret .....max. 0.1%
Ammonium (NH_4) .....max. 500 ppm
Heavy Metals (as Pb) .....max. 10 ppm
Loss on Drying .....max. 1.0%
Ash (sulfated) .....max. 0.1%

Preserve in tight containers. Store at 25°C, excursions permitted between 15°C and 30°C

CAS: 57-13-6

Urea
USP cGMP

8642-12	POLYSTORMOR	500 g	fg	60.70	
		4 x 500 g	fg	48.55	194.20
8642-20	Lined Fiber Dr	12 kg	bs	Inquire	
8642-88	Poly Pail	12 kg	bs	Inquire	
8642-30	Poly Drum	100 lb	bp	Inquire	

NH_2CONH_2 FW: 60.06

Meets USP Requirements

Assay (NH_2CONH_2) 99.0-100.5%
Alcohol Insoluble Matter .....max. 0.04%
Chloride (Cl) .....max. 0.007%
Heavy Metals (as Pb) .....max. 0.002%
Identification A .....Passes Test
Identification B .....Passes Test
Melting Range .....132-135 °C.
Residue on Ignition .....max. 0.1%
Sulfate (SO_4) .....max. 0.010%

Product Information (not specifications):
Appearance (colorless to white powder, granules, or small pellets)
Preserve in tight containers. Store at 25°C, excursions permitted between 15°C and 30°C

CAS: 57-13-6

Urea, Crystal
AR (ACS)

8648-04	POLYSTORMOR	500 g	gd	50.95	
		12 x 500 g	gd	40.75	489.00
8648-06	STAKMOR	2.5 kg	gd	156.30	
8648-20	STAKMOR	12 kg	bs	Inquire	

NH_2CONH_2 FW: 60.06

Meets ACS Specifications

Assay 99.0-100.5%
Chloride (Cl) .....max. 5 ppm
Heavy Metals (as Pb) .....max. 0.001%
Insoluble Matter .....max. 0.01%
Iron (Fe) .....max. 0.001%
Residue after Ignition .....max. 0.01%
Solubility (NTU) .....max. 4.0

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Sulfate (SO_4) .....max. 0.001%
Melting Point .....132.0-135.0 °C.

Product Information (not specifications):
Appearance (colorless to white prismatic crystals, or white crystalline powder, or small white pellets)

CAS: 57-13-6

Vitamin C
See Ascorbic Acid

Water
AR (ACS)
(Distilled Water, Deionized Water)

H453-05	Poly	1 L	st	17.80
H453-07	Poly	4 L	st	46.00
H453-09	Cubitainer	20 L	st	143.35

H_2O FW: 18.02

Meets ACS Specifications

Chloride (Cl) .....max. 0.4 ppm
Electrical Resistivity at 25°C (Mohm.cm) .....min. 0.5
Heavy Metals (as Pb) .....max. 0.01 ppm
Nitrate (NO_3) .....max. 0.4 ppm
Phosphate (PO_4) .....max. 1.0 ppm
Residue after Evaporation .....max. 0.0002%
Silicate (as SiO_2) .....max. 0.01 ppm
Specific Conductance at 25°C ($\mu ohm^{-1}\ cm^{-1}$) .....max. 2.0
Substances Reducing Permanganate .....Passes Test
Sulfate (SO_4) .....max. 1.0 ppm

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg

Water
UltimAR
Suitable for Liquid Chromatography and Ion Chromatography

V564-23	NOWPak	20 L	np	324.40
V564-51	NOWPak	200 L	np	618.35

H_2O FW: 18.02

Meets ACS Specifications

Residue after Evaporation .....max. 0.0001%

Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.1
at Emission Maximum for Impurities .....max. 0.2

Volatile Organic Trace Analysis
Photoionization Detection (PID) Below CRQL .....Passes Test
Electroconductivity Detection (ELCD) Below CRQL .....Passes Test
Total Organic Carbon (100 ppb) .....Passes Test
Total Inorganic Carbon .....Actual Value Reported
HPLC Gradient Elution .....Passes Test
Specific Conductance at 25°C ($\mu ohm^{-1}\ cm^{-1}$) .....max. 2.0
Substances Reducing Permanganate .....Passes Test
Chloride (Cl) .....max. 0.4 ppm
Nitrate (NO_3) .....max. 0.4 ppm
Silicate (as SiO_2) .....max. 0.01 ppm
Phosphate (PO_4) .....max. 1.0 ppm
Heavy Metals (as Pb) .....max. 0.01 ppm
Sulfate (SO_4) .....max. 1.0 ppm

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Water
ChromAR
Suitable for Liquid Chromatography and UV-Spectrophotometry

6795-06	Glass	1 L	sp	28.70	
		6 x 1 L	sp	19.50	117.00
6795-10	Glass	4 L	sp	75.40	
		4 x 4 L	sp	51.30	205.20
6795-23	NOWPak	20 L	np	305.00	

H_2O FW: 18.02

Meets ACS Specifications

Fluorescence Trace Impurities, in ppb, measured as Quinine Base:
at 450 nm Emission .....max. 0.1
at Emission Maximum for Impurities .....max. 0.2
pH 5.0-8.0
Residue after Evaporation .....max. 0.0001%
Suitability for HPLC .....Passes Test
Specific Conductance at 25°C ($\mu ohm^{-1}\ cm^{-1}$) .....max. 2.0
Substances Reducing Permanganate .....Passes Test
Chloride (Cl) .....max. 0.4 ppm
Electrical Resistivity at 25°C (Mohm.cm) .....min. 0.5
Heavy Metals (as Pb) .....max. 0.01 ppm
Nitrate (NO_3) .....max. 0.4 ppm
Phosphate (PO_4) .....max. 1.0 ppm
Silicate (as SiO_2) .....max. 0.01 ppm
Sulfate (SO_4) .....max. 1.0 ppm
Filtered through a 0.2 micron filter.
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 7732-18-5 DENSITY: 1 L = 1.00 kg

Wijs Solution
See Iodine-Monochloride Solution

Wood Alcohol
See Methyl Alcohol Anhydrous

Wright's Stain
Certified OR

E209-55	Glass	25 g	so	75.50	

Certified by the Biological Stain Commission.

CAS: 68988-92-1

X-Gal
(5-bromo-4-chloro-3-indolyl-beta-D-galatopyranoside)
Suitable for Use in Biotechnology

V261-01		1 g	ge	329.75	

$C_{14}H_{15}BrClNO_6$ FW: 408.64

Assay (enzymatic purity) .....min. 99.0%
Solubility .....Passes Test
Product Information (not specifications):
Appearance (white powder)
NOTE: Freeze upon receipt. Keep dry. Warm to room temperature before opening. Keep from light.

CAS: 7240-90-6

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

p-Xylene
AR

5450-08	Glass	4 L	gs	274.45	
		4 x 4 L	gs	221.75	887.00

$C_6H_4(CH_3)_2$ FW: 106.17

Boiling Range .....137-144 °C.
Color (APHA) .....max. 20
Freezing Point .....12-14 °C.
Residue after Evaporation .....max. 0.002%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.050%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 106-42-3 DENSITY: 1 L = 0.86 kg IMO: 3:1307
FLASH POINT: 27.2°C

Solvent Spill Cleanup Products available. See pp. 378.

Xylenes
AR (ACS)
For Histological Use

8668-02	Poly	500 mL	ur	24.45	
		12 x 500 mL	ur	19.75	237.00
8668-06	Glass	1 L	gs	58.90	
		6 x 1 L	gs	47.60	285.60
8668-16	Poly	4 L	ur	66.55	
		4 x 4 L	ur	54.10	216.40
8668-22	Steel Pail	20 L	ur	179.20	
8668-26	Steel Drum	200 L	bp	Inquire	

$C_6H_4(CH_3)_2$ FW: 106.17

Meets ACS Specifications

Assay ($C_6H_4(CH_3)_2$) (by GC) .....min. 98.5%
Color (APHA) .....max. 10
Ethylbenzene ($C_6H_5C_2H_5$) .....max. 25%
Particulate Contamination .....Passes Test
Residue after Evaporation .....max. 0.002%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.0005%
Water (H_2O) .....max. 0.02%
Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 1330-20-7 DENSITY: 1 L = 0.86 kg IMO: 3:1307
FLASH POINT: 29°C

Solvent Spill Cleanup Products available. See pp. 378.

See Histopathology section for more information about stains and buffers, starting on page 87.

Xylenes

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Xylenes
Lab Grade
For Histological Use

8664-01	Glass S/S	500 mL	gs	20.05	
8664-08	Glass	4 L	gs	70.85	
		4 x 4 L	gs	57.25	229.00
8664-12	Poly	4 L	gs	132.25	
		4 x 4 L	gs	106.85	427.40
8664-19	Steel Pail	20 L	sb	148.80	

$C_6H_4(CH_3)_2$ FW: 106.17

Residue after Evaporation .....max. 0.002%
Water (H_2O)(by Karl Fischer titrn) .....max. 0.02%
Particulate Contamination .....Passes Test
Assay ($C_6H_4(CH_3)_2$) (by GC) .....min. 98.5%
Color (APHA) .....max. 10
Ethylbenzene ($C_6H_5C_2H_5$) .....max. 25%
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.005%

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 1330-20-7 DENSITY: 1 L = 0.86 kg IMO: 3:1307
FLASH POINT: 29°C

Solvent Spill Cleanup Products available. See pp. 378.

Xylenes
Low Trace Metal Grade

8802-04	Glass	4 L	gs	172.10	
		4 x 4 L	gs	139.05	556.20

$C_6H_4(CH_3)_2$ FW: 106.17

Assay ($C_6H_4(CH_3)_2$) (by GC) .....min. 98.5%
Acidity (µeq/g) .....max. 0.3
Arsenic and Antimony (as As) .....max. 0.01 ppm
Chloride (Cl) .....max. 3 ppm
Color (APHA) .....max. 10
Heavy Metals (as Pb) .....max. 1 ppm
Identification (by IR) .....Passes Test
Phosphate (PO_4) .....max. 1 ppm
Residue after Evaporation .....max. 5 ppm
Substances Darkened by H_2SO_4 .....Passes Test
Sulfur Compounds (as S) .....max. 0.003%
Water (H_2O) .....max. 0.02%

Trace Impurities (in ppm):
Aluminum (Al) .....max. 0.1
Barium (Ba) .....max. 1
Boron (B) .....max. 0.1
Cadmium (Cd) .....max. 1
Calcium (Ca) .....max. 0.1
Chromium (Cr) .....max. 0.1
Cobalt (Co) .....max. 0.1
Copper (Cu) .....max. 0.1
Gallium (Ga) .....max. 0.5
Germanium (Ge) .....max. 1
Gold (Au) .....max. 0.1
Iron (Fe) .....max. 0.1
Lead (Pb) .....max. 0.1
Lithium (Li) .....max. 1
Magnesium (Mg) .....max. 0.1
Manganese (Mn) .....max. 0.1
Nickel (Ni) .....max. 0.1
Potassium (K) .....max. 0.1
Silicon (Si) .....max. 1
Silver (Ag) .....max. 0.5
Sodium (Na) .....max. 0.1
Strontium (Sr) .....max. 1
Tin (Sn) .....max. 0.1
Zinc (Zn) .....max. 0.1

Product Information (not specifications):
Appearance (clear, colorless liquid)

CAS: 1330-20-7 DENSITY: 1 L = 0.86 kg IMO: 3:1307
FLASH POINT: 29°C

Solvent Spill Cleanup Products available. See pp. 378.

Zinc Metal, Dust
AR

8681-04	Glass	500 g	gd	56.25	
		12 x 500 g	gd	45.00	540.00
8681-06	Glass	2.5 kg	gd	194.60	
		4 x 2.5 kg	gd	155.65	622.60

Zn AW: 65.39

Assay (Zn) .....min. 95.0%
Nitrogen (N) .....max. 0.001%

Product Information (not specifications):
Appearance (fine, gray powder)

CAS: 7440-66-6

Zinc Acetate, Dihydrate, Granular
AR (ACS)

8740-04	POLYSTORMOR	500 g	gd	66.60	
		12 x 500 g	gd	53.25	639.00
8740-06	Poly	2.5 kg	gd	199.50	
		4 x 2.5 kg	gd	159.60	638.40

$(CH_3COO)_2Zn{\cdot}2H_2O$ FW: 219.50

Meets ACS Specifications

Assay ($(CH_3COO)_2Zn{\cdot}2H_2O$) 98.0-101.0%
Solubility .....Passes Test
Chloride (Cl) .....max. 0.0005%
Insoluble Matter .....max. 0.005%
Iron (Fe) .....max. 0.0005%
Lead (Pb) .....max. 0.002%
Sulfate (SO_4) .....max. 0.002%
pH of 5% Solution at 25°C 6.0-7.0
Calcium (Ca) .....max. 0.005%
Magnesium (Mg) .....max. 0.005%
Potassium (K) .....max. 0.01%
Sodium (Na) .....max. 0.05%

Product Information (not specifications):
Appearance (white, crystalline granules)

CAS: 5970-45-6

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Zinc Chloride, Granular
AR (ACS)

8780-02	POLYSTORMOR	125 g	gd	68.65	
		12 x 125 g	gd	54.90	658.80
8780-04	POLYSTORMOR	500 g	gd	161.85	
		12 x 500 g	gd	129.45	1553.40
8780-06	Poly	2.5 kg	gd	516.35	
		4 x 2.5 kg	gd	413.05	1652.20
8780-20	STAKMOR	12 kg	bs	Inquire	
8780-25	Poly Drum	50 kg	bp	Inquire	

$ZnCl_2$ FW: 136.30

Meets ACS Specifications

Assay ($ZnCl_2$) ..... min. 97.0%
Ammonium (NH_4) ..... max. 0.005%
Calcium (Ca) ..... max. 0.06%
Insoluble Matter ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Lead (Pb) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.01%
Nitrate (NO_3) ..... max. 0.003%
Oxychloride ..... Passes Test
Potassium (K) ..... max. 0.02%
Sodium (Na) ..... max. 0.05%
Solubility ..... Passes Test
Sulfate (SO_4) ..... max. 0.01%

Product Information (not specifications):
Appearance (off-white to gray granules)

CAS: 7646-85-7 IMO: 8:2331

Zinc Chloride, Granular
USP cGMP

8772-04	Glass	500 g	fg	181.95	
		12 x 500 g	fg	145.55	1746.60
8772-20	STAKMOR	12 kg	bs	Inquire	
8772-25	Poly Drum	50 kg	bp	Inquire	

$ZnCl_2$ FW: 136.30

Meets USP Requirements

Assay ($ZnCl_2$) 97.0-100.5%
Alkalies and Alkaline Earths ..... max. 1.0%
Ammonium Salts ..... Passes Test
Identification A ..... Passes Test
Identification B ..... Passes Test
Lead (Pb) ..... max. 0.005%
Sulfate (SO_4) ..... max. 0.03%
Oxychloride ..... Passes Test
Solubility (10 in 100) ..... Passes Test

Product Information (not specifications):
Appearance (white to nearly white deliquescent granules)

CAS: 7646-85-7 IMO: 8:2331

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case

Zinc Oxide, Powder
AR (ACS)

8832-20	Lined Fiber Dr	12 kg	bs	Inquire	

ZnO FW: 81.39

Meets ACS Specifications

Assay (ZnO) ..... min. 99.0%
Alkalinity ..... Passes Test
Calcium (Ca) ..... max. 0.005%
Chloride (Cl) ..... max. 0.001%
Insoluble in Dilute H_2SO_4 ..... max. 0.01%
Iron (Fe) ..... max. 0.001%
Lead (Pb) ..... max. 0.005%
Magnesium (Mg) ..... max. 0.005%
Manganese (Mn) ..... max. 5 ppm
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Nitrate (NO_3) ..... max. 0.003%
Sulfur Compounds (as SO_4) ..... max. 0.01%

Product Information (not specifications):
Appearance (white to slightly yellow, amorphous powder)

CAS: 1314-13-2

Zinc Oxide, Powder
USP cGMP

8824-04	POLYSTORMOR	500 g	fg	73.50	
		12 x 500 g	fg	58.80	705.60
8824-05	STAKMOR	2.5 kg	fg	161.40	
8824-20	Lined Fiber Dr	12 kg	bs	Inquire	
8824-30	Bag	50 lb	bp	Inquire	
8824-24	Lined Fiber Dr	100 lb	bp	Inquire	

ZnO FW: 81.39

Meets USP Requirements

Assay (ZnO) (ignited basis) 99.0-100.5%
Identification A ..... Passes Test
Identification B ..... Passes Test
Alkalinity ..... Passes Test
Loss on Ignition ..... max. 1.0%
Carbonate and Color of Solution ..... Passes Test
Arsenic (As) ..... max. 6 ppm
Lead (Pb) ..... Passes Test
Iron and Other Heavy Metals ..... Passes Test
Solubility in Dilute Sulfuric Acid ..... Passes Test

Preserve in well-closed containers.

CAS: 1314-13-2

See Analytical Chromatography section for more information on HPLC, UHPLC, LC/MS and GC solvents, starting on page 22.

Zinc Sulfate

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Zinc Sulfate, 7-Hydrate, Granular AR (ACS)					
8880-12	POLYSTORMOR	500 g	gd	76.65	
		4 x 500 g	gd	61.30	245.20
8880-06	Poly	2.5 kg	gd	320.15	
		4 x 2.5 kg	gd	256.10	1024.40
8880-20	STAKMOR	12 kg	bs	Inquire	

$ZnSO_4 \cdot 7H_2O$ FW: 287.54

Meets ACS Specifications

Assay ($ZnSO_4 \cdot 7H_2O$) 99.0-103.0%
Insoluble Matter ..... max. 0.01%
Chloride (Cl) ..... max. 0.0005%
Nitrate (NO_3) ..... max. 0.002%
Ammonium (NH_4) ..... max. 0.001%
Calcium (Ca) ..... max. 0.005%
Iron (Fe) ..... max. 0.001%
Lead (Pb) ..... max. 0.003%
Magnesium (Mg) ..... max. 0.005%
Manganese (Mn) ..... max. 0.0003%
Potassium (K) ..... max. 0.01%
Sodium (Na) ..... max. 0.05%
Solubility ..... Passes Test
pH of 5% Solution at 25°C 4.4-6.0

Product Information (not specifications):
Appearance (white to off-white granules)

CAS: 7446-20-0

Product Number	Container Type	Package Size	Group Code	Price Each	Price Case
Zinc Sulfate, 7-Hydrate, Granular USP, FCC cGMP					
8872-07	Poly	2.5 kg	fg	341.75	
		4 x 2.5 kg	fg	273.40	1093.60
8872-20	STAKMOR	12 kg	bs	Inquire	
8872-24	Lined Fiber Dr	100 lb	bp	Inquire	

$ZnSO_4 \cdot 7H_2O$ FW: 287.56

Meets USP & FCC Requirements

Assay ((as $ZnSO_4$)) 55.6-61.0%
Assay ($ZnSO_4 \cdot 7H_2O$) 99.0-108.7%
Solubility ..... Passes Test
Identification A ..... Conforms to USP/NF
Identification B ..... Conforms to USP/NF
Appearance ..... Passes Test
Acidity ..... Passes Test
Alkalies and Alkaline Earths (FCC) ..... max. 0.5%
Alkalies and Alkaline Earths (USP) ..... max. 0.9%
Arsenic (As) ..... max. 3 ppm
Iron (Fe) ..... max. 0.003%
Lead (Pb)(FCC) ..... max 4 mg/kg
Lead (Pb)(USP) ..... max. 0.002%
Cadmium (Cd) ..... max 2 mg/kg
Mercury (Hg) ..... max. 5 ppm
Selenium (Se) ..... max. 0.003%

CAS: 7446-20-0

Packaging Appendix of Most Common Containers

The following Packaging Appendix contains information about many of Avantor's most common packaging configurations and is organized by product type with specifications and photos. All Avantor packaging is designed with purity, safety, and convenience in mind. For detailed information on packaging that does not appear in this catalog, please contact Technical Service at 1-800-669-8230 or use the ASK AVANTOR feature at avantormaterials.com.

Package Type		Septum-Seal Cap	Septum-Seal Cap	Amber Poly Coated
				
Description		4 oz amber round glass bottle with septum seal cap	1 L amber round glass bottle with septum seal cap	4 L round amber glass bottle with an outer PVC coating
Material of Construction	**Container**	Soda lime glass type III	Soda lime glass type III	Soda lime glass type III with PVC coating
	Cap	Polypropylene 0.45" hole	Polypropylene 0.45" hole	Polypropylene
	Cap Liner	PFA composite liner	PFA composite liner	Fluoropolymer
	Gasket			
Height (in)		4.780	8.766	13.406
Width or OD (in)		1.910	3.797	6.219
Package Weight (lb)		0.220	1.076	2.813
Height (cm)		12.141	22.266	34.052
Width or OD (cm)		4.841	9.644	15.796
Package Weight (kg)		0.101	0.489	1.276
Thread (neck finish)		38/439 Finish	38/439 Finish	38/439 Finish
Special Features		Septum cap allows multiple penetrations while still maintaining low water content.	Septum cap allows multiple penetrations while still maintaining low water content.	Poly coated bottle to prevent shattering upon impact.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Amber Glass	Amber Glass	Amber Glass
				
Description		500 mL round amber glass bottle	1 L round amber glass bottle	1 L round amber glass bottle
Material of Construction	**Container**	Soda lime glass type III	Soda lime glass type III	Soda lime glass type III
	Cap	Polypropylene	Polypropylene, tamper evident	Polypropylene
	Cap Liner	Pulp and tin foil	Fluoropolymer	Fluoropolymer
	Gasket			
Height (in)		7.734	8.580	8.766
Width or OD (in)		3.000	4.000	3.797
Package Weight (lb)		0.686	1.540	1.076
Height (cm)		19.644	21.793	22.266
Width or OD (cm)		7.620	10.160	9.644
Package Weight (kg)		0.311	0.699	0.489
Thread (neck finish)		38/439 Finish	DIN 45 Finish	38/439 Finish
Special Features			Compatible with Karl Fischer instruments.	

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Amber Glass	Amber Glass	Poly
				
Description		2.5 L round amber glass bottle	4 L amber glass bottle	4 L polyethylene bottle
Material of Construction	**Container**	Soda lime glass type III	Soda lime glass type III	HDPE
	Cap	Polypropylene, tamper evident	Polypropylene	Polypropylene
	Cap Liner	Fluoropolymer	Fluoropolymer	Polypropylene
	Gasket			
Height (in)		12	13.406	13.600
Width or OD (in)		6	6.219	6.120
Package Weight (lb)		2.860	2.813	0.419
Height (cm)		30.45	34.052	34.544
Width or OD (cm)		15.23	15.796	15.545
Package Weight (kg)		1.297	1.276	0.190
Thread (neck finish)		DIN 45 Finish	38/439 Finish	38/439 Finish
Special Features		Compatible with Karl Fischer instruments.		

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Poly PB	Poly Pail	NOWPak Package
				
Description		4 L pressure bottom polyethylene bottle	5 gal molded polyethylene pail	20 L non-pressurized HDPE drum with collapsible inner liner
Material of Construction	**Container**	HDPE with molded handle	High Molecular Weight HDPE	High Molecular Weight HDPE resin/ polytetrafluoroethylene liner
	Cap	Polypropylene	2″ buttress white HDPE	HDPE
	Cap Liner	Polypropylene		Fluoropolymer
	Gasket		EPDM & POE (Polyolefin)	
Height (in)		13.730	13.625	16.300
Width or OD (in)		6.031	9.375	12.000
Package Weight (lb)		0.467	2.900	4.800
Height (cm)		34.874	34.6	41.402
Width or OD (cm)		15.319	23.8	30.480
Package Weight (kg)		0.212	1.315	2.180
Thread (neck finish)		38/439 finish	2″ female buttress	
Special Features				For more details see page 104.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Al SAFETAINER	CYCLE-TAINER System	CYCLE-TAINER System
				
Description		4 L seamless aluminum can	4 L stainless steel returnable positive-pressure solvent delivery system	18 L stainless steel returnable positive-pressure solvent delivery system
Material of Construction	**Container**	Aluminum with polypropylene threads	304 stainless steel with internal passivation of electropolish	304 stainless steel with internal passivation of electropolish
	Cap	Polypropylene	Swagelok Quick-Connect fitting color-coded for a specific chemical	Swagelok Quick-Connect fitting color-coded for a specific chemical
	Cap Liner		Fluoropolymer	Fluoropolymer
	Gasket			
Height (in)		9.173	11.750	22.440
Width or OD (in)		6.890	9.200	11.100
Package Weight (lb)		0.651	13.000	24.000
Height (cm)		23.300	29.845	56.998
Width or OD (cm)		17.500	23.368	28.194
Package Weight (kg)		0.295	5.897	10.886
Thread (neck finish)		DIN45		
Special Features		Safety package that eliminates breakage and minimizes vapor leaks.	For more details see pages 99–103.	For more details see pages 99–103.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		CYCLE-TAINER System	CYCLE-TAINER System	CYCLE-TAINER System
				
Description		52 L stainless steel returnable positive-pressure solvent delivery system	215 L stainless steel returnable positive-pressure solvent delivery system	1250 L stainless steel returnable positive-pressure solvent delivery system
Material of Construction	**Container**	304 stainless steel with internal passivation of electropolish	304 stainless steel with internal passivation of electropolish	304/316 stainless steel with internal passivation of electropolish
	Cap	Swagelok Quick-Connect fitting color-coded for a specific chemical	Swagelok Quick-Connect fitting color-coded for a specific chemical	Swagelok Quick-Connect fitting color-coded for a specific chemical.
	Cap Liner	Fluoropolymer	Fluoropolymer	Fluoropolymer
	Gasket			
Height (in)		28.920	55.125	73.210
Width or OD (in)		15.640	21.770	45.000
Package Weight (lb)		56.000	144.000	496.000
Height (cm)		73.457	140.018	185.953
Width or OD (cm)		39.726	55.296	114.300
Package Weight (kg)		25.402	65.318	224.986
Thread (neck finish)				
Special Features		For more details see pages 99–103.	For more details see pages 99–103.	For more details see pages 99–103.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Steel Pail	Lined Steel Dr	Steel Drum
				
Description		20 L steel pail with pull out spout	20 L steel drum with phenolic coating pull out spout	55 gal steel drum
Material of Construction	**Container**	Cold rolled low carbon steel with Rieke LDPE spout	Steel/phenolic liner with Rieke LDPE spout	Cold rolled low carbon steel
	Cap	LDPE	LDPE	Rieke flanges and zinc plated (electroplated steel) plugs or plastic plugs (2" and 3/4" plug available)
	Cap Liner			Irradiated Polyethylene
	Gasket			
Height (in)		14.313	14.313	34.375
Width or OD (in)		11.250	11.250	23.594
Package Weight (lb)		4.550	5.800	37.500
Height (cm)		36.355	36.355	87.313
Width or OD (cm)		28.575	28.575	59.929
Package Weight (kg)		2.064	2.631	17.010
Thread (neck finish)				
Special Features		Steel drum helps absorb shock, is break resistant, and can be grounded for safety. Tamper evident cap.	Extra phenolic coating to prevent rust forming inside. Tamper evident cap.	Compatible with many pumps for dispensing. Provides grounding option. Tamper evident cap.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Amber Glass	Amber Glass	Amber Glass
				
Description		30 cc wide mouth amber glass bottle	60 cc wide mouth amber glass bottle	150 cc wide mouth amber glass bottle
Material of Construction	**Container**	Soda lime glass type III with no internal treatment	Soda lime glass type III with no internal treatment	Soda lime glass type III with no internal treatment
	Cap	Phenolic	Phenolic	Polypropylene; tamper evident
	Cap Liner	Polyethylene	Polyethylene	Fluoropolymer/ polyethylene
	Gasket			
Height (in)		2.516	3	4.25
Width or OD (in)		1.5	1.75	2.2
Package Weight (lb)		0.11	0.15	0.41
Height (cm)		6.39	7.62	10.80
Width or OD (cm)		3.81	4.45	5.59
Package Weight (kg)		0.05	0.07	0.19
Thread (neck finish)		28/400	33/400	DIN45
Special Features				Tamper evident break away ring.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Amber Glass	Amber Glass	Amber Glass
				
Description		300 cc wide mouth amber glass bottle	500 cc wide mouth amber glass bottle	950 cc wide mouth amber glass bottle
Material of Construction	**Container**	Soda lime glass type III with no internal treatment	Soda lime glass type III with no internal treatment	Soda lime glass type III with no internal treatment
	Cap	Polypropylene; tamper evident	Polypropylene; tamper evident	Polypropylene; tamper evident
	Cap Liner	Fluoropolymer/ polyethylene	Fluoropolymer/ polyethylene	Fluoropolymer/ polyethylene
	Gasket			
Height (in)		5.409	6.183	7.428
Width or OD (in)		2.641	3.25	3.828
Package Weight (lb)		0.62	0.9	0.93
Height (cm)		13.74	15.70	18.87
Width or OD (cm)		6.71	8.26	9.72
Package Weight (kg)		0.28	0.41	0.42
Thread (neck finish)		DIN54	DIN54	DIN54
Special Features		Tamper evident break away ring.	Tamper evident break away ring.	Tamper evident break away ring.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Amber Glass	Poly	Poly
				
Description		2500 cc wide mouth amber glass bottle	120 cc wide mouth square poly bottle	300 cc wide mouth square poly bottle
Material of Construction	**Container**	Soda lime glass type III with no internal treatment	HDPE	HDPE
	Cap	Polypropylene; tamper evident	Polypropylene; tamper evident	Polypropylene; tamper evident
	Cap Liner	Fluoropolymer/ polyethylene		
	Gasket			
Height (in)		10.048	4.33	5.11
Width or OD (in)		5.422	2.36	2.36
Package Weight (lb)		1.06	0.06	0.073
Height (cm)		25.52	11.00	12.98
Width or OD (cm)		13.77	5.99	5.99
Package Weight (kg)		0.48	0.03	0.03
Thread (neck finish)		DIN80	DIN45	DIN45
Special Features		Tamper evident break away ring.	Tamper evident break away ring.	Tamper evident break away ring.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Poly	Poly	Poly
				
Description		500 cc wide mouth square poly bottle	1000 cc wide mouth square poly bottle	1500 cc wide mouth square poly bottle
Material of Construction	**Container**	HDPE	HDPE	HDPE
	Cap	Polypropylene; tamper evident	Polypropylene; tamper evident	Polypropylene; tamper evident
	Cap Liner			
	Gasket			
Height (in)		6.3	7.28	9.5
Width or OD (in)		3	3.74	3.74
Package Weight (lb)		0.1	0.16	0.21
Height (cm)		16.00	18.49	24.13
Width or OD (cm)		7.62	9.50	9.50
Package Weight (kg)		0.05	0.07	0.10
Thread (neck finish)		DIN45	DIN45	DIN45
Special Features		Tamper evident break away ring.	Tamper evident break away ring.	Tamper evident break away ring.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Poly	Poly	Flowmor System
				
Description		2500 cc wide mouth square poly bottle	4000 cc wide mouth poly bottle	3.5 gal open head poly pail
Material of Construction	**Container**	HDPE	HDPE	HDPE with Tyvek liner
	Cap	Polypropylene; tamper evident	Polypropylene; tamper evident	HDPE
	Cap Liner			
	Gasket			Polyurethane
Height (in)		10.55	10.55	10.65
Width or OD (in)		5	5	14.13
Length (in)		5	8.5	14.13
Package Weight (lb)		0.275	0.4	2.58
Height (cm)		26.80	26.80	27.05
Width or OD (cm)		12.70	12.70	35.89
Length (cm)		12.70	21.59	35.89
Package Weight (kg)		0.12	0.18	1.17
Thread (neck finish)		DIN80	DIN80	
Special Features		Tamper evident break away ring.	Tamper evident break away ring.	Includes desiccant bag between liner and drum. Combination of liner, drum and desiccant keeps material free flowing. Tamper evident cable tie with Avantor logo.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Poly Pail	Poly Pail	Poly Pail
				
Description		2 gal open head poly pail	3.5 gal open head poly pail	5 gal open head poly pail
Material of Construction	**Container**	HDPE with LDPE liner	HDPE with LDPE liner	HDPE with LDPE liner
	Cap	HDPE	HDPE	HDPE
	Cap Liner			
	Gasket	Polyurethane	Polyurethane	Polyurethane
Height (in)		10.13	10.65	14.51
Width or OD (in)		11.28	14.13	14.13
Package Weight (lb)		1.71	2.58	3.23
Height (cm)		25.73	27.05	36.86
Width or OD (cm)		28.65	35.89	35.89
Package Weight (kg)		0.78	1.17	1.47
Thread (neck finish)				
Special Features		Tamper evident cable tie with Avantor logo.	Tamper evident cable tie with Avantor logo.	Tamper evident cable tie with Avantor logo.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Poly Drum	Poly Drum
			
Description		14 gal open head poly drum	30 gal open head poly drum
Material of Construction	**Container**	HDPE with LDPE liner	HDPE with LDPE liner
	Cap		
	Cap Liner		
	Gasket		
Height (in)		26	30
Width or OD (in)		14.75	21.5
Package Weight (lb)		8.2	15.9
Height (cm)		66.04	76.20
Width or OD (cm)		37.47	54.61
Package Weight (kg)		3.72	7.21
Thread (neck finish)			
Special Features		Tamper evident galvanized metal ring with wire hasps.	Tamper evident galvanized metal ring with wire hasps.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Poly Coated	Glass	Poly Coated
				
Description		500 mL narrow mouth clear glass bottle with PVC coating	500 mL narrow mouth clear glass bottle	2.5 L narrow mouth clear glass bottle with PVC coating
Material of Construction	**Container**	Soda lime glass type III with internal treatment	Soda lime glass type III with internal treatment	Soda lime glass type III with internal treatment
	Cap	Polypropylene	Polypropylene	Polypropylene
	Cap Liner	LDPE	LDPE	LDPE
	Gasket			
Height (in)		7.766	7.766	12.203
Width or OD (in)		3	3	5.39
Package Weight (lb)		0.686	0.686	2.3
Height (cm)		19.73	19.73	31.00
Width or OD (cm)		7.62	7.62	13.69
Package Weight (kg)		0.31	0.31	1.04
Thread (neck finish)		38/439	38/439	38/439
Special Features		Internally treated with difluoroethane to prevent leaching of sodium from glass. PVC prevents bottle from shattering and keeps chemical inside if broken.	Internally treated with difluoroethane to prevent leaching of sodium from glass. Designed with a drip ring to prevent dripping during dispensing.	Internally treated with difluoroethane to prevent leaching of sodium from glass. PVC prevents bottle from shattering and keeps chemical inside if broken.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Glass	Poly PB	Poly PB
				
Description		2.5 L narrow mouth clear glass bottle	500 mL footed bottom round poly bottle	500 mL footed bottom round poly bottle
Material of Construction	**Container**	Soda lime glass type II with internal treatment	HDPE	HDPE
	Cap	Polypropylene	Polypropylene	Polypropylene, vented
	Cap Liner	LDPE	LDPE	Fluoropolymer
	Gasket			
Height (in)		12.203	7.621	7.621
Width or OD (in)		5.391	2.937	2.937
Package Weight (lb)		2.3	0.1	0.1
Height (cm)		31.00	19.36	19.36
Width or OD (cm)		13.69	7.46	7.46
Package Weight (kg)		1.04	0.05	0.05
Thread (neck finish)		38/439	38/439	38/439
Special Features		Internally treated with difluoroethane to prevent leaching of sodium from glass. Designed with a drip ring to prevent dripping during dispensing.	Designed for chemicals that develop high pressure during transit or storage.	Designed for chemicals that develop high pressure during, transit or storage, specifically for H_2O_2.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Poly	Poly PB	Poly
				
Description		500 mL boston round poly bottle	4 L high pressure bottom poly bottle	4 L round poly bottle
Material of Construction	**Container**	HDPE	HDPE	HDPE
	Cap	Polypropylene	Polypropylene	Polypropylene
	Cap Liner		LDPE	LDPE
	Gasket			
Height (in)		6.34	13.73	13.6
Width or OD (in)		3.062	6.031	6.12
Package Weight (lb)		0.07	0.466	0.42
Height (cm)		16.10	34.87	34.54
Width or OD (cm)		7.78	15.32	15.54
Package Weight (kg)		0.03	0.21	0.19
Thread (neck finish)			38/439	38/439
Special Features		Designed with a spout for easy dispensing.	Designed for chemicals that develop high pressure during transit or storage.	

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Poly	Fluoropolymer	Fluoropolymer
				
Description		32 oz round poly bottle	500 mL round Fluoropolymer bottle	2 L round Fluoropolymer bottle
Material of Construction	**Container**	HDPE	Fluoropolymer	Fluoropolymer
	Cap		Fluoropolymer	Fluoropolymer
	Cap Liner	LDPE		
	Gasket			
Height (in)		8.3	7	9.25
Width or OD (in)		3.6	2.75	4.5
Length (in)				
Package Weight (lb)		0.15	0.25	0.8
Height (cm)		21.08	17.78	23.50
Width or OD (cm)		9.14	6.99	11.43
Length (cm)				
Package Weight (kg)		0.07	0.11	0.36
Thread (neck finish)				
Special Features			Fluoropolymer bottle dispenser system available (See page 64 for additional details).	Fluoropolymer bottle dispenser system available (See page 64 for additional details).

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Ampoule	Poly Pail	Hedpak
				
Description		poly ampoule	19 L poly pail with one opening	5 gal bottle inside a corrugated box (not shown)
Material of Construction	**Container**	LDPE	HDPE	Polyethylene
	Cap		2″ buttress HDPE	70 mm HDPE and 38 mm Polypropylene
	Cap Liner			Polyethylene
	Gasket		EPDM	Ethylene Propylene Terpolymer
Height (in)			13.625	12.25
Width or OD (in)		1.38	13.063	12.25
Length (in)		7.13	9.375	12.25
Package Weight (lb)		0.08	2.5	3.9
Height (cm)			34.61	31.12
Width or OD (cm)		3.51	33.18	31.12
Length (cm)		18.11	23.81	31.12
Package Weight (kg)		0.04	1.13	1.77
Thread (neck finish)			2″ female buttress HDPE	
Special Features		Designed for 1 time use	Designed to be light enough for one operator to carry. Available in black or natural.	Designed with a spigot for easy dispensing. Used with high density chemicals.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Returnable Poly Composite Drum	Returnable Poly Drum	Returnable Poly Drum
				
Description		46 gal polyethylene bladder inside a polyethylene shell	55 gal trilayer drum	55 gal Fluoropolymer bladder inside a polyethylene shell
Material of Construction	**Container**	Polyethylene, 300 kPa rating	HDPE	Polyethylene shell, Fluoropolymer liner
	Cap	2" Buttress HDPE	2" Buttress HDPE	2" Buttress Fluoropolymer
	Cap Liner	Polyethylene	HDPE	Fluoropolymer
	Gasket	EPDM or Viton	EPDM, Viton, POE, or Fluoropolymer encapsulated silicone	EPDM, Viton, POE, or Fluoropolymer encapsulated silicone
Height (in)		35.9	37.25	34.75
Width or OD (in)		21.88	23.5	23.25
Package Weight (lb)		46.2	29.5	56
Height (cm)		91.19	94.62	88.27
Width or OD (cm)		55.58	59.69	59.06
Package Weight (kg)		20.96	13.38	25.40
Thread (neck finish)				
Special Features		Entegris drum with keyed dip tube, customer dedicated. Designed for chemicals that develop high pressure during transit or storage.	Entegris drum, keyed dip tube, customer dedicated.	Entegris drum, keyed dip tube, customer dedicated.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene
POE—Polyolefin Elastomer

Package Type		Returnable IBC	Returnable IBC
			
Description		220 gal intermediate bulk container (IBC)	330 gal intermediate bulk container (IBC)
Material of Construction	**Container**	HDPE	HDPE
	Cap	2″ Buttress HDPE	2″ Buttress HDPE
	Cap Liner		
	Gasket	Viton	Fluoropolymer encapsulated
Height (in)		53.75	70
Width or OD (in)		46	46
Length (in)		46	46
Package Weight (lb)		268	309
Height (cm)		136.53	177.80
Width or OD (cm)		116.84	116.84
Length (cm)		116.84	116.84
Package Weight (kg)		121.56	140.16
Thread (neck finish)			
Special Features		Snyder tote, keyed dip tube, customer dedicated.	Snyder tote, keyed dip tube, customer dedicated.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Amber Glass	Amber Glass	Amber Glass
				
Description		500 mL narrow mouth amber glass bottle	1 L narrow mouth amber glass bottle	4 L narrow mouth amber glass bottle
Material of Construction	**Container**	Soda lime glass type II with internal treatment	Soda lime glass type III without internal treatment	Soda lime glass type III without internal treatment
	Cap	Polypropylene	Phenolic	Phenolic
	Cap Liner	Fluoropolymer	Fluoropolymer	Pulp & tin foil
	Gasket			
Height (in)		7.7	8.75	13.39
Width or OD (in)		3	3.78	6.22
Package Weight (lb)		0.6864	1.076	2.8
Height (cm)		19.56	22.23	34.01
Width or OD (cm)		7.62	9.60	15.80
Package Weight (kg)		0.31	0.49	1.27
Thread (neck finish)		38/439	38/439	38/439
Special Features		Internally treated with difluoroethane to prevent leaching of sodium from glass.		

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Poly PB	Poly	Poly PB
				
Description		500 mL footed bottom round poly bottle	500 mL Boston round poly bottle	4 L high pressure bottom poly bottle
Material of Construction	**Container**	HDPE	HDPE	HDPE
	Cap	Polypropylene	Polypropylene	Polypropylene
	Cap Liner	LDPE		LDPE
	Gasket			
Height (in)		7.621	6.34	13.73
Width or OD (in)		2.937	3.062	6.031
Package Weight (lb)		0.1	0.07	0.466
Height (cm)		19.36	16.10	34.87
Width or OD (cm)		7.46	7.78	15.32
Package Weight (kg)		0.05	0.03	0.21
Thread (neck finish)		38/439		38/439
Special Features		Designed for chemicals that develop high pressure during transit or storage.	Designed with a spout for easy dispensing.	Designed for chemicals that develop high pressure during transit or storage.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		Poly	Poly Pail	Ampoule
				
Description		4 L round poly bottle	19 L poly pail with one opening	poly ampoule
Material of Construction	**Container**	HDPE	HDPE	LDPE
	Cap	Polypropylene	2" Buttress HDPE	
	Cap Liner	LDPE		
	Gasket		EPDM	
Height (in)		13.6	13.625	1.38
Width or OD (in)		6.12	13.063	1.38
Length (in)			9.375	7.13
Package Weight (lb)		0.42	2.5	0.08
Height (cm)		34.54	34.61	3.51
Width or OD (cm)		15.54	33.18	3.51
Length (cm)			23.81	18.11
Package Weight (kg)		0.19	1.13	0.04
Thread (neck finish)		38/439		
Special Features			Designed to be light enough for one operator to carry. Available in black or natural.	Designed for 1 time use.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Package Type		Cubitainer	Cubitainer	Hedpak
				
Description		5 L bag inside a corrugated square box	20 L bag inside a corrugated square box	5 gal bottle inside a corrugated box (not shown)
Material of Construction	**Container**	Polyethylene	Polyethylene	Polyethylene
	Cap	Polypropylene	Polypropylene	70 mm HDPE and 38 mm Polyproylene
	Cap Liner	Polyethylene	Polyethylene	Polyethylene
	Gasket			Ethylene Propylene Terpolymer
Height (in)		8	12.25	12.25
Width or OD (in)		7.5	12.25	12.25
Length (in)		7.5	12.25	12.25
Package Weight (lb)		0.59	3.9	3.9
Height (cm)		20.32	31.12	31.12
Width or OD (cm)		19.05	31.12	31.12
Length (cm)		19.05	31.12	31.12
Package Weight (kg)		0.27	1.77	1.77
Thread (neck finish)				
Special Features		Designed with a spigot for easy dispensing.	Designed with a spigot for easy dispensing.	Designed with a spigot for easy dispensing. Used with high density chemicals.

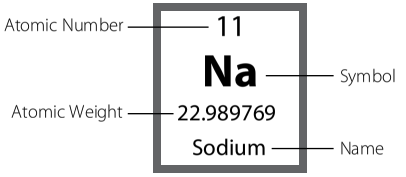
Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Packaging Appendix

Package Type		IBC	IBC
			
Description		220 gal intermediate bulk container (IBC)	330 gal intermediate bulk container (IBC)
Material of Construction	**Container**	HDPE	HDPE
	Cap	2" Buttress HDPE	2" Buttress HDPE
	Cap Liner		
	Gasket	Viton	Fluoropolymer encapsulated
Height (in)		53.75	70
Width or OD (in)		46	46
Length (in)		46	46
Package Weight (lb)		268	309
Height (cm)		136.53	177.80
Width or OD (cm)		116.84	116.84
Length (cm)		116.84	116.84
Package Weight (kg)		121.56	140.16
Thread (neck finish)			
Special Features		Snyder tote, keyed dip tube, customer dedicated.	Snyder tote, keyed dip tube, customer dedicated.

Abbreviations:
HDPE—High Density Polyethylene
EPDM—Ethylene Propylene Durometer
LDPE—Low Density Polyethylene

Periodic Table of the Elements



1A												3A	4A	5A	6A	7A	8A
1 H 1.00794 Hydrogen	2A																2 He 4.002602 Helium
3 Li 6.941 Lithium	4 Be 9.012182 Beryllium											5 B 10.811 Boron	6 C 12.0107 Carbon	7 N 14.0067 Nitrogen	8 O 15.9994 Oxygen	9 F 18.9984032 Fluorine	10 Ne 20.1797 Neon
11 Na 22.989769 Sodium	12 Mg 24.3050 Magnesium	3B	4B	5B	6B	7B	8B			1B	2B	13 Al 26.9815386 Aluminum	14 Si 28.0855 Silicon	15 P 30.973762 Phosphorus	16 S 32.065 Sulfur	17 Cl 35.453 Chlorine	18 Ar 39.948 Argon
19 K 39.0983 Potassium	20 Ca 40.078 Calcium	21 Sc 44.955912 Scandium	22 Ti 47.867 Titanium	23 V 50.9415 Vanadium	24 Cr 51.9961 Chromium	25 Mn 54.938045 Manganese	26 Fe 55.845 Iron	27 Co 58.933195 Cobalt	28 Ni 58.6934 Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 Ga 69.723 Gallium	32 Ge 72.64 Germanium	33 As 74.92160 Arsenic	34 Se 78.96 Selenium	35 Br 79.904 Bromine	36 Kr 83.798 Krypton
37 Rb 85.4678 Rubidium	38 Sr 87.62 Strontium	39 Y 88.90585 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.90638 Niobium	42 Mo 95.96 Molybdenum	43 Tc [98] Technetium	44 Ru 101.07 Ruthenium	45 Rh 102.90550 Rhodium	46 Pd 106.42 Palladium	47 Ag 107.8682 Silver	48 Cd 112.411 Cadmium	49 In 114.818 Indium	50 Sn 118.710 Tin	51 Sb 121.760 Antimony	52 Te 127.60 Tellurium	53 I 126.90447 Iodine	54 Xe 131.293 Xenon
55 Cs 132.9054519 Cesium	56 Ba 137.327 Barium		72 Hf 178.49 Hafnium	73 Ta 180.94788 Tantalum	74 W 183.84 Tungsten	75 Re 186.207 Rhenium	76 Os 190.23 Osmium	77 Ir 192.217 Iridium	78 Pt 195.084 Platinum	79 Au 196.966569 Gold	80 Hg 200.59 Mercury	81 Tl 204.3833 Thallium	82 Pb 207.2 Lead	83 Bi 208.98040 Bismuth	84 Po [209] Polonium	85 At [210] Astatine	86 Rn [222] Radon
87 Fr [223] Francium	88 Ra [226] Radium		104 Rf [267] Rutherfordium	105 Db [268] Dubnium	106 Sg [271] Seaborgium	107 Bh [272] Bohrium	108 Hs [270] Hassium	109 Mt [276] Meitnerium	110 Ds [281] Darmstadtium	111 Rg [280] Roentgenium	112 Uub [285] Ununbium	113 Uut [284] Ununtrium	114 Uuq [289] Ununquadium	115 Uup [288] Ununpentium	116 Uuh [293] Ununhexium	117 Uus [294] Ununseptium	118 Uuo [294] Ununoctium

Lanthanides	57 La 138.90547 Lanthanum	58 Ce 140.116 Cerium	59 Pr 140.90765 Praseodymium	60 Nd 144.242 Neodymium	61 Pm [145] Promethium	62 Sm 150.36 Samarium	63 Eu 151.964 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.92535 Terbium	66 Dy 162.500 Dysprosium	67 Ho 164.93032 Holmium	68 Er 167.259 Erbium	69 Tm 168.93421 Thulium	70 Yb 173.054 Ytterbium	71 Lu 174.9668 Lutetium
Actinides	89 Ac [227] Actinium	90 Th 232.03806 Thorium	91 Pa 231.03588 Protactinium	92 U 238.02891 Uranium	93 Np [237] Neptunium	94 Pu [244] Plutonium	95 Am [243] Americium	96 Cm [247] Curium	97 Bk [247] Berkelium	98 Cf [251] Californium	99 Es [252] Einsteinium	100 Fm [257] Fermium	101 Md [258] Mendelevium	102 No [259] Nobelium	103 Lr [262] Lawrencium

Reference Information

Atomic Weights

The atomic weights of many elements are not invariant, but depend on the origin and treatment of the material. The standard values of Ar(E) and the uncertainties, which are shown following the last significant figure to which they are attributed, apply to elements of natural terrestrial origin. When used with due regard to the footnotes, they are considered reliable to ±1 in the last digit, unless otherwise stated. The footnotes to this table elaborate the types of variation that may occur for individual elements and that may be larger than the listed uncertainties of values of Ar(E). For elements that have no stable nuclides, the mass number of the nuclide with the longest confirmed half-life is listed in parenthesis. The information is used with permission of the International Union of Pure and Applied Chemistry, © 2006 IUPAC.

Pure & Applied Chemistry 78, pp. 2051–2066

Atomic Weights of the Elements, 2005 — Scaled to A_r (^{12}C) = 12.

Name	Atomic Number	Atomic Weight	Note
Actinium (Ac)	89	(227)	a
Aluminum (Al)	13	26.9815386±8	—
Americium (Am)	95	(243)	a
Antimony (Stibium) (Sb)	51	121.760	b
Argon (Ar)	18	39.948	b, d
Arsenic (As)	33	74.92160±2	—
Astatine (At)	85	(210)	a
Barium (Ba)	56	137.327±7	—
Berkelium (Bk)	97	(247)	a
Beryllium (Be)	4	9.012182±3	—
Bismuth (Bi)	83	208.98040	—
Bohrium (Bh)	107	(264)	a
Boron (B)	5	10.811±7	b, c, d
Bromine (Br)	35	79.904	—
Cadmium (Cd)	48	112.411±8	b
Calcium (Ca)	20	40.078±4	b
Californium (Cf)	98	(251)	a
Carbon (C)	6	12.0107±8	b, d
Cerium (Ce)	58	140.116	b
Cesium (Cs)	55	132.9054519±2	—
Chlorine (Cl)	17	35.453±2	b, c, d
Chromium (Cr)	24	51.9961±6	—
Cobalt (Co)	27	58.933195±5	—
Copper (Cu)	29	63.546±3	d
Curium (Cm)	96	(247)	a
Darmstadtium (Ds)	110	(271)	a
Dubnium (Db)	105	(262)	a
Dysprosium (Dy)	66	162.500	a, b
Einsteinium (Es)	99	(252)	a
Erbium (Er)	68	167.259±3	b
Europium (Eu)	63	151.964	b
Fermium (Fm)	100	(257)	a
Fluorine (F)	9	18.9984032	—
Francium (Fr)	87	(223)	a
Gadolinium (Gd)	64	157.25±3	b
Gallium (Ga)	31	69.723	—
Germanium (Ge)	32	72.64	—
Gold (Au)	79	196.966569±4	—
Hafnium (Hf)	72	178.49±2	—
Hassium (Hs)	108	(277)	a
Helium (He)	2	4.002602±2	b, d
Holmium (Ho)	67	164.93032±2	—
Hydrogen (H)	1	1.00794±7	b, c, d
Indium (In)	49	114.818±3	—
Iodine (I)	53	126.90447±3	—
Iridium (Ir)	77	192.217±3	—
Iron (Fe)	26	55.845±2	—
Krypton (Kr)	36	83.798±2	b, c, d
Lanthanum (La)	57	138.90547±7	b
Lawrencium (Lr)	103	(262)	a
Lead (Pb)	82	207.2	b, d
Lithium (Li)	3	6.941±2	b, c, d
Lutetium (Lu)	71	174.9668	b
Magnesium (Mg)	12	24.3050±6	—
Manganese (Mn)	25	54.938045±5	—
Meitnerium (Mt)	109	(268)	a
Mendelevium (Md)	101	(258)	a
Mercury (Hg)	80	200.59±2	—
Molybdenum (Mo)	42	95.96±2	b
Neodymium (Nd)	60	144.242±3	b
Neon (Ne)	10	20.1797±6	b, c
Neptunium (Np)	93	(237)	a
Nickel (Ni)	28	58.6934±4	—
Niobium (Nb)	41	92.90638±2	—
Nitrogen (N)	7	14.0067±2	b, c
Nobelium (No)	102	(259)	a
Osmium (Os)	76	190.23±3	b
Oxygen (O)	8	15.9994±3	b, d
Palladium (Pd)	46	106.42	b
Phosphorus (P)	15	30.973762±2	—
Platinum (Pt)	78	195.084±9	—
Plutonium (Pu)	94	(244)	a
Polonium (Po)	84	(209)	a
Potassium (Kalium) (K)	19	39.0983	—
Praseodymium (Pr)	59	140.90765±2	—
Promethium (Pm)	61	(145)	a
Protactinium (Pa)	91	231.03588±2	a
Radium (Ra)	88	(226)	a
Radon (Rn)	86	(222)	a
Rhenium (Re)	75	186.207	—
Rhodium (Rh)	45	102.90550±2	—
Roentgenium	111	(272)	a
Rubidium (Rb)	37	85.4678±3	b
Ruthenium (Ru)	44	101.07±2	b
Rutherfordium (Rf)	104	(261)	a
Samarium (Sm)	62	150.36±2	b
Scandium (Sc)	21	44.955912±6	—
Seaborgium (Sg)	106	(266)	a
Selenium (Se)	34	78.96±3	d
Silicon (Si)	14	28.0855±3	d
Silver (Ag)	47	107.8682±2	b
Sodium (Natrium) (Na)	11	22.98976928±2	—
Strontium (Sr)	38	87.62	b, d
Sulfur (S)	16	32.065±5	b, d
Tantalum (Ta)	73	180.94788±2	—
Technetium (Tc)	43	(98)	a
Tellurium (Te)	52	127.60±3	b
Terbium (Tb)	65	158.92535±2	—
Thallium (Tl)	81	204.3833±2	—
Thorium (Th)	90	232.03806±2	a, b
Thulium (Tm)	69	168.93421±2	—
Tin (Sn)	50	118.710±7	b
Titanium (Ti)	22	47.867	—
Tungsten (Wolfram) (W)	74	183.84	—
Uranium (U)	92	238.02891±3	a, b, c
Vanadium (V)	23	50.9415	—
Xenon (Xe)	54	131.293±6	b, c
Ytterbium (Yb)	70	173.04	b
Yttrium (Y)	39	88.90585±2	—
Zinc (Zn)	30	65.38±2	—
Zirconium (Zr)	40	91.224±2	b

a. Element has no stable nuclides. Three elements (Th, Pa, and U) have a characteristic terrestrial isotopic composition, and for these an atomic weight is tabulated.

b. Geological specimens are known in which the element has an isotopic composition outside the limits for normal material. The difference between the atomic weight of the element in such specimens and that given in the table may exceed the stated uncertainty.

c. Modified isotopic compositions may be found in commercially available material because it has been subjected to an undisclosed or inadvertent isotopic fractionation. Substantial deviations in atomic weight of the element from that given in the table can occur.

d. Range in isotopic composition of normal terrestrial material prevents a more precise Ar(E) being given; the tabulated Ar(E) value and uncertainty should be applicable to normal material.

Units of measure conversion factors

Percent	Parts per Million	Parts per Billion	Parts per Trillion
.001% =	10 ppm =	—	—
.0001% =	1 ppm =	1,000 ppb =	1,000,000 ppt
.00001% =	.1 ppm =	100 ppb =	100,000 ppt
.000001% =	.01 ppm =	10 ppb =	10,000 ppt
—	.001 ppm =	1 ppb =	1,000 ppt
—	.0001 ppm =	.1 ppb =	100 ppt
—	—	.01 ppb =	10 ppt
—	—	.001 ppb =	1 ppt

Prefix	Factor	Fraction
centi	10^{-2}	1/100 (part per hundred)
milli	10^{-3}	1/1,000 (part per thousand)
micro	10^{-6}	1/1,000,000 (ppm, part per million)
nano	10^{-9}	1/1,000,000,000 (ppb, part per billion)
pico	10^{-12}	1/1,000,000,000,000 (ppt, part per trillion)
femto	10^{-15}	1/1,000,000,000,000,000 (ppq, part per quadrillion)
atto	10^{-18}	1/1,000,000,000,000,000,000 (part per quintillion)

Weight Conversion Table[1]

From/To	g	kg	metric ton	grain	oz	lb
g	1	0.001	1×10^{-6}	15.43	0.03527	0.00220
kg	1000	1	0.001	1.54×10^{4}	35.27	2.205
metric ton	1×10^{6}	1000	1	1.54×10^{7}	3.53×10^{4}	2205
grain	6.48×10^{-2}	6.48×10^{-5}	6.48×10^{-5}	1	2.29×10^{-3}	1.43×10^{-4}
oz	28.35	0.02835	2.83×10^{-5}	437.5	1	0.06250
lb	453.6	0.4536	4.54×10^{4}	7000	16	1

1. To convert from a unit shown in the left column, multiply by the factor listed in the column for the desired unit.

Volume Conversion Table[1] (metric and U.S. Liquid measures)

From/To	cm^3	liter	m^3	in^3	ft^3	yd^3	fl oz	fl pt	fl qt	gal
cm^3	1	0.001	1×10^{-6}	0.06102	3.53×10^{-5}	1.31×10^{-6}	0.03381	0.00211	0.00106	2.64×10^{-4}
liter	1000	1	0.001	61.02	0.03532	0.00131	33.81	2.113	1.057	0.2642
m^3	1×10^{6}	1000	1	6.10×10^{4}	35.31	1.308	3.38×10^{4}	2113	1057	264.2
in^3	16.39	0.01639	1.64×10^{-5}	1	5.79×10^{-4}	2.14×10^{-5}	0.5541	0.03463	0.01732	0.00433
ft^3	2.83×10^{4}	28.32	0.02832	1728	1	0.03704	957.5	69.84	29.92	7.481
yd^3	7.65×10^{5}	764.5	0.7646	4.67×10^{4}	27	1	2.59×10^{4}	1616	807.9	202.0
fl oz	29.57	0.02957	2.96×10^{-5}	1.805	0.00104	3.87×10^{-5}	1	0.06250	0.03125	0.00781
fl pt	473.2	0.4732	473×10^{-4}	28.88	0.01671	619×10^{-4}	16	1	0.6000	0.1250
fl qt	946.4	0.9463	9.46×10^{-4}	57.75	0.03342	0.00124	32	2	1	0.2500
gal	3785	3.786	0.00379	231.0	0.1337	0.00495	128	8	4	1

1. To convert from a unit shown in the left column, multiply by the factor listed in the column for the desired unit.

Length Conversion Table[1]

From/To	cm	m	km	in	ft	mile
cm	1	0.01	1×10^{-5}	0.3937	0.03281	6.214×10^{-6}
m	100	1	0.001	39.37	3.281	6.214×10^{-4}
km	1×10^{5}	1000	1	3.94×10^{4}	3281	0.6214
in	2.540	0.02540	2.540×10^{-5}	1	0.08333	1.578×10^{-5}
ft	30.48	0.3048	3.048×10^{-4}	12	1	18.94×10^{-4}
mile	1.609×10^{5}	1609	1.609	6.336×10^{4}	5280	1

1. To convert from a unit shown in the left column, multiply by the factor listed in the column for the desired unit.

Reference Information

Common Molecular Biology Conversion Factors[1]

Factor	Value
Molecular weight (ave.) of DNA base pair	649 Da
Molecular weight (ave.) of amino acid	110 Da
1 g/mL DNA	3.08 µM phosphate
1 g/mL of 1 kb DNA	3.08 nM 5′ ends
1 mol pBR322 (4363 bp)	2.83 g
1 pmol linear pBR322 5′ ends	1.4 g
1 A260 double-stranded DNA	50 µg/mL
1 A260 single-stranded DNA	37 µg/mL
1 kb DNA:	333 amino acids of coding capacity ≈ 36,000 Da
	6.5×10^5 Da of double-stranded DNA (sodium salt)
	3.3×10^5 Da of single-stranded DNA (sodium salt)
	3.4×10^5 Da of single-stranded RNA (sodium salt)
10 kDa protein ≈ 91 amino acids ≈ 273 nucleotides	

1. Short Protocols in Molecular Biology, edited by Frederick M. Ausubel, et al., Copyright © 1992 by Current Protocols. All rights reserved. Reprinted by permission of John Wiley & Sons, Inc.

ACID/BASE CONCENTRATIONS—Composition of concentrated reagent grade acids, ammonium hydroxide, and sodium and potassium hydroxide solutions (with dilution directions to 1M and 1N solutions)

Chemical	Formula Weight of Reagent[a]	Approximate Density	Approximate Strength of Concentrated Reagent[b]	Assay Limits % w/w	Molarity of Concentrated Reagent	Milliliters of Concentrated Reagent Necessary to Prepare 1 Liter of 1 Molar Solution[c]	Normality of Concentrated Reagent	Milliliters of Concentrated Reagent Necessary to Perpare 1 Liter of 1 Normal Solution[c]
Acetic Acid (CH_3COOH)	60.052	1.05	99.8	99.7–99.9	17.4	57.5	17.4	57.5
Formic Acid (HCOOH)	46.026	1.13	90.0	88.0–92.0	23.6	42.5	23.6	42.5
Hydrochloric Acid (HCl)	36.461	1.18	37.2	36.5–38.0	12.1	82.5	12.1	82.5
Hydrofluoric Acid (HF)	20.006	1.19	49.0	48.0–51.0	28.9	34.5	28.9	34.5
Nitric Acid (HNO_3)	63.013	1.41	69.6	69.0–70.0	15.6	64.0	15.6	63.0
Perchloric Acid ($HClO_4$)	100.458	1.67	70.5	70.0–72.0	11.7	85.5	11.7	85.5
Perchloric Acid ($HClO_4$)	100.458	1.67	61.3	60.0–62.0	9.5	105.5	9.5	105.5
Phosphoric Acid (H_3PO_4)	97.995	1.71	85.5	85.0–87.0	14.8	67.5	44.4	22.5
Sulfuric Acid (H_2SO_4)	98.073	1.84	96.0	95.0–98.0	18.0	55.5	36.0	28.0
Ammonium Hydroxide (NH_4OH)	35.046	0.90	56.6d	—	14.5	69.0	14.5	69.0
Sodium Hydroxide (NaOH)	39.997	1.53	50.5	50.0–52.0	19.4	51.5	19.4	51.5
Potassium Hydroxide (KOH)	56.105	1.45	45.0	45.0–46.0	11.7	85.5	11.7	85.5

a. Based on Atomic Weight Table (32C = 12).
b. Representative value, w/w %.
c. Rounded to nearest 0.5 mL.
d. Equivalent to 28.0 % w/w NH_3.

Physical Data for BAKER ANALYZED HPLC Solvents and Acids

Summary of Key Physical Data

Solvent	Product Number	Eluotropic Value (ε°) (on silica)	Polarity Index (p')	Viscosity (cP, 25 °C)	Density (g/mL)	Refractive Index (25 °)	Boiling Point (°C)
Acetic Acid, Glacial	9515	>0.73	6.20	1.10	1.049	1.370	118
Acetone	9002	0.43	5.40	0.30	0.791	1.356	56
Acetonitrile	9017	0.50	6.20	0.34	0.786	1.341	82
Chloroform, Hydrocarbon Stabilized	9174	0.26	4.40	0.53	1.483	1.443	61
Chloroform	9175	0.31	4.40	0.53	1.483	1.443	61
Cyclohexane	9292	0.03	0.00	0.90	0.774	1.423	81
o-Dichlorobenzene	9233	N/A	N/A	1.33	1.306	1.551	180
Ether, Anhydrous	9237	0.29	2.90	0.24	0.708	1.350	35
Ethyl Acetate	9282	0.45	4.30	0.43	0.900	1.370	77
n-Heptane	9177	0.00	0.20	0.40	0.684	1.385	98
Hexanes	9304	0.00	0.06	0.30	0.659	1.372	69
Isobutyl Alcohol	9048	0.54	3.00	4.70	0.802	1.384	108
Methanol	9093	0.73	6.60	0.54	0.791	1.326	65
Methyl tert-Butyl Ether	9042	0.29	N/A	0.28	0.758	1.368	55
Methylene Chloride	9315	0.32	3.40	0.41	1.327	1.421	40
Methyl Ethyl Ketone	9214	0.39	4.50	0.38	0.805	1.376	80
Pentane	9331	0.00	0.00	0.22	0.626	1.355	36
2-Propanol	9095	0.63	4.30	1.90	0.785	1.384	82
Pyridine	9393	0.55	5.30	0.88	0.980	1.507	115
Tetrahydrofuran, Stabilized	9440	0.35	4.20	0.46	0.881	1.405	66
Tetrahydrofuran	9441	0.35	4.20	0.46	0.881	1.405	66
Toluene	9351	0.22	2.40	0.55	0.867	1.494	110
1,2,4-Trichlorobenzene	9444	N/A	N/A	N/A	1.450	1.572	215
2,2,4-Trimethylpentane	9480	0.01	0.10	0.47	0.690	1.389	99
Water	4218	>0.73	10.20	0.89	1.000	1.333	100

In Order of Decreasing Eluotropic Value

Solvent	Product Number	Eluotropic Value (ε°) (on silica)
Acetic Acid, Glacial	9515	>0.73
Water	4218	>0.73
Methanol	9093	0.73
2-Propanol	9095	0.63
Pyridine	9393	0.55
Isobutyl Alcohol	9048	0.54
Acetonitrile	9017	0.50
Ethyl Acetate	9282	0.45
Acetone	9002	0.43
Methyl Ethyl Ketone	9214	0.39
Tetrahydrofuran, Stabilized	9440	0.35
Tetrahydrofuran	9441	0.35
Methylene Chloride	9315	0.32
Chloroform	9175	0.31
Methyl tert-Butyl Ether	9042	0.29
Ether, Anhydrous	9237	0.29
Chloroform, Hydrocarbon Stab.	9174	0.26
Toluene	9351	0.22
Cyclohexane	9292	0.03
2,2-4-Trimethylpentane	9480	0.01
Pentane	9331	0.00
Hexanes	9304	0.00
n-Heptane	9177	0.00
1,2,4-Trichlorobenzene	9444	N/A
o-Dichlorobenzene	9233	N/A

In Order of Decreasing Polarity Index

Solvent	Product Number	Polarity Index (p')
Water	4218	10.20
Methanol	9093	6.60
Acetic Acid, Glacial	9515	6.20
Acetonitrile	9017	6.20
Acetone	9002	5.40
Pyridine	9393	5.30
Methyl Ethyl Ketone	9214	4.50
Chloroform, Hydrocarbon Stabilized	9174	4.40
Chloroform	9175	4.40
Ethyl Acetate	9282	4.30
2-Propanol	9095	4.30
Tetrahydrofuran, Stabilized	9440	4.20
Tetrahydrofuran	9441	4.20
Methylene Chloride	9315	3.40
Isobutyl Alcohol	9048	3.00
Ether, Anhydrous	9237	2.90
Toluene	9351	2.40
n-Heptane	9177	0.20
2,2,4-Trimethylpentane	9480	0.10
Hexanes	9304	0.06
Cyclohexane	9292	0.00
Pentane	9331	0.00
1,2,4-Trichlorobenzene	9444	N/A
o-Dichlorobenzene	9233	N/A
Methyl tert-Butyl Ether	9042	N/A

Reference Information

Particle Size[1]

Sieve "Mesh"	Sieve Opening		Sieve "Mesh"	Sieve Opening		Sieve "Mesh"	Sieve Opening	
	Inches	Millimeters		Inches	Millimeters		Inches	Millimeters
1	1.00	25.4	6	0.132	3.36	50	0.0117	0.297
⅞	0.875	22.6	7	0.111	2.83	60	0.0098	0.250
¾	0.750	19.0	8	0.0937	2.38	70	0.0083	0.210
⅝	0.625	16.0	10	0.0787	2.00	80	0.0070	0.177
.530	0.530	13.5	12	0.0661	1.68	100	0.0059	0.149
½	0.500	12.7	14	0.0555	1.41	120	0.0049	0.125
7/16	0.438	11.2	16	0.0469	1.19	140	0.0041	0.105
3/8	0.375	9.51	18	0.0394	1.00	170	0.0035	0.088
5/16	0.312	8.00	20	0.0331	0.841	200	0.0029	0.074
.265	0.265	6.73	25	0.0278	0.707	230	0.0025	0.063
¼	0.250	6.35	30	0.0234	0.595	270	0.0021	0.053
3½	0.223	5.66	35	0.0197	0.500	325	0.0017	0.044
4	0.187	4.76	40	0.0165	0.420	400	0.0015	0.037
5	0.157	4.00	45	0.0139	0.354			

1. Large sieve opening (1 to ¼ inch) have been designated a sieve "mesh" size that corresponds to the size of the opening in inches.

Sieve "mesh" sizes of 3½ and higher are designated by the number of openings per linear inch in the sieve.

Special conventions apply to particle sizing by mesh designation. A "+" before the sieve mesh indicates that all particles are too large to pass through the sieve; a "–" denotes complete passage of material through the sieve. For example, the particle size of a material may be described as –4 +40 mesh, meaning the material goes through a 4-mesh sieve (particles are smaller than 4.76 mm) but remain on the 40-mesh sieve (particles are larger than 0.420 mm).

Note: To convert millimeters to microns, move decimal point three places to the right. Example: 0.125 millimeters converts to 125 microns.

Neutralization Capacities for J.T.Baker SAF-T-SPILL Cleanup Kits

Acid Spill Cleanup Kit (4442-02)

Type of Spill	Approximate Neutralization Capacity
Acetic Acid (98%)	500 mL
Hydriodic Acid (51%)	6.3 L
Hydrobromic Acid (48%)	2.6 L
Hydrochloric Acid (38%)	1.9 L
Hydrofluoric Acid (49%)	Not recommended
Nitric Acid (70%)	1.5 L
Nitric Acid, Fuming	Not recommended
Phosphoric Acid (87%)	475 mL
Sulfuric Acid (98%)	660 mL
Sulfuric Acid, Fuming	Not recommended
Sulfurous Acid (9%)	11.5 L

Caustic Spill Cleanup Kit (4441-02)

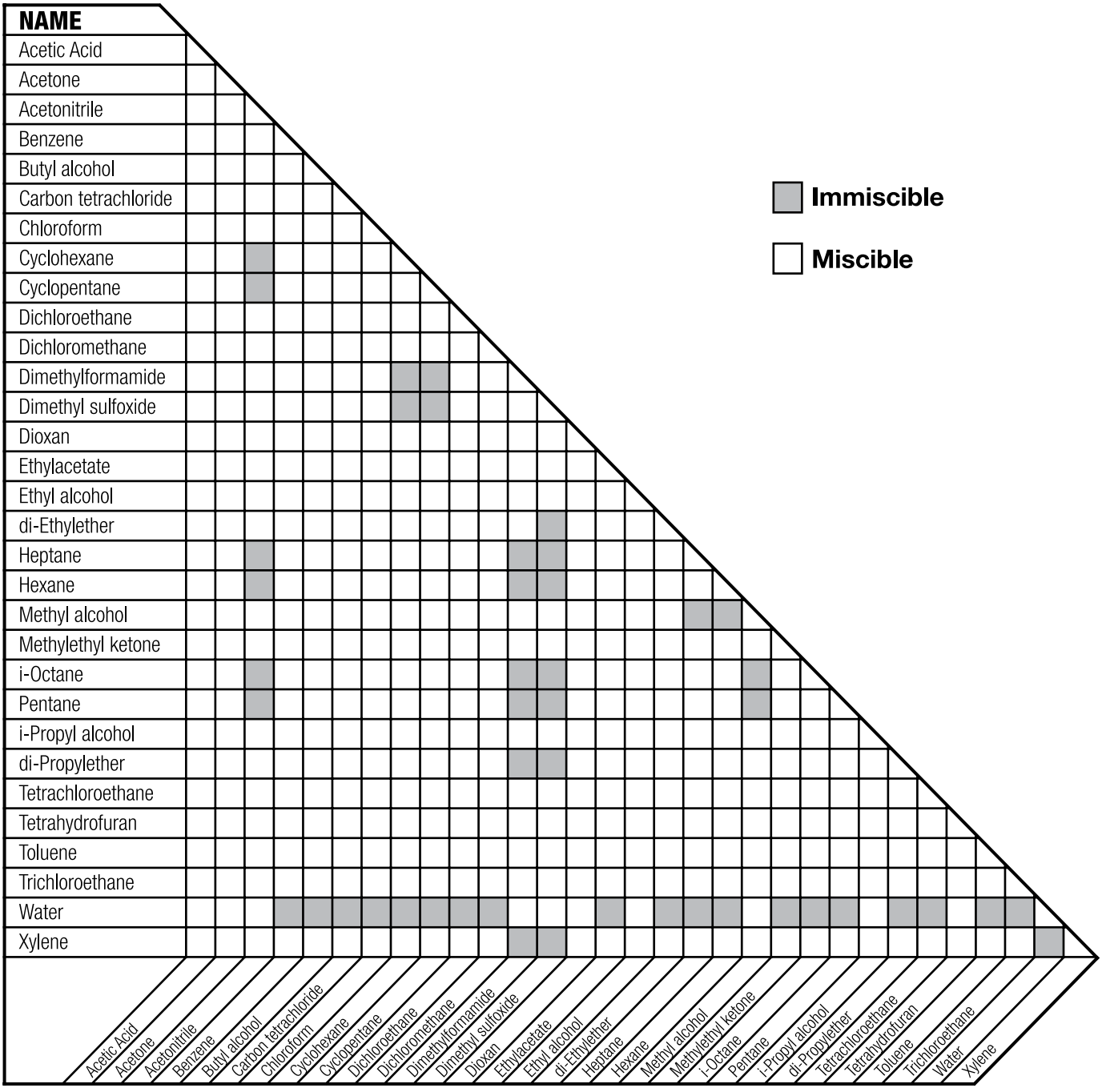
Type of Spill	Approximate Neutralization Capacity
Ammonium Hydroxide (28%)	750 mL
Potassium Hydroxide (45%)	660 mL
Sodium Hydroxide (50%)	470 mL

Solvent Spill Cleanup Kit (4437-02)

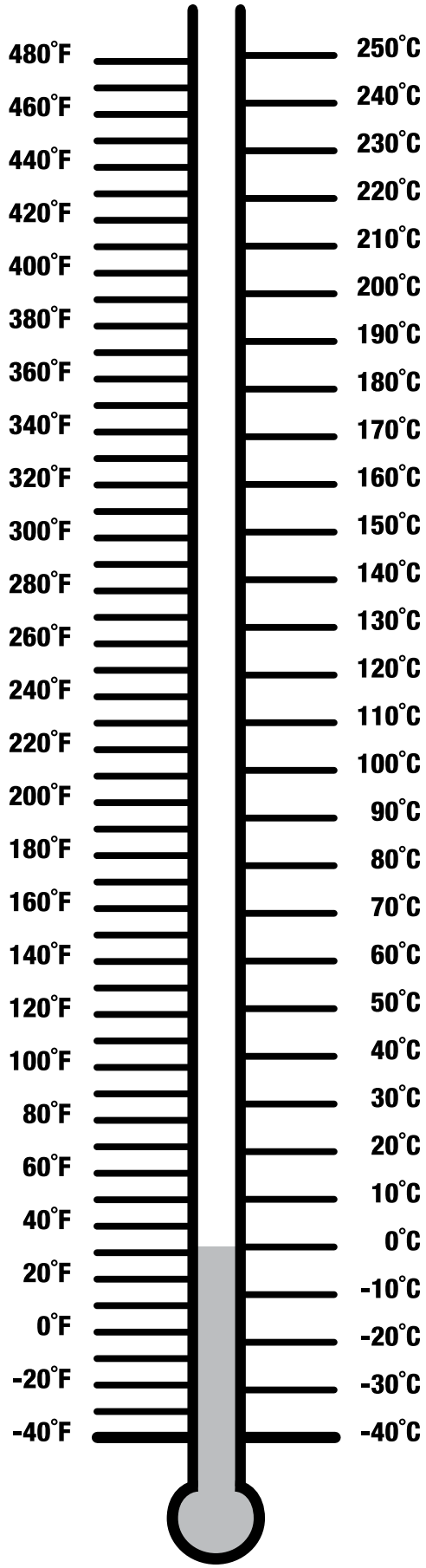
Type of Spill	Approximate Neutralization Capacity
Flammable Solvents	440 mL
Toxic and Noxious Liquids	440 mL
Halogens—Corrosive Hazards	440 mL

Customer Service: 1-855-282-6867 Technical Service: 1-800-669-8230

SOLVENT MISCIBILITY TABLE



Reference Information



Temperature Conversion Formulas

˚C to ˚F	˚F to ˚C
(˚C × 9/5) + 32 = ˚F	(˚F – 32) × 5/9 = ˚C

˚C to ˚K	˚F to ˚K
(˚C + 273.15) = ˚K	(˚F + 459.67) × 5/9 = ˚K

Notes

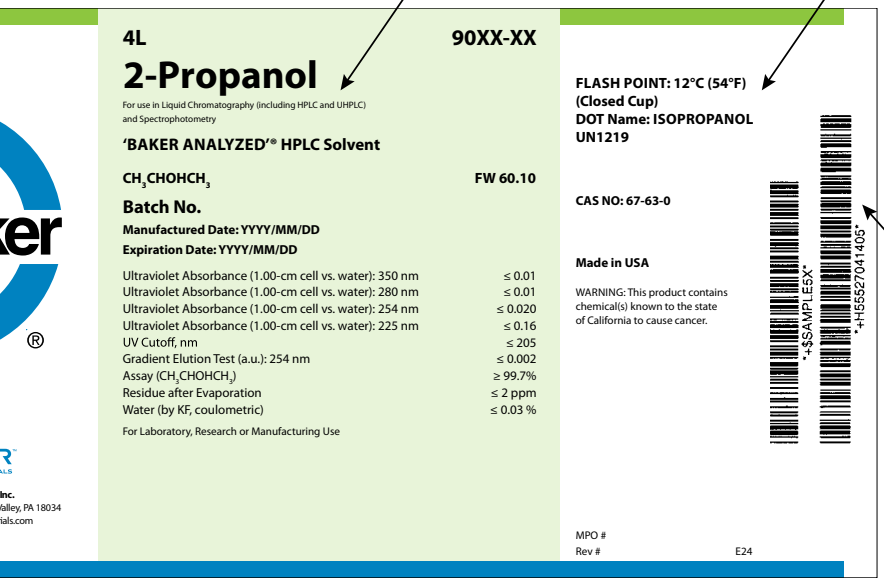
Reading our label.

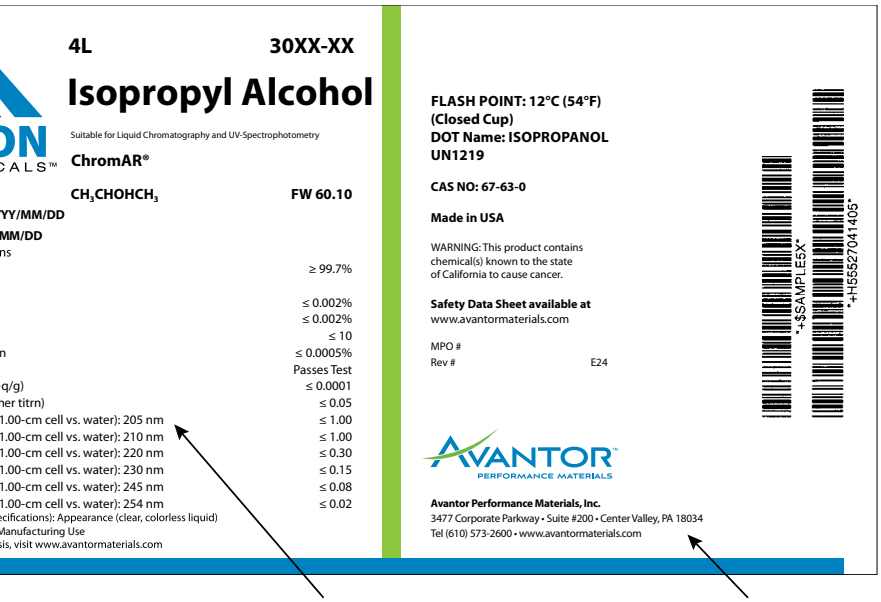
Hazard Information

Labels provide a written hazard warning presented in the Canadian Worker Hazardous Materials Information System (WHMIS) format. It includes warnings in French and English, as well as WHMIS warning symbols.

Globally Harmonized System (GHS) Hazard Information

- Product identifer
- Signal word
- Hazard and precautionary statements
- Multi-lingual information





Use Statements

Transport Information

- DOT classification
- UN number
- Flash point (if applicable)

Bar Code

This is in accordance with the Health Industry Bar Code (HIBC) standard, which has been adopted by most suppliers in the scientific community. The primary bar code includes:

- Identification Number
- Product Number
- Unit of Measure

The secondary bar code includes:

- Expiration Date (Julian format e.g., 180th day of the year) (if applicable)
- Lot Number

Specifications

Laboratory reagents may list the specifications on the label in addition to the Certificate of Analysis.

Supplier Identity

Reference Information

CAS Number Index

Reference Information

Product Number Index

Reference Information

Product Number	Page Number
3461	66, 84, 344
3462	66, 74, 84, 344
3470	342
3472	342
3473	66, 343
3474	66, 84, 343
3476	435
3478	344
3484	435
3487	344
3496	67
3500	66, 345
3501	66, 345
3506	71, 345
3508	23, 345
3509	66, 346
3510	66, 346
3512	435
3524	436
3534	346
3550	347
3551	66, 347
3552	71, 347
3556	347
3557	346
3568	71, 348, 436
3570	348
3574	67, 347
3575	67, 348
3584	92, 436
3588	348
3598	350
3599	69
3600	67, 350
3602	71, 350
3603	67, 351
3604	71, 349
3605	67, 349
3606	67, 350
3616	351
3624	71, 352
3627	67, 353
3628	67, 74, 352
3629	67, 353
3640	71, 354
3646	354
3647	67, 355
3648	354
3649	67, 354
3650	67, 355
3656	71, 355
3662	71, 356
3672	71, 356
3688	71, 357
3689	67, 357
3700	357
3712	71, 356
3716	438
3718	67, 84, 358
3722	71, 358
3727	359
3728	67, 84, 358
3736	438
3740	366
3748	366
3754	68
3756	71, 368, 438
3764	71, 366
3770	71, 74, 367
3771	67
3780	69, 71, 367, 555
3791	87, 465
3792	71, 367
3797	470
3800	71, 367
3801	367
3802	67, 84, 369
3803	67, 84, 370
3804	67, 372
3816	67, 84, 370
3817	67, 84, 370
3818	71, 368
3819	369
3820	67, 74, 84, 368
3821	67, 84, 369
3822	370
3824	71, 370
3826	67, 84, 371
3827	67, 74, 84, 371
3828	71, 371
3836	71, 372
3840	25, 372
3850	71, 373
3868	92, 373, 439
3872	67
3875	66, 336
3877	373
3880	373
3888	87, 375
3890	373
3891	374
3898	374
3910	71, 374
3922	71, 375
3930	71, 375
3938	375
3945	67, 376
3946	72, 376
3954	376
3972	379
3980	72, 379
3999	46, 509
4001	59, 314
4002	59, 82, 254
4003	59, 258
4004	59, 281
4005	75, 381
4006	72, 379
4007	59, 61, 63, 204
4008	59, 325
4009	59, 343
4011	59, 368
4012	59, 326
4014	59, 267
4015	63
4017	63
4018	59, 222
4019	63
4020	63
4027	59, 82, 131
4028	59, 212
4030	59, 129
4031	59, 275
4032	68
4034	66, 307
4035	59, 149
4036	380
4040	59, 200
4042	59, 167
4043	59, 82, 219
4048	444
4049	59, 264
4052	68, 445
4056	59, 299
4057	74, 220
4058	59, 352
4059	59, 74, 219
4062	59, 371
4063	59, 62-63, 118
4069	67-68, 444
4071	444
4072	444
4072	75, 382
4074	67, 75, 82, 382
4077	82, 221
4079	87, 383
4081	59, 63, 117
4083	82, 222
4084	72
4088	67
4090	59, 62-63, 118
4093	59, 355
4095	59, 82, 357
4097	59, 75, 82 381
4098	59, 389
4099	59, 406
4100	67, 388
4102	67, 83, 407
4103	59, 406
4104	67, 389
4105	67, 389
4106	83, 86, 407
4109	59, 406
4110	67, 74, 395
4111	59, 82, 410
4115	67
4116	66, 307
4117	66, 308
4118	59, 164
4123	396
4128	67, 72, 397
4131	87
4144	72, 398
4145	59, 82, 167
4146	59, 168
4147	59, 168
4150	398
4153	59, 223, 477
4160	445
4162	399
4163	59, 281
4167	87, 400
4169	59, 63, 117
4170	59, 63, 117
4188	68, 446
4195	446
4200	68, 494
4203	67, 82, 410
4204	72, 409
4206	67, 82, 409
4207	72, 411
4208	67, 410
4212	82, 414
4216	82, 413
4218	22, 412, 599
4219	28, 33, 413
4221	59, 414
4226	75, 86, 402
4227	292
4236	446
4240	72
4244	72, 418
4248	72, 418
4252	72, 418
4260	72, 418
4264	68, 447
4265	59, 304
4266	59, 305
4268	68
4270	72, 418
4272	446
4274	72, 419
4280	68, 447
4282	418
4283	447
4296	419
4308	419
4312	419
4320	420
4322	420
4326	67, 420
4337	484
4344	420
4348	68
4358	421
4360	67
4375	67, 421
4382	421
4383	67, 422
4384	67, 74, 421
4390	54, 297
4391	54, 297
4392	54, 297
4393	54, 297
4394	54, 68, 297, 448
4395	54, 297
4396	54, 297
4397	54, 297
4398	54, 297
4399	54, 297
4400	54, 297
4401	54
4402	54, 297
4403	54, 298
4404	54
4405	54, 298
4407	54, 437
4408	53, 241
4409	53
4411	53
4412	53
4413	53
4414	53
4415	53, 241
4416	53, 241
4417	53, 241
4418	53, 241
4419	92, 448
4420	53
4421	241
4426	23, 448
4432	450
4433	93, 379
4434	93, 378
4437	93, 378
4439	93, 378
4440	92, 449
4441	92-93, 378, 449
4442	93, 378
4443	23, 450
4444	450
4448	30
4449	30, 140
4456	93, 378
4458	93, 378
4462	30
4463	30, 140
4466	29
4467	29, 140
4468	30
4469	30
4470	93, 378
4471	530
4473	30, 140
4474	30, 140
4477	30
4480	30
4482	378
4483	23, 93, 379, 559
4490	503
4494	503
4500	308
4503	255
4518	67
4532	452
4560	68, 87, 452
4568	93, 378
4572	68
4577	69, 75, 539
4580	68, 87, 452
4601	242
4605	242
4616	68, 75, 445
4631	242
4649	452
4653	50, 201
4654	50, 235
4655	50, 235
4657	50, 235
4660	50, 241
4662	50, 240
4665	50, 290
4671	50, 317
4673	50, 321
4674	50, 320
4676	50, 321
4677	50, 323
4681	50, 341
4682	52, 551
4683	50, 351

Reference Information

Product Number	Page Number
6183	92, 528
6192	495
6206	23, 501
6208	65, 68, 75, 495
6209	75, 495
6210	496
6215	68
6221	485
6222	68, 87, 496
6240	92, 501
6247	92, 501
6263	69, 526
6270	68, 75, 489
6357	68, 502
6358	68, 503
6376	504
6388	52, 481
6392	23, 507
6400	504
6410	92, 506
6440	94, 120
6441	94, 135
6442	94, 138
6443	94, 141
6444	94, 146
6445	94, 147
6446	94, 150
6447	31, 94, 156, 531
6448	94, 158
6449	94, 171
6450	94, 175
6451	31, 94, 177, 530
6452	94, 221
6453	94, 243
6454	94, 250
6455	94, 251
6456	94, 253
6457	94, 257
6458	94, 262
6459	94, 267
6460	94, 280
6461	94, 284
6462	31, 94, 291, 530
6463	95, 305
6464	95, 310
6465	95, 338
6466	95, 340
6467	95, 340
6468	95, 342
6469	95, 380
6470	95, 396
6471	95, 398
6472	95, 399
6473	95, 411
6474	95, 419
6512	31, 531
6551	31, 531
6552	87, 508
6622	488
6623	47, 505
6662	87
6665	47, 433
6671	52, 520
6672	515
6696	68, 516
6700	515
6704	524
6715	522
6732	68
6736	69, 516
6841	68
6748	516
6770	519
6795	23, 565
6814	517
6834	517
6838	69, 75, 517
6840	52, 551
6845	69, 75, 518
6858	517
6870	518
6875	469
6876	469
6877	469
6881	518
6882	68
6900	47, 229
6901	47, 286
6902	47, 384
6903	47, 108
6904	47, 235
6906	47, 412
6908	47, 301
6910	47, 409
6912	47, 409
6924	68
6932	519
6944	519
6947	52, 250
6948	52, 250
6976	69, 520
6984	519
7000	29, 69, 521
7001	29
7002	29
7003	29
7004	29
7005	29
7007	29
7008	29, 522
7009	29
7010	29
7011	29
7012	29
7013	29
7018	43 ,87, 465
7019	87, 92, 527
7020	35, 39
7021	35
7023	31
7024	31
7025	79
7026	79
7027	80
7028	80, 522
7028	80
7037	79
7040	79
7043	25, 77
7044	25, 77
7045	25, 77
7046	25, 77
7047	80
7056	69, 522
7062	529
7067	24
7068	79
7070	24, 80
7076	79, 523
7081	24-25
7084	31
7086	31, 36, 531
7087	35
7088	35, 524
7089	35
7090	35
7091	35, 68, 515
7094	35
7095	35
7096	39, 69, 75, 523
7098	24
7100	523
7104	24, 80
7105	24, 80
7109	24
7110	532
7111	24, 81
7112	519
7114	24, 78
7116	24, 80
7119	43
7120	43
7122	43
7129	80
7128	69
7130	29
7132	69
7140	525
7145	43
7146	43
7147	43
7148	525
7152	43
7157	25, 77-78
7158	24, 78
7159	24, 78
7166	43
7168	525
7169	526
7179	79, 526
7180	26, 77-78, 92, 527
7181	26, 77, 92, 527
7182	79
7183	26, 77-78
7184	26, 77-78
7187	80
7189	35
7190	79
7191	79
7199	79
7207	79
7208	43
7211	35, 39
7212	35
7213	35, 36
7216	38, 544
7217	38
7218	38
7219	38
7221	36, 38
7225	36, 38
7232	69, 528
7237	43
7238	38
7239	38-39
7241	43
7247	79
7248	79
7251	26, 77
7252	26, 77-78
7254	25, 77
7260	69, 528
7263	26, 77
7264	26, 77
7269	25, 77
7272	78
7273	35
7274	78
7275	78
7277	79
7278	78
7280	80
7283	79
7285	79
7291	79
7295	80
7296	80
7297	80
7315	80
7316	25, 77
7317	25, 77
7327	43
7356	69, 85, 534
7364	533
7368	26, 77
7369	25, 77
7372	533
7392	534
7393	69, 75, 85, 547
7396	69, 535
7403	79
7412	80, 535
7418	69
7421	43
7422	43
7423	43
7424	43
7425	43
7426	43
7427	43
7429	43
7430	43
7432	43, 536
7433	43
7435	43
7436	43
7437	43
7440	80
7444	69, 536
7448	536
7457	537
7460	537
7463	44
7465	79
7466	35
7471	26, 77
7472	26, 77-78
7473	26, 77
7475	78
7479	79
7484	79
7485	79
7488	79
7489	26, 77
7516	538
7521	538
7527	537
7528	537
7532	69, 75, 539
7540	69, 75, 540
7544	540
7552	68
7565	68
7516	69
7579	79
7581	538
7585	77-78
7586	77-78
7587	77-78
7588	79
7603	77-78
7605	31, 80
7606	36, 41
7610	52, 556
7616	541
7620	30
7624	69, 80
7631	494
7636	542
7637	79
7680	69, 85, 543
7705	543
7708	542
7713	69, 75, 538
7716	82, 473
7720	62, 431
7722	68, 75, 445
7723	69, 75, 82, 553
7725	82
7727	68, 461
7728	472
7729	82, 563
7730	68, 75, 455
7731	440
7732	562
7735	62, 431
7745	474
7746	69, 75, 523
7749	69, 535
7754	63, 441
7755	515
7756	75, 471
7763	69, 550
7764	448
7768	69, 75, 85, 533
7771	69, 75, 85, 547
7772	69, 85, 542
7773	69, 541
7774	69, 75, 85, 546
7776	69, 544

Reference Information

Product Number	Page Number
9607	287
9624	46, 71, 287
9652	46, 295
9653	47, 295
9656	46, 295
9671	385
9673	47, 384
9675	385
9681	46, 72, 383
9691	385
9696	52, 386
9721	46, 70, 127
9726	123
9733	47, 126
9736	123
9760	70, 150
9801	103
9802	103
9803	103
9804	103
9809	103
9814	102
9815	102
9823	27, 413
9824	116
9826	414
9827	27, 330
9828	27, 206
9829	27, 113
9830	27, 268
9831	27, 413
9832	27, 115
9834	27, 414
9835	27, 116
9836	27, 415
9837	27, 414
9838	27, 414
9839	27, 415
9840	27, 415
9853	27, 114
9863	27, 269
A068	107
A069	107
A134	87, 112
A261	70, 116
A355	61, 87, 116
A397	70, 117
A426	59, 62-63, 118
A434	118
A461	119
A464	118
A475	61, 119
A478	87, 119
A586	61, 122
A630	122
A896	123
B337	131
B362	61, 70, 87, 135
B490	135
B529	70
B531	135
B544	75
B577	74, 137
B581	74, 138
B601	74, 139
B604	61, 87, 139
B652	142
B654	140
B660	61, 87, 143
B889	144
B934	144
C242	61, 146
C272	74, 146
C323	146
C533	147
C548	61, 87, 147
C571	147
C701	150
C704	82
C710	70, 150
C946	150
C948	63, 151
C949	151
D010	52, 72, 196
D011	52, 72, 196
D012	52, 72, 196
D013	52, 72, 197
D014	52, 72, 197
D015	52, 72, 197
D016	52, 72, 197
D017	52, 72, 196
D018	52, 72, 197
D019	52, 72, 197
D020	52, 72, 197
D021	52, 72, 197
D184	151
D293	63, 151
D294	63, 151
D470	152
D472	152
D545	70, 152
D570	154
D600	154
D648	154
D654	155
D660	155
D683	92, 155
E008	61, 528
E024	542
E050	440
E051	528
E052	52, 471
E053	462
E054	513
E055	467
E056	437
E057	529
E058	87
E059	489
E060	472
E061	462
E062	452
E063	504
E064	439
E065	501
E067	553
E068	52, 455
E069	52, 504
E070	52, 87, 529
E071	430
E106	61, 87, 474
E107	87
E117	458
E121	503
E186	156
E207	497
E209	61, 87, 565
E224	557
E258	156
E268	157
E278	164
E280	164
E343	164
E345	164
E350	28, 164
E376	165
E395	165
E406	166
E422	510
E453	167
E494	168
E518	61, 87, 471
E823	537
F676	170
F780	59, 82, 198
F781	86, 198
F789	61, 63, 176
F792	61, 63, 176
F800	177
F812	74, 178
F842	178
F860	178
F906	61, 178
F907	87, 178
F916	182
G045	183
G083	183
G121	74, 184
G122	74, 183
G123	70, 184
G136	70, 185
G143	185
G161	52, 87, 185
G200	185
G218	187
G680	70, 188
G811	70, 188
G895	188
G897	188
H004	52, 433
H061	189
H076	23, 70, 92, 189, 430
H077	23, 458
H078	23, 465
H080	23, 499
H098	189
H100	52, 462
H105	52, 462
H109	52, 462
H115	52, 462
H116	70, 190
H118	52, 467
H119	52, 468
H121	53, 87, 470
H125	53, 467
H151	53, 481
H165	507
H168	53, 481
H169	53, 484
H175	53, 485
H179	61, 87, 436
H180	53, 485
H181	61, 438
H182	441
H185	53, 484
H219	471
H220	53 489
H223	476
H261	53, 504
H262	53, 506
H265	506
H273	515
H277	529
H278	529
H279	560
H281	53, 508
H282	507
H295	53, 513
H296	53, 515
H297	53, 513
H300	53, 518
H301	53, 510
H302	53, 513
H306	53, 513
H308	53, 513
H312	515
H320	53, 520
H362	53, 551
H365	53, 552
H371	53, 551
H378	53, 555
H379	53, 556
H380	53, 544
H381	53, 556
H383	53, 532
H385	53, 543
H391	53, 532
H394	53, 532
H407	450
H419	496
H451	23, 28, 428
H453	92, 564
H454	23, 28, 429
H485	23, 28, 457
H487	23, 28, 477
H488	23, 28, 498
H489	23, 28, 511
H571	490
H580	87, 429
H590	563
H603	87, 499
H604	87, 488
H613	46, 478
H739	71, 340
H768	70, 190
H775	190
H916	191
J166	172
J189	377
J219	191
J330	191
J331	70, 191
J372	192
J407	192
J418	70, 192
J431	192
J795	194
K064	194
K617	195
K620	70, 196
K750	191
L049	198
L050	357
L056	199
L057	198
L058	199
L059	199
L083	61, 87, 201
L088	61, 87, 201
L126	202
L146	61, 87, 202
L210	70, 204
L216	204
L657	206
L693	201
L699	201
L701	201
L704	201
L718	207
L820	207
M368	211
M369	211
M370	210
M376	208
M377	61, 87, 207
M422	211
M430	211
M518	52, 87, 212
M520	212
M522	92, 212
M530	213
M556	75, 213
M672	75, 213
M702	61, 87, 215
M708	52, 87, 215
M746	74, 216
M752	217
M753	216
M756	74, 215
M770	74, 217
M778	218
M781	219
M816	220
M821	220
M834	220
M840	70, 221
M906	61, 71, 87, 222
M916	222
M953	224
M956	223
N105	224
N121	224
N126	167
N145	225
N151	225
N152	71, 225
N168	28, 226
N169	226
N230	228
N327	74, 228

Reference Information

Subject Index

Reference Information

Reference Information

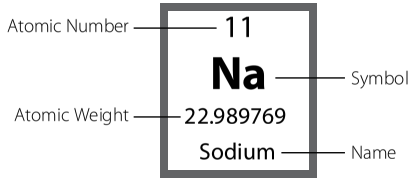
Notes

Notes

Notes

Reference Information

Periodic Table of the Elements



1A	2A	3B	4B	5B	6B	7B	8B			1B	2B	3A	4A	5A	6A	7A	8A
1 **H** 1.00794 Hydrogen																	2 **He** 4.002602 Helium
3 **Li** 6.941 Lithium	4 **Be** 9.012182 Beryllium											5 **B** 10.811 Boron	6 **C** 12.0107 Carbon	7 **N** 14.0067 Nitrogen	8 **O** 15.9994 Oxygen	9 **F** 18.9984032 Fluorine	10 **Ne** 20.1797 Neon
11 **Na** 22.989769 Sodium	12 **Mg** 24.3050 Magnesium											13 **Al** 26.9815386 Aluminum	14 **Si** 28.0855 Silicon	15 **P** 30.973762 Phosphorus	16 **S** 32.065 Sulfur	17 **Cl** 35.453 Chlorine	18 **Ar** 39.948 Argon
19 **K** 39.0983 Potassium	20 **Ca** 40.078 Calcium	21 **Sc** 44.955912 Scandium	22 **Ti** 47.867 Titanium	23 **V** 50.9415 Vanadium	24 **Cr** 51.9961 Chromium	25 **Mn** 54.938045 Manganese	26 **Fe** 55.845 Iron	27 **Co** 58.933195 Cobalt	28 **Ni** 58.6934 Nickel	29 **Cu** 63.546 Copper	30 **Zn** 65.38 Zinc	31 **Ga** 69.723 Gallium	32 **Ge** 72.64 Germanium	33 **As** 74.92160 Arsenic	34 **Se** 78.96 Selenium	35 **Br** 79.904 Bromine	36 **Kr** 83.798 Krypton
37 **Rb** 85.4678 Rubidium	38 **Sr** 87.62 Strontium	39 **Y** 88.90585 Yttrium	40 **Zr** 91.224 Zirconium	41 **Nb** 92.90638 Niobium	42 **Mo** 95.96 Molybdenum	43 **Tc** [98] Technetium	44 **Ru** 101.07 Ruthenium	45 **Rh** 102.90550 Rhodium	46 **Pd** 106.42 Palladium	47 **Ag** 107.8682 Silver	48 **Cd** 112.411 Cadmium	49 **In** 114.818 Indium	50 **Sn** 118.710 Tin	51 **Sb** 121.760 Antimony	52 **Te** 127.60 Tellurium	53 **I** 126.90447 Iodine	54 **Xe** 131.293 Xenon
55 **Cs** 132.9054519 Cesium	56 **Ba** 137.327 Barium		72 **Hf** 178.49 Hafnium	73 **Ta** 180.94788 Tantalum	74 **W** 183.84 Tungsten	75 **Re** 186.207 Rhenium	76 **Os** 190.23 Osmium	77 **Ir** 192.217 Iridium	78 **Pt** 195.084 Platinum	79 **Au** 196.966569 Gold	80 **Hg** 200.59 Mercury	81 **Tl** 204.3833 Thallium	82 **Pb** 207.2 Lead	83 **Bi** 208.98040 Bismuth	84 **Po** [209] Polonium	85 **At** [210] Astatine	86 **Rn** [222] Radon
87 **Fr** [223] Francium	88 **Ra** [226] Radium		104 **Rf** [267] Rutherfordium	105 **Db** [268] Dubnium	106 **Sg** [271] Seaborgium	107 **Bh** [272] Bohrium	108 **Hs** [270] Hassium	109 **Mt** [276] Meitnerium	110 **Ds** [281] Darmstadtium	111 **Rg** [280] Roentgenium	112 **Uub** [285] Ununbium	113 **Uut** [284] Ununtrium	114 **Uuq** [289] Ununquadium	115 **Uup** [288] Ununpentium	116 **Uuh** [293] Ununhexium	117 **Uus** [294] Ununseptium	118 **Uuo** [294] Ununoctium

Lanthanides	57 **La** 138.90547 Lanthanum	58 **Ce** 140.116 Cerium	59 **Pr** 140.90765 Praseodymium	60 **Nd** 144.242 Neodymium	61 **Pm** [145] Promethium	62 **Sm** 150.36 Samarium	63 **Eu** 151.964 Europium	64 **Gd** 157.25 Gadolinium	65 **Tb** 158.92535 Terbium	66 **Dy** 162.500 Dysprosium	67 **Ho** 164.93032 Holmium	68 **Er** 167.259 Erbium	69 **Tm** 168.93421 Thulium	70 **Yb** 173.054 Ytterbium	71 **Lu** 174.9668 Lutetium
Actinides	89 **Ac** [227] Actinium	90 **Th** 232.03806 Thorium	91 **Pa** 231.03588 Protactinium	92 **U** 238.02891 Uranium	93 **Np** [237] Neptunium	94 **Pu** [244] Plutonium	95 **Am** [243] Americium	96 **Cm** [247] Curium	97 **Bk** [247] Berkelium	98 **Cf** [251] Californium	99 **Es** [252] Einsteinium	100 **Fm** [257] Fermium	101 **Md** [258] Mendelevium	102 **No** [259] Nobelium	103 **Lr** [262] Lawrencium

Contact Information

North America: Avantor Performance Materials, Inc.
3477 Corporate Parkway
Suite #200
Center Valley, PA 18034 USA
Tel: +1-855-AVANTOR (+1-855-282-6867)
Fax: +1-610-573-2600
Email: info@avantormaterials.com
www.avantormaterials.com

Worldwide Locations

China: Avantor Performance Materials Trading (Shanghai) Co., Ltd.
Room 501, Block E, Poly Plaza, No.18, Dongfang Road
Pudong New Area, Shanghai 200120 China
Tel: +86-21-5878 3226
Fax: +86-21-5877 7253
Email: info@avantormaterials.com
www.avantormaterials.com

India: RFCL Limited
A-3, Okhla Industrial Area,
Phase - I,
New Delhi 110020 India
Tel: +91-11-42395700, 41609171/75
Fax: +91-11-41609189, 26813676
Email: info@avantormaterials.com
www.avantormaterials.com

Malaysia: Avantor Performance Materials, Sdn. Bhd.
A-1201-2, 12th Floor, Kelana Brem Tower 1
Jalan SS7/15, Kelana Jaya
47301 Petaling Jaya, Selangor, Malaysia
Tel: +60-3-7803 0378
Fax: +60-3-7803 0405 / 7804 5427
Email: info@avantormaterials.com
www.avantormaterials.com

Mexico: Avantor Performance Materials, S.A. de C. V.
Plomo 2
Fracc. Industrial Esfuerzo Nacional Xalostoc
CP 55320 Ecatepec, Estado de Mexico, Mexico
Tel: +52-55-5699-0250
Fax: +52-55-5755-2585
Email: info@avantormaterials.com
www.avantormaterials.com

Netherlands: Avantor Performance Materials, B.V.
Teugseweg 20, 7418 AM Deventer
The Netherlands
Tel: +31-570-687500
Fax: +31-570-687574
Email: info@avantormaterials.com
www.avantormaterials.com

AVANTOR™
PERFORMANCE MATERIALS

ISO
Phillipsburg, NJ 9001: 2008 & 14001: 2004
Paris, KY 9001: 2008
Mexico City, Mexico 9001: 2008
Deventer, the Netherlands 9001: 2008 & 14001: 2004 & 13485:2003
Selangor, Malaysia 9001: 2008

Ordering Information and Assistance
Customer Service and Technical Service
Toll Free: +1-855-AVANTOR (+1-855-282-6867)
Outside of U.S. Tel: +1-610-573-2600
Fax: 610-573-2610
www.avantormaterials.com
E-mail: info@avantormaterials.com

ASK Avantor™
For Q&A information including live chat visit
www.avantormaterials.com/askavantor