

# Production Insight

Solutions for Critical Environments & Manufacturing Processes



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American Pharmaceutical Market and How  
it Impacts Big Pharma's Procurement  
Strategy and the Partners that Support It

# Focus On: Production

Due to a continually expanding range of products and services for production supplies, VWR is the perfect provider for your manufacturing and production operations.

Through acquisitions and selective product additions, VWR's production supplies includes a comprehensive range of critical environment supplies, safety products and production chemicals with the intended use in manufacturing, production and assembling facilities.

Manufacturers of pharmaceuticals, medical devices, food and beverage, semiconductors, chemicals and others, can benefit from VWR's dedicated capabilities for production supplies that enable the standardization of products and suppliers, supply chain security and efficient order and material handling; and due to VWR's geographic reach, this can be accomplished globally.

**Contact your VWR Sales Representative for pricing, samples, and additional information.**



## VWR Production Chemicals Complexity Simplified



As a global chemical solutions provider, we offer reliable and transparent supply chain solutions designed to decrease the complexity you encounter. Manage the risk you face by harnessing our global strengths through Security, Services, Supply and Support. Learn more at [vwr.com/production-chemicals](http://vwr.com/production-chemicals).



### SECURITY

MINIMIZE complexity — MAXIMIZE supply chain security



### SERVICES

INCREASE productivity — FOCUS on process development and manufacturing



### SUPPLY

SIMPLIFY procurement — STRENGTHEN strategic sourcing



### SUPPORT

LEVERAGE global reach — GAIN local support

Shop [vwr.com](http://vwr.com) for additional information on VWR Production Chemicals or contact your local VWR Sales Representative.



## VWR Signature™ Lab Coats made with DuPont™ Tyvek® IsoClean® Material

Lab coats provide a premium level of protection and durability while remaining comfortable. They offer an excellent barrier against dry particles, nonhazardous liquids, and microorganisms, and are designed for use in cleanroom environments. Limited-use lab coats are antistatic-treated, low-linting, and chemically and biologically inert.



### Features:

- Serged seams
- Open wrists
- Laydown collar
- Available in Raglan or Standard sleeve formats
- Five-snap front
- Color: white
- One breast pocket
- Two hip pockets

Size	Cat. No.	Case of 30
<b>Lab Coats with Raglan Sleeves</b>		
Small	89127-196	263.95
Medium	89125-612	269.85
Large	89127-194	275.23
X-Large	89125-614	294.53
XX-Large	89127-190	350.70
<b>Lab Coats with Standard Sleeves</b>		
Small	89128-798	156.71
Medium	89125-786	156.71
Large	89128-786	163.46
X-Large	89127-198	188.98
XX-Large	89127-192	231.57



## DuPont™ Tychem® Sleeved Apron

DuPont™ Tychem® SL delivers effective protection against a range of chemical environments. Tychem® SL, utilizes Saranex™ 23-P film laminated to Tyvek® fabric to provide a rugged and durable fabric that resists abrasion. Tychem® SL fabric provides at least 30 minutes of protection against >124 chemical challenges.



### Typical applications:

Chemical mixing, hazardous remediation, emergency medical response, paint spraying, and nuclear environments.

- Calf-length (52") apron/gown design with attached sleeves
- Provides enhanced frontal protection
- Tightly sewn seam is covered with garment fabric to reinforce seam and reduce potential for particle penetration
- Open back for wearer comfort
- Bound yoke neck opening without snaps
- Ties at waist
- Elastic opening for tighter fit at wrist
- One size fits most

Description	Cat. No.	Case of 12
Tychem SL Apron	10147-148	123.14

## VWR has All You Need for Critical Environments and Manufacturing

VWR has all of your solutions for critical environments and manufacturing processes; offering the most extensive product portfolio and services supporting labs and production facilities.

Download a copy from [vwr.com](http://vwr.com) or contact your VWR Sales Rep for a printed version.

- **VWR Protection Apparel Brochure:** Head-to-toe garments and gloves to support production
- **VWR Collection Catalog:** The right products, at the right price, when you need them...from a name you trust
- **VWR Furniture Catalog:** From design to project completion
- **VWR Safety Diamond:** Products to meet your safety needs
- **All You Need for Essential Industrial Supplies Catalog:** Janitorial, MRO, and much more
- **VWRCATALYST™ Services Portfolio:** Deliver process improvements to your lab or production facility

Cleanroom and Industrial Gloves

# Innovative solutions to meet your controlled environment needs

## High-quality and reliable Cleanroom Gloves from Cardinal Health

Whether latex or synthetic, sterile or non sterile, hand-specific or ambidextrous, Cardinal Health offers a portfolio of gloves that will meet a wide variety of needs. Our gloves comply with ISO certification standards and options range from ISO 4 to ISO 7. Cardinal Health™ Cleanroom Gloves are clean-processed and designed to meet the demands of pharmaceutical, medical device producers, biotech and contract manufacturers in controlled environments, as well as professionals in lab research environments.

For additional information, or to place an order, please contact your VWR Sales Representative, call **800.932.5000** or visit **vwr.com**.

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### Sterile



CR100 Sterile Nitrile Gloves (PH2Y1860T series)

CR100 Sterile Latex Gloves (PH2Y1640 series)

Esteem® CP Synthetic Gloves (PH2Y72PL55 series)

Duraprene™ CP Synthetic Gloves (89027-156 series)

Protegrity® CP Latex Gloves with synthetic coating (PH2Y72N0 series)

CP100 BT Latex Laboratory Gloves (PH2Y5000 series)

### Non-Sterile



CP100 Nitrile Ambi Gloves (PH2Y1849 series)

CR100 Non-Sterile Latex Gloves (PH2Y1639 series)

Esteem® Stretchy Nitrile Ambi Gloves (89068-886 series)

CP100 BT Ambi Latex Gloves (PH2Y1730 series)

Multi-Flex® CC100 Latex Gloves (PH2Y1600 series)





**NEW** from Kimberly-Clark Professional\*!

## Sustainable Gloves – From Start to Finish

Looking for gloves that provide dexterity, strength, protection and a way to reduce your solid waste stream? Try **NEW Kimberly-Clark\* Spring Green** and **Kimberly-Clark\* Forest Green** Nitrile Exam Gloves. Comfortable as well as sustainable, these gloves:

- Enhance Grip
- Save space
- Reduce waste

**It All Adds Up** to a sustainable solution for a greener, safer, more productive lab.



Can be recycled in the RightCycle by Kimberly-Clark Professional\* Program. [www.Kimtech.com/RightCycle](http://www.Kimtech.com/RightCycle)

**Kimberly-Clark\* Spring Green Nitrile Exam Gloves**

Length	Mil Thickness	Size	Gloves/ Box	Boxes/ Case	Total/ Case	VWR Cat No.
9.5"	4.7	XS	200/10	10	2,000	<b>10204-806</b>
9.5"	4.7	S	200/10	10	2,000	<b>10204-808</b>
9.5"	4.7	M	200/10	10	2,000	<b>10204-810</b>
9.5"	4.7	L	200/10	10	2,000	<b>10204-812</b>
9.5"	4.7	XL	180/10	10	1,800	<b>10204-814</b>

**Kimberly-Clark\* Forest Green Nitrile Exam Gloves**

Length	Mil Thickness	Size	Gloves/ Box	Boxes/ Case	Total/ Case	VWR Cat No.
9.5"	3.5	XS	200/10	10	2,000	<b>10204-816</b>
9.5"	3.5	S	200/10	10	2,000	<b>10204-818</b>
9.5"	3.5	M	200/10	10	2,000	<b>10204-820</b>
9.5"	3.5	L	200/10	10	2,000	<b>10204-822</b>
9.5"	3.5	XL	200/10	10	2,000	<b>10204-824</b>
9.5"	3.5	XXL	180/10	10	1,800	<b>10204-826</b>



Exceptional Workplaces

Shop [vwr.com](http://vwr.com) for additional information.

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## KLEENGUARD® A70 Chemical Spray Protection Coveralls, Kimberly-Clark Professional®

- For use in hazardous waste remediation, environmental cleanup, petrochemical/oil refining, acid/caustic handling, biohazard cleanup, and pharmaceutical manufacturing applications
- Features bound seams for increased protection
- Durable, breathable, and comfortable



Manufactured from NFPA 99 compliant antistatic material, coveralls feature a seamless front for superior protection, ample chest room and more body length, and a liquid-resistant, extra-long zipper. Wick-away lining provides enhanced comfort during extended use, and a storm flap covers the zipper for additional protection. Available with a variety of hood and boot configurations. Level B/C suit.

Size	Cat. No.	Case of 12
<b>Elastic Wrists, Ankles, and Hood</b>		
Medium	89030-822	236.67
Large	89030-824	237.43
X-Large	89030-826	236.67
XX-Large	89030-828	248.08
3X-Large	89030-830	260.43
<b>Elastic Wrists, Hood, and Boots</b>		
Medium	89030-834	242.82
Large	89030-836	242.82
X-Large	89030-838	242.82
XX-Large	89030-840	271.79
3X-Large	89030-842	287.44
4X-Large	89030-844	303.37



## ALL SUITS LOOK THE SAME, BUT ONLY TYVEK® MAKES THE DIFFERENCE.

All suits might appear the same, but only ours stands out where you need it most—on the job. DuPont™ Tyvek®—an ideal balance of protection, durability and comfort.

### CHECK OUT OUR NEW LINE OF DIVERSE PRODUCTS:

- **TYVEK®**  
Breathable inherent barrier protection
- **TYVEK® DUAL**  
Tyvek® protection in front with DuPont™ ProShield® on the back
- **TYVEK® PLUS**  
Serged and over-taped seams for added protection
- **TYVEK® XPRT**  
Serged external seams for improved performance over standard Tyvek® serged seams
- **TYVEK® ISOCLEAN®**  
for ISO 4/5 (class 10/100) and ISO 7/8 (Class 10,000/100,000) Controlled Environments

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# Stay Safe & Productive

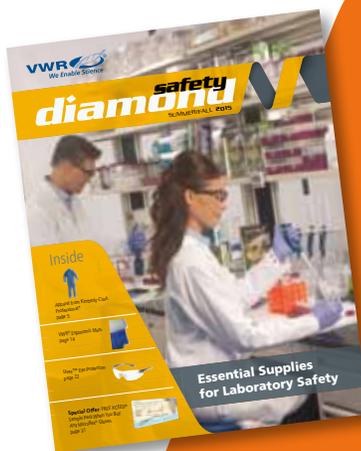
More than ever, VWR is ready to help you stay safe and productive, in the production area and across your entire facility.

Find helpful resources at [vwr.com](http://vwr.com). Request a FREE catalog and check out featured brands, products, and promotions.

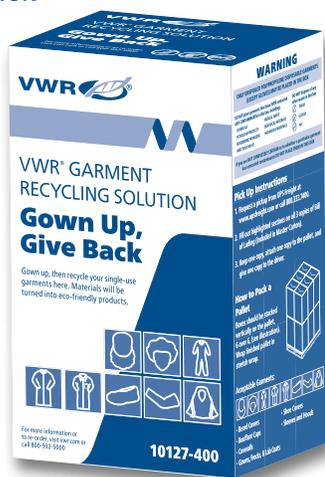
Go to [vwr.com/safetyandindustrial](http://vwr.com/safetyandindustrial) and select "All You Need for Safety & Industrial".

## SAFETY SUPPLIES

- Apparel
- Chemical Handling & Storage
- Ergonomics
- Eye & Face Protection
- Fall Protection
- First Aid
- Handcare
- Hand Protection
- Hearing Protection
- Respiratory Protection
- Safety Signs
- Spill Control
- Waste Disposal



Request your FREE catalog today at [vwr.com/safetyandindustrial](http://vwr.com/safetyandindustrial)



## VWR® GARMENT Recycling Solution Gown Up, Give Back

- Comprehensive recycling solution to reduce landfill waste
- Drives sustainable business practices
- A portion of sales is donated to the VWR Foundation

This easy-to-use recycling program provides a complete waste collection, shipment, and recycling solution for used disposable apparel.

Description	Capacity	Cat. No.	Each
VWR Garment Recycling Collection Boxes	600 lbs. of garments	10127-400	245.00

Shop [vwr.com](http://vwr.com) for additional information.



## Jackson Safety\* V80 Revolution\* OTG Goggle Protection, Kimberly-Clark Professional®

These impact goggles are extremely comfortable to wear and provide the necessary protection for your eyes



CrossVent™ technology keeps air flowing in for anti-fog while keeping chemical splashes out. Polycarbonate lens provides 99% UV protection and superior impact resistance, while Dynaflex® material provides extreme comfort and fit. An important factor for the person who needs to wear goggles for any length of time. The impact goggles stay supple in extreme climates and are easy to clean and sanitize. Expanded face room and sight field allow most glasses to be worn inside the goggle. The CrossVent technology for anti-fogging makes these goggles perfect for outdoor use for such activities as skiing and snow-mobiling! The Jackson Safety V80 Revolution OTG Goggles will be a great addition to your lab and for use at your home!

Description	Cat. No.	Each	Case of
V80 Revolution OTG Goggles	470144-884	13.40	30/ 402.02

**EMPROVE®**

Faster to market – prepared for the future



With a portfolio of 400 EMPROVE® products, EMD Millipore's experience and broad expertise in the chemical and pharmaceutical industry safeguard your future success by:

- ▶ Meeting regulatory challenges
- ▶ Supplying comprehensive, ready-to-use documentation
- ▶ Providing high-quality raw materials
- ▶ Offering a thorough material qualification trail



## Search, Source, and Order Compounds Online

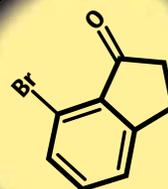
Streamline your discovery with our new, convenient building blocks sourcing option.

Reduce search time and streamline procurement process complexities with the VWR Building Blocks Portal, powered by eMolecules.

- Access more than 650,000 compounds
- Search by substructure, similarity, or exact search
- Use SD files, SMILES, CAS number, or MFCD number to search large amounts of product
- Real-time price and availability

Visit [vwr.com/buildingblockportal](http://vwr.com/buildingblockportal) to start searching today!

**VWR Building Blocks Portal**  
POWERED BY eMOLECULES





With **VWRCATALYST's** support, your business can focus on maintaining a competitive edge in the market.

Our extensive portfolio of differentiated services can help you move faster and devote more time to your core production processes.

**VWRCATALYST** services remove the burden of ancillary tasks, including procurement, inventory management, administration and much more.

We can help you re-focus your time on initiatives that directly support the strategic mission of your company.

**We Enable Science by:**

- Powering productivity
- Improving quality, safety, and regulatory compliance
- Reducing total operating costs

Over 1,200 **VWRCATALYST** associates are working worldwide today at industry leading pharmaceutical, biotech, educational, industrial, healthcare and high-tech production institutions.

**Our services include:**

- Procurement and Supply Management
- Laboratory and Production Support
- Scientific Support
- Equipment and Instrument Services
- Lean Six Sigma Laboratory Process Consulting

Learn more at [vwr.com/vwrcatalyst](http://vwr.com/vwrcatalyst), or contact us at **1.888.793.2300** or [vwrcatalyst@vwr.com](mailto:vwrcatalyst@vwr.com).



## The Right Tools to Address the Complex Needs of Your Business

VWR has the right manufacturing solution for you.

With a well-established infrastructure of manufacturing facilities in North America and Europe, we provide a variety of production services across numerous applications and market segments.

### OUR PRODUCTION SCALE SERVICES INCLUDE:

- Custom Re-Packaging and Testing
  - Custom Pack Sizes & Configurations
  - Custom Testing & Specifications
- Custom Intermediates for Production
  - Liquid Formulations
  - Powder Blends
- Contract Manufacturing (OEM) - Finished Products
  - Final Formulation - Liquid & Powder Reagents
  - Fill/Finish, Labeling, Kitting & Assembly
- Custom Synthesis
  - R&D Process Development & Bench Scale Production
  - Production Scale Synthesis

VWR engineers and scientists will ensure the right processes and systems are used to meet your needs. Whether your product is in development or already commercialized, we can scale our systems appropriately.

Our systems are modular in design. So you can use all or a tailored selection of our production centers, equipment, and infrastructure. Whether you are an industry leader or new to the market, we have the right manufacturing solution to support your production and commercialization needs.

For more information, call **1.800.932.5000**.

Find case studies and more at [vwr.com/manufacturing](http://vwr.com/manufacturing)



## KMG Electronic Chemicals

KMG is the leading manufacturer of High Purity Process Chemicals (HPPC) for the electronic chemicals markets. Their broad offering includes acids, solvents and other wet chemicals used to etch and clean silicon wafers in production of semiconductors. KMG is able to offer purity measured to as low as parts per trillion.

KMG has strategically located manufacturing facilities in United States (California & Colorado) and Milan, Italy, supplying customers throughout the U.S., Europe, and Asia.

### Organic chemical purification, processing and packaging

- Specialty solvent blending
- Custom solvent blends
- Photo ancillary solvent blends

### Inorganic acid manufacturing, processing and packaging

- Custom blending facility (BOEs, MAEs, PAEs)
- Industry leading blending system
- Dedicated blending vessels

### Custom packaging (bottle, drum, tote and bulk)

- Custom developed packages
- Leader in particle reducing and analyzing technology
- Cleanroom packaging

### In-house analytical (analyzed from the container)

- Cleanroom prep areas
- State-of-the-art metrology

Description	Cat. No.	Each
Acetone Cleanroom Gigabit® - CX B	71009-506	3270.95
Ammonium Hydroxide 29% Gigabit®	71009-540	1098.60
Hydrofluoric Acid 49% Gigabit®	71009-360	144.57
Hydrofluoric Acid 49% Gigabit® - C	71009-518	3683.93
Hydrogen Peroxide 30% Terabit - C	71009-522	3402.04
Hydrogen Peroxide 30% Gigabit®	71009-336	90.36
Isopropanol Gigabit® 55 Gal. Drum	89400-822	2312.79
Nitric Acid 69.5% Gigabit® - SCHUT	71009-498	14,174.10
Phosphoric Acid 85% Terabit - CX	71009-530	4625.57
Sulfuric Acid 96% Gigabit® - CX Y+	71009-534	2411.91

Shop [vwr.com](http://vwr.com) for additional product offering.



## HiMedia HiVeg Animal-Free Culture Media

HiMedia labs is a scientific company producing microbiology media specifically to optimize growth and protein expression. Our scientists provide a complete line of standard formulation or will assist in custom formulations for any fermentation application.

HiMedia provides a complete line for Production and Quality Control in Pharmaceutical, BioPharmaceutical, and Food Industries.



## Bulk Fermentation Feeds - Conventional and Animal-Free

Description	Cat. No.	Each
<b>Vegetable-Based Peptones</b>		
HiVeg Acid Hydrolysate	61001-544	122.71
HiVeg Extract	61001-512	144.55
HiVeg Extract No. 1	61001-516	81.08
HiVeg Extract No. 2	61001-616	126.33
HiVeg Hydrolysate	61001-548	101.52
HiVeg Hydrolysate No. 1	61001-580	99.34
HiVeg Hydrolysate No. 2	61001-568	112.83
HiVeg Hydrolysate No. 4	61001-540	148.47
HiVeg Infusion	61001-596	157.03
HiVeg Infusion No. 1	95039-298	160.96
HiVeg Infusion No. 2	89174-532	113.06
HiVeg Special Infusion	61001-588	120.06
HiVeg Peptone	61001-508	99.06
HiVeg Peptone No. 1	61001-632	112.83
HiVeg Peptone No. 2	61001-558	111.33
HiVeg Peptone No. 3	61001-522	156.05
HiVeg Peptone No. 4	61001-526	111.14
HiVeg Peptone No. 5	61001-562	133.14
HiVeg Special Peptone	61001-552	119.91
<b>Equivalent Animal-Based Peptones</b>		
Beef Extract	61001-510	144.55
Bio Peptone	61001-560	133.14
Brain Heart Infusion	61001-586	141.00
Casein Acid Hydrolysate	61001-542	114.65
Casein Enzyme Hydrolysate Type-I (Tryptone)	61001-546	96.79
Gelatin Peptone	61001-556	110.19
Heart Infusion	61001-594	157.51
Lactalbumin Hydrolysate	61001-538	85.41
Liver Extract Powder	61001-614	156.12
Liver Hydrolysate	61001-566	113.13
Liver Infusion Powder	61001-564	139.43
Meat Extract	61001-514	100.10
Meat Infusion Powder	61001-598	113.14
Meat Peptone	61001-630	139.43
Peptone	61001-506	94.73
Peptone M	61001-524	111.40
Peptone Special	61001-550	148.02
Proteose Peptone	61001-520	156.12
Tryptose	61001-578	122.71

Shop [vwr.com](http://vwr.com) today or call 800.932.5000 for more information.



## Tereos Merisorb® SD Pharma

A spray dried sorbitol, highly compressible, ideal for sugar-free formula with a characteristic cooling effect

### A Spray Drying Technology

This technology creates the unique particle structure of Merisorb SD Pharma which consists of very loosely packed, randomly orientated needle-like crystals. Its associated high specific surface and good porosity provide increased properties of flowability.

When compared to standard, commercially available crystalline sorbitol, Merisorb SD Pharma exhibits superior compression properties. It allows the formulator to operate at lower compression force for a given tablet hardness.

### Formulation benefits

- High flowability and compressibility
- Chemical stability
- High absorption capacity
- Uniform coloring
- Pleasant sweet taste and cooling effect

### Nutrition facts

- Sweetening power: 60% of sucrose
- Low energy content: 2.4 kcal/g
- Low glycaemic index
- Non-cariogenic

Description	Cat. No.	Bag of 25	Pallet of 1000
Merisorb SD Pharma	10204-836	180.00	6000.00



## VWR® Biological Buffers

Bioprocess Chemicals. More Product Solutions.

VWR manufactures commercial-scale biological buffers and biochemicals, to deliver you more product solutions.

- **Biological Buffers:** BIS-TRIS, HEPES, HEPES Sodium Salt, MES, MES Sodium Salt, MOPS, TRIS Amino, and TRIS Hydrochloride
- Store at 15° - 30° C

Description	EC No.	CAS No.	Formula	Molecular Weight	Size	Cat. No.
HEPES Free Acid	230-907-9	7365-45-9	C <sub>8</sub> H <sub>18</sub> N <sub>2</sub> O <sub>4</sub> S	238.3	1KG	VWRB30487-1KG
HEPES Free Acid	230-907-9	7365-45-9	C <sub>8</sub> H <sub>18</sub> N <sub>2</sub> O <sub>4</sub> S	238.3	5KG	VWRB30487-5KG
HEPES Free Acid	230-907-9	7365-45-9	C <sub>8</sub> H <sub>18</sub> N <sub>2</sub> O <sub>4</sub> S	238.3	25KG	VWRB30487-25KG
HEPES Sodium Salt	278-169-7	75277-39-3	C <sub>8</sub> H <sub>17</sub> N <sub>2</sub> O <sub>4</sub> SNa	260.3	1KG	VWRB30567-1KG
HEPES Sodium Salt	278-169-7	75277-39-3	C <sub>8</sub> H <sub>17</sub> N <sub>2</sub> O <sub>4</sub> SNa	260.3	5KG	VWRB30567-5KG
HEPES Sodium Salt	278-169-7	75277-39-3	C <sub>8</sub> H <sub>17</sub> N <sub>2</sub> O <sub>4</sub> SNa	260.3	25KG	VWRB30567-25KG
PIPES Free Acid	227-057-6	5625-37-6	C <sub>8</sub> H <sub>18</sub> N <sub>2</sub> O <sub>6</sub> S <sub>2</sub>	302.37	1KG	VWRB73007-1KG
PIPES Free Acid	227-057-6	5625-37-6	C <sub>8</sub> H <sub>18</sub> N <sub>2</sub> O <sub>6</sub> S <sub>2</sub>	302.37	5KG	VWRB73007-5KG
PIPES Free Acid	227-057-6	5625-37-6	C <sub>8</sub> H <sub>18</sub> N <sub>2</sub> O <sub>6</sub> S <sub>2</sub>	302.37	25KG	VWRB73007-25KG
PIPES Sequisodium Salt	—	100037-69-2	C <sub>16</sub> H <sub>33</sub> N <sub>4</sub> O <sub>12</sub> S <sub>4</sub> •3Na	670.69	1KG	VWRB73257-1KG
PIPES Sequisodium Salt	—	100037-69-2	C <sub>16</sub> H <sub>33</sub> N <sub>4</sub> O <sub>12</sub> S <sub>4</sub> •3Na	670.69	5KG	VWRB73257-5KG
PIPES Sequisodium Salt	—	100037-69-2	C <sub>16</sub> H <sub>33</sub> N <sub>4</sub> O <sub>12</sub> S <sub>4</sub> •3Na	670.69	25KG	VWRB73257-25KG
PIPES Disodium Salt	278-562-3	76836-02-7	C <sub>8</sub> H <sub>16</sub> N <sub>2</sub> O <sub>6</sub> S <sub>2</sub> Na <sub>2</sub>	346.33	1KG	VWRB73305-1KG
PIPES Disodium Salt	278-562-3	76836-02-7	C <sub>8</sub> H <sub>16</sub> N <sub>2</sub> O <sub>6</sub> S <sub>2</sub> Na <sub>2</sub>	346.33	5KG	VWRB73305-5KG
PIPES Disodium Salt	278-562-3	76836-02-7	C <sub>8</sub> H <sub>16</sub> N <sub>2</sub> O <sub>6</sub> S <sub>2</sub> Na <sub>2</sub>	346.33	25KG	VWRB73305-25KG
TRIS Hydrochloride	214-684-5	1185-53-1	C <sub>4</sub> H <sub>11</sub> NO <sub>3</sub> HCl	157.6	1KG	VWRB85827-1KG
TRIS Hydrochloride	214-684-5	1185-53-1	C <sub>4</sub> H <sub>11</sub> NO <sub>3</sub> HCl	157.6	5KG	VWRB85827-5KG
TRIS Hydrochloride	214-684-5	1185-53-1	C <sub>4</sub> H <sub>11</sub> NO <sub>3</sub> HCl	157.6	25KG	VWRB85827-25KG

Visit [vwr.com](http://vwr.com) or contact your Sales Representative for pricing and additional product information.

**NEW**



**VWR**   
BIOPROCESSING



## Don't Take Your Source of Biological Buffers for Granted!

*Carl Schrott, Bioprocessing Technologies Manager, VWR International*

Biological Buffers play a critical role to ensure that the pH of the culture system mimics as best it can that of the natural environment for the cells being studied. Phosphate and bicarbonate buffers have long been used. However, both have limits. Phosphate buffers can form insoluble complexes with essential components in the nutrient media. In addition to their role in buffering the system, bicarbonate/CO<sub>2</sub> is involved in biochemical reactions within the culture environment.

The use of Zwitterionic Organic Buffers (ex. HEPES, PIPES) began in the 1960s<sup>1</sup>. Also known as Goods Buffers<sup>2</sup>, these have proven useful in culture systems and have several favorable characteristics such as:

- pKa values with acceptable pH ranges of 6.0 to 8.0.
- Chemically inert in the presence of inorganic salts thus, nonreactive with other media components.
- They do not absorb wavelengths required to measure purification column performance.
- Improved protein stability.

In the Volume 1 2015 edition of Production Insight, VWR Bioprocessing announced a new offering of Biological Buffers and Amino Acid Derivatives. As a follow-up to this announcement, VWR is providing additional information that will assist you in the selection of biological buffers for your critical application.

- VWR's biological buffers are manufactured in the U.S. at its Sanborn, New York location. Supply chain security and transparency is much improved compared to sources from international-based companies.
- Our biological buffers are synthetically manufactured. So the risk of TSE/BSE contamination associated with raw materials made with animal-derived components has been eliminated.
- VWR's Sanborn manufacturing site is ISO 9001 and ISO 13485 certified. Products are manufactured in a GMP environment and assurance is guaranteed under an audited quality system program.
- VWR's manufactured buffers have been successfully used in preclinical, clinical, and licensed biological applications. Thus, we have a proven track record of providing the

highest quality buffers required for your critical bioprocessing applications.

- VWR manufactures the largest lot sizes of buffers available in the industry. This provides assurance that your supply chain needs are routinely met.

Our biological buffer offering is available ready-to-ship in 1KG, 5KG, and 25KG unit packaging. If you need larger pack sizes (ex. 50KG, 100KG), or you require these buffers in other formats (ex. Liquid), VWR Custom Manufacturing Services can assist in your custom requirements.

#### Footnotes:

1. J. gen Virol. (1968), 2, 309-312
2. Good, Norman E., etal, Biochemistry 5 (2) 467-477



Increase your pharma raw materials know-how.  
EMPROVE® ready-to-use regulatory documentation.



Our EMPROVE® portfolio simplifies your work process by:

- ▶ Saving time and money
- ▶ Creating formulations with full regulatory compliance
- ▶ Speeding up approval preparation for faster time to market



## Macco Organiques Inorganic Salts

Your mineral source for cGMP biopharmaceutical, pharmaceutical, diagnostic, and medical device applications.

High quality products for a wide variety of applications in life sciences. Chemicals are produced in contamination free areas and are packed in cleanrooms to ensure the highest possible level of quality is maintained at all stages. They are certified to ISO, GMP, Halal, and Kosher standards.



Description	Cat. No.	Each
<b>Sample Size Chemicals - 200g (7oz.)</b>		
Ammonium Sulfate	89234-892	52.97
Calcium Carbonate	89234-898	34.01
Calcium Chloride Dihydrate	89234-900	18.96
Magnesium Chloride Hexahydrate	89234-910	18.96
Magnesium Sulphate, Dried	89234-918	20.20
Magnesium Sulphate Heptahydrate	89234-914	15.73
Potassium Chloride	89234-922	19.18
Sodium Acetate Trihydrate	89234-926	20.04
Sodium Carbonate Monohydrate	89234-930	49.59
Sodium Chloride	89234-936	13.81
Sodium Sulphate, Anhydrous	89234-938	26.73
Zinc Sulphate Heptahydrate	89234-944	33.03
Zinc Sulphate Monohydrate	89234-948	47.04

Description	Size, kg (lbs.)	Cat. No.	Each
<b>Production Chemicals*</b>			
Ammonium Sulfate	12 (26.5)	89234-890	346.57
Calcium Chloride Dihydrate	12 (26.5)	89234-902	306.61
Magnesium Chloride Hexahydrate	12 (26.5)	89234-906	306.61
Potassium Chloride	12 (26.5)	89234-920	144.70
Sodium Acetate Trihydrate	12 (26.5)	89234-924	320.07
Sodium Chloride	12 (26.5)	89234-934	239.61
Sodium Sulphate, Anhydrous	12 (26.5)	89234-940	408.51
Zinc Sulphate Monohydrate	12 (26.5)	89234-946	676.41

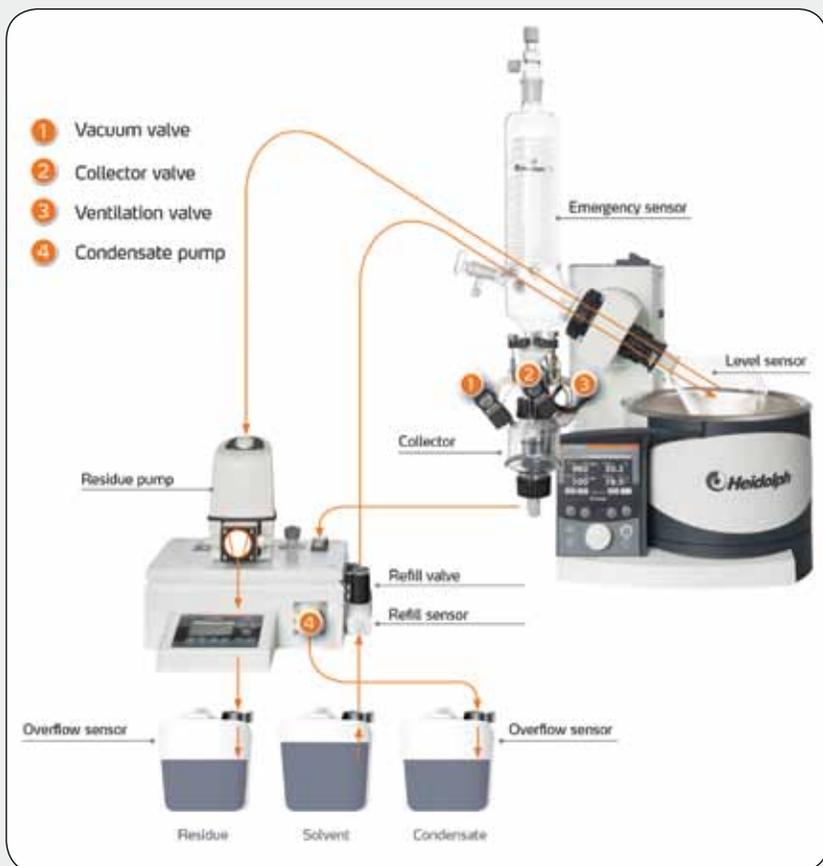
\* Shipped in poly drums

For more information shop [vwr.com](http://vwr.com) or contact your VWR Production Chemical Specialist.



## Neptune Technologies & Bioresources

Improves a Traditional Process with the Heidolph Distimatic



### The Situation

Neptune had seen no problem with their previous method of distilling large batches. They had accepted that you would need to stop the distillation process to empty the receiving flask or refill the evaporating flask with new sample. This required technical time to the users and frequent supervision along with higher risk of users spilling solvents or breaking glassware. All in all, this usual process resulted in a lower amount of potential product processed per day and a more time-consuming procedure for the people using it.

### The Objective

Addition of an automatic distimatic module on a Hei-Vap Industrial evaporator, hoping to improve the productivity and diminish the risks associated with its manipulation.

### Results

1. Increase productivity by reducing the technical time needed to operate the evaporator
2. Reduce supervision required and allowed users to run distillation all day long
3. Safer laboratory environment by diminishing the amount of necessary manipulation of the flasks



“Safer laboratory environment by diminishing the amount of necessary manipulations of the flask”

# VWR's Production Portfolio

Continually expanding to support your Research and Production needs. To learn more, contact us today! [vwr.com](http://vwr.com) | 800.932.5000

## Supplies



## Chemicals



## Apparel



## VWR Specialist Team

We offer FREE consultative services to support your specific requirements

The VWR Specialist Team is regionally located across the U.S. to support our customers nationwide. Each highly trained Specialist has technical and industry experience. Our Specialists stay current on industry trends and codes. Collectively the team has over 75 years of experience, and also has deep product and supplier knowledge to effectively recommend the best solutions to meet your needs. They are available at no charge to consult with you and offer cost and process improvement solutions tailored to your specific requirements.

Contact your local VWR Production Chemical specialist or VWR Controlled Environment specialist for a free consultation today.



## SAME PURE PRODUCT NEW PURE BRAND.

### DELIVERING PURITY THROUGH QUALITY, CONVENIENCE AND PERFORMANCE TO BETTER ENABLE SCIENCE.

Together, VWR and AMRESCO deliver a new life science brand that combines VWR's extensive brand recognition and AMRESCO's purity solutions –

#### **VWR Life Science AMRESCO.**

This new pure brand features biochemicals and kits for research in DNA, RNA, protein, cell culture and histology. Expect superior performance from VWR Life Science AMRESCO's family of products.

- EZ-Vision®
- NEXT GEL®
- RiboZol™
- Rapid Western kits
- Ready PCR Mix
- HistoChoice®
- Antibiotics, reagents, buffers and more

Description	Size	Cat. No.	Each
<b>Water, Sterile</b>			
Low Endotoxin, Tissue Culture Grade	500 mL	VWRL0200-0500	9.95
Low Endotoxin, Tissue Culture Grade	1 L	VWRL0200-1000	17.95
Purified, Molecular Biology Grade	500 mL	VWRL0201-0500	7.95
Purified, Molecular Biology Grade	1 L	VWRL0201-1000	13.95
Nuclease-Free	100 mL	97062-790	19.33
Nuclease-Free	500 mL	97062-794	34.21

The United States is the largest producer of biopharmaceuticals, approaching 60% of the global market

## Changing Landscape of the North American Pharmaceutical Market and How it Impacts Big Pharma's Procurement Strategy and Those who Support It

Jim Luchsinger, Category Manager for Production Chemicals, VWR International, LLC

The North American Pharmaceutical Industry has seen a significant change over the past 10-15 years, such as the continued off-shoring of small molecule active pharmaceutical ingredients (APIs). Over the next several years, it is expected that 80% of APIs will be outsourced, with the majority coming from China and India. At the same time, the United States has become the largest producer of biopharmaceuticals, capturing in excess of 60% of the global market. Not only are the differences between a traditional small molecule API and an API grown in a biopharmaceutical process stark, but the different raw materials and quality procedures required are also very different. With the mix of pharmaceuticals produced in North America changing, the way raw material manufacturers and distributors support this industry must also continue to adapt to meet these new, and often times, very demanding needs.

The table below highlights some of the most obvious differences between a small molecule API and the much more complex large molecule biopharmaceuticals:

Large Molecule Biopharma	Small Molecule
Manufactured from living cells	Manufactured from chemical synthesis
Large/complex molecules (30,000 to 150,000 Daltons)	Small (<1,000 Daltons)
Difficulty to fully characterize final product	Final product characterized with current analytical methods
Relatively young market	Mature market
Fragile	Stable
Parenteral dosage form	Variety of dosage forms

Most notably, traditional small molecule APIs are produced from organic synthesis in highly controlled processes, while biopharmaceuticals are created by engineering a cell to produce a protein, generally grown either in mammalian cell culture or bacterial fermentation (i.e. *e. coli*). In order to grow these cells, a complex combination of high quality materials needs to be sourced and managed. These materials include the cell culture media (which can include an assortment of over 100 inorganic and organic materials manufactured from animal, plant, and other sources), inorganic salts, carbohydrates, amino acids, biological buffers such as TRIS, and a vast array of other materials. These materials are needed in order to feed and stabilize the cells during the upstream manufacturing process and to stabilize the protein during

the downstream purification process. After the protein has reached the desired purity, it needs to be combined with the appropriate excipients and filled aseptically. Compared to the typical small molecule API that has no more than a dozen excipients, the additional complexity of the supply chain for biopharmaceuticals is obvious. Biopharmaceuticals are generally 100 to 200 times larger than a typical API, making them that much more difficult to characterize. Combined with the relatively fragile nature of biopharmaceuticals, this complexity increases the need for strict oversight of the supply chain in order to remove as much variability from the process as possible.

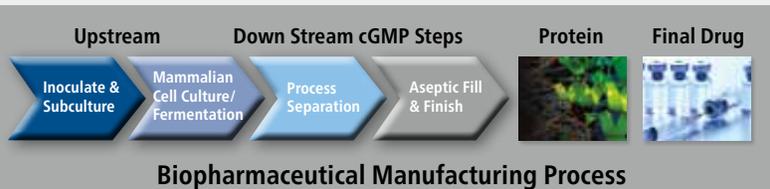
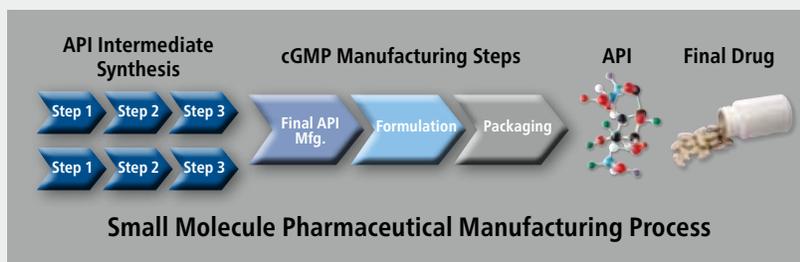
Current trends in the industry compound the challenge further. The growth of biopharmaceuticals is nearly double that of the small molecule market. Recent tragedies involving diethylene-contaminated cough syrups, melamine-contaminated infant formulas, and nearly 100 deaths connected to intentionally adulterated heparin, have led to increased demand for greater transparency and tighter controls over the raw material supply chain.

Greater control and oversight of the supply chain is a noble goal, but there are significant hurdles to overcome before that goal can be met. While major components such as biochromatography resins and filters have

significant transparency back to the manufacturers, many process chemicals and excipients have a much more complicated supply chain.

For many of the materials that are used in significant quantities, no original manufacturer is willing to utilize the appropriate PE bags and pails required by the industry. For other materials with no true vertically integrated cGMP manufacturer in existence, a significant portion of the supply base simply repackages materials purchased from other manufacturers. These repackaged materials may be put into solution, purified, and recrystallized under cGMP standards. In many cases, the result is a high quality product that has been packaged appropriately with the required specifications for the intended use, but this process still greatly complicates the required transparency and increases the possibility of a lapse in the supply chain.

In order to navigate the challenges of this complex supply chain, it is critical to align with providers that actively manage sources of supply. VWR offers solutions that include Change Notice Verification Services, multiple redundant storage locations, and primary and secondary sourcing options. Learn more about how VWR can help mitigate risks in your supply chain by contacting your local VWR Representative.



1. Bioprocessing International 11(3) 2013. Global Evolution of Biomanufacturing.



## RODAC™ SNAP LID Plates

### For Environmental Monitoring Sample Security

The BD RODAC SNAP LID was designed by environmental monitoring professionals to provide additional security during sampling and transport from a controlled environment to the laboratory.

- Ensures the integrity of the sample
- Withstands accidental drop from height of a bench-top workspace
- Prevents unintentional opening of the dish
- Protects media from accidental cross contamination
- 60mm plates



Description	Cat. No.	Price
<b>DE Neutralizing Agar</b>		
Sterile, Triple Wrap, VHP Resistant	71003-758	Pk. 10/ 36.43
Sterile, Double Wrap	71003-778	Pk. 10/ 35.56
Sterile, Double Wrap	71003-776	Cs. 100/ 343.42
<b>SDA w/Lecithin and Polysorbate 80</b>		
Sterile, Triple Wrap, VHP Resistant	71003-756	Pk. 10/ 36.43
Sterile, Double Wrap	71003-782	Pk. 10/ 37.35
Sterile, Double Wrap	71003-780	Cs. 100/ 341.97
<b>SDA w/Lecithin and Polysorbate 80</b>		
Sterile, Triple Wrap, VHP Resistant	71003-784	Pk. 10/ 35.33
Sterile, Triple Wrap, VHP Resistant	71003-786	Cs. 100/ 338.58
Sterile, Double Wrap	71003-766	Pk. 10/ 33.37
Sterile, Double Wrap	71003-768	Cs. 100/ 315.26
Aseptic Fill, Single Wrap	71003-770	Pk. 10/ 55.08
Aseptic Fill, Single Wrap	71003-772	Cs. 100/ 260.12
<b>TSA w/Lecithin, Polysorbate 80, and Penicillinase</b>		
Sterile, Triple Wrap, VHP Resistant	71003-762	Cs. 100/ 397.10
Sterile, Double Wrap	71003-774	Pk. 10/ 36.79
Sterile, Double Wrap	71003-764	Cs. 100/ 364.60

Visit [vwr.com](http://vwr.com) for additional information.



## VWR Technical Product Support

Click-to-Chat Online Support  
available on select products  
Monday through Friday,  
8:00 a.m. - 8:00 p.m. (EST)

With VWR  
Click-to-Chat,  
your answer is  
just a click away!



### NEED HELP?

Click to Chat  
with a Representative.

- Which wiper should I use in my cleanroom?
- Where can I get a Certificate of Analysis?
- Can you provide a data sheet for my lab coat?
- Can I get an MSDS for 190-proof pure ethanol?
- What class Nitrile glove should I order?



## Perfex TruCLEAN® Mopping Systems

TruCLEAN Mopping Systems work to capture and isolate contaminants, ensuring the delivery of unadulterated cleaning and sanitizing agents. TruCLEAN Disinfection systems are designed for fast, easy application of sterilants to floors, walls and ceilings. TruCLEAN components are constructed with high-grade stainless steel, entirely autoclavable, easy to maintain and guaranteed to deliver reliable cleaning results time after time.

- Compatible with gamma, ETO and autoclave sterilization
- Reduce the risk of cross-contamination
- Multiple color combinations available

Color	Cat. No.	Each
<b>TruCLEAN Triple Bucket Mopping System*</b>		
Red	22940-012	1903.75
White	22940-015	1848.21
Blue	22940-014	1903.75
<b>TruCLEAN II</b>		
Red	89095-990	552.23
Blue	89095-992	552.23

\*Also available in green and yellow

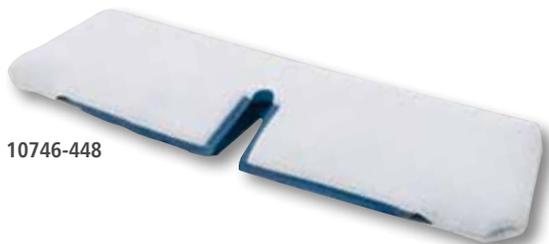
## TruCLEAN® Mops and Accessories

Designed for cleanrooms or sterile environments where contamination control is extremely critical. Low profile, stainless steel mop frame compatible with all TruCLEAN mops. Easily change mop heads with our quick squeeze release and frame-locking mechanism. Choose between our polymer adjustable handle and fixed length stainless steel handle. All TruCLEAN mops can be repeatedly laundered providing exceptional value.

- Excellent chemical and microbial resistance
- Low particle generation, excellent surface coherence
- Ideal for disinfection and sterilization procedures

Description	Cat. No.	Case of
TruCLEAN Clean Room Mop	89096-038	12/ 255.84
TruCLEAN Microfiber Mop	89096-040	12/ 170.28
TruCLEAN Anti-Microbial Mop	89096-036	12/ 201.76
TruCLEAN Sponge Mop	22940-023	25/ 464.82
TruCLEAN Mop Cover	22940-191	25/ 202.43





10746-448



## Vileda Professional-FHP Innovative Clean Room Mopping Systems Now Available in Sterile

- Manufactured, sterilized and stocked in the USA
- Validated to the 10<sup>-6</sup> SAL per ISO 11137
- Individually double bagged with Lot # and Indicator Dot on each package
- Certificate of Sterility available with each shipment

Description	Cat. No.	Case of 12
Sterile 14" Roll-O-Matic® Original Stainless Steel Mop Refill	10746-466	12/ 231.20
Sterile 10" Roll-O-Matic® Universal Stainless Steel Mop Refill	10746-444	12/ 221.87
Sterile 14" Roll-O-Matic® Universal Stainless Steel Mop Refill	10746-468	12/ 235.56
Sterile 14" Roll-O-Matic® CE Stainless Steel Sponge Refill with Polyester	10746-450	12/ 350.93
Sterile 14" Roll-O-Matic® CE Stainless Steel Sponge Refill with Microfiber	10746-442	12/ 397.60
Sterile VWR Collection CE Flat Sponge with Polyester Mop Refill	10208-978	45/ 936.56
Sterile CleanTech Duo Mop Refill	10746-446	45/ 1129.00
Sterile SanTech Duo Mop Refill	10746-448	45/ 1138.00



10746-446



## VWR® Vacuum Ovens

The 12.5L unit features a top-mounted independent evacuation and venting vacuum fittings. The 19.8L and 65.1L units feature a front-mounted three-way valve for evacuation, venting and purging of inert gases (e.g., Nitrogen or Argon) with vacuum fittings on the front of the unit.

- Radiant warm-wall heating system optimizes uniformity and conserves chamber space for drying, curing, vacuum embedding and plating applications
- 7.6cm (3") glass wool insulation prevents heat loss
- Silicone door gasket and positive latch door maintain seal at all vacuum levels
- Polycarbonate safety shield protects door glass
- Built-in over-temperature protection
- Temperature Range: Ambient +10° to 220°C

- Vacuum level is displayed on gauges from 0 to 30in.Hg
- Vacuum and air lines are corrosion-resistant stainless-steel tubing for optimum chamber cleanliness and long-term performance
- With two removable stacking aluminum shelves
- Easy-to-clean Type 304 stainless-steel interior chamber
- Powder-coated heavy-gauge steel exterior for durability
- Two-year warranty with extended warranty packages available



Electrical	Volume, L (cu. ft.)	Ext. Dim., cm (in.)	Int. Dim., cm (in.)	Shipping Weight, kg (lbs.)	Cat. No.	Each
120V, 50/60Hz, 600W, 5A	12.5 (0.44)	41 × 43 × 44 (16 × 17 × 17)	30 × 20 × 20 (12 × 8 × 8)	50 (110)	89508-424	3188.82
120V, 50/60Hz, 600W, 5A	19.8 (0.7)	40 × 50 × 41 (16 × 19.8 × 16.25)	30 × 25 × 25 (12 × 10 × 10)	59 (130)	89508-426	3573.40
120V, 50/60Hz, 1600W, 13.3A	65.1 (2.3)	64 × 64 × 56 (25 × 25 × 22)	51 × 36 × 36 (20 × 14 × 14)	134 (295)	89508-428	6346.28

Visit [vwr.com](http://vwr.com) for additional information.

## Puritan Medical Products Company

You can't do the right job if you don't have the right swab.



Puritan's knitted polyester swabs are non-abrasive and lint-free and can easily stand up to IPA, acetone, and other solvents commonly used in clean rooms and other critical environments. These swabs are non-absorbent, have low particle generation, low NVRs (non-volatile residues), good chemical resistance, and are suitable for cleanrooms. Made and vacuum packed in our Class 1,000 cleanroom, they are ideal for cleaning electronic and communication devices and perfect for instrumentation and medical device manufacturing.

If your application requires an absorbent swab that has low particle generation and low NVRs, yet is soft and non-abrasive, check out our microfiber line. Microfiber swabs offer excellent wipe-dry characteristics and are safe to use on and around static-sensitive components. They're ideal for removing contaminants and excess materials in your critical environment. That's why they're often used with fiber optics component manufacturing.

Foam-over-cotton tipped swabs are lint and residue free and extra absorbent making them good for removing removing epoxy residue from connectors, general cleaning, or when used as a flux remover. Puritan's PurSwab® applicators also have thermal edge seals and thermal bonding to the handle so the sponge-like foam picks-up unwanted particles without releasing any into your critical environment.

Description	Cat. No.	Case of 1000
<b>PurSwab® Knitted Polyester Tipped Swabs (Nonsterile)</b>		
Large paddle, double-ply knitted polyester tip, polypropylene handle	82030-704	1152.64
Large paddle tip, solid polypropylene handle	89133-800	377.23
Flexible thin paddle tip, polypropylene handle	89133-802	321.55
<b>PurSwab® Microfiber Tipped Swabs (Nonsterile)</b>		
Flexible, microfiber tip thermally bonded to polypropylene handle	89133-808	168.13
Soft flexible paddle tip, molded polypropylene handle	89087-856	607.79
<b>PurSwab® Foam-Over-Cotton Tipped Swabs (Nonsterile)</b>		
Foam-over-cotton tip, wood handle	82030-590	346.47
Small foam-over-cotton tip, wood handle (bulk packaging)	82030-594	334.90
Foam-over-cotton tip, polypropylene handle	10806-026	391.79

Visit [vwr.com](http://vwr.com) for additional information and pricing.



# The VWR Collection

The choice that delivers the right products at the right price when you need them



From the lab bench to production, the VWR Collection line provides access to a whole portfolio of products including supplies, chemicals, and apparel. Continually expanding to support your research and production needs.

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VWR Swabs



VWR Tubing



VWR Wipers



VWR Notepads & Pens



VWR Gloves

## VWR Protection Apparel Coveralls



VWR Chairs

# Secure & Protect



## Metro® Security Storage

Protect valuable materials and sensitive items from loss or pilferage.

- Security Units are available in multiple sizes and finishes, in both stationary and mobile options.
- For use any where in your facility where security is needed — Lab, Clean Room, Cooler and Stock Room.
- Heavy-gauge open wire construction keeps contents visible at all times, and facilitates air flow.
- Add optional Intermediate Shelves to base models, allowing flexibility to meet changing needs. Can be positioned in 1" (25mm) increments along the entire height of post.
- Double Doors open 270° and can be secured along the sides of the unit.
- Shipped knocked-down saves freight costs. Easy assembly.



1. Select the Finish. 2. Choose Stationary or Mobile. 3. Add Intermediate Shelves.



DRY ENVIRONMENTS				WET ENVIRONMENTS			
Super Erecta® Chrome Finish	Model No. <b>82023-456</b> <b>82023-472</b> <b>82023-422</b> <b>82023-424</b> <b>82023-426</b>	Super Erecta Metroseal 3™ Finish Corrosion Resistant	Model No. <b>82023-460</b> <b>82023-476</b> <b>82023-428</b> <b>82023-430</b> <b>82023-432</b>	MetroMax Q® Polymer & Epoxy Coated Steel Finish Corrosion Resistant	Model No. <b>22233-690</b> <b>22233-692</b> <b>22233-694</b>	Super Erecta Type 304 Stainless Steel Finish Corrosion Proof	Model No. <b>82023-464</b> <b>82023-480</b> <b>89369-978</b> <b>89369-982</b> <b>89369-988</b>

For more styles and information, please visit [vwr.com](http://vwr.com)





## VWR® Flammable Materials Storage Refrigerators

To facilitate the storage of flammable materials, sources of sparks and ignition – such as lights, thermostats, switches and fans – have been removed from the interior of these units. All units have exterior adjustable mechanical thermostats. The exteriors feature a white baked-on powder coat finish, and single solid doors with keyed locks.

- Exterior adjustable mechanical thermostats
- White baked-on powder coat exterior
- Single solid door, with keyed locks
- Temperature Range: 0 to 10°C (32 to 50°F)
- Units meet NFPA and OSHA guidelines, and are UL and C-UL listed
- **Ordering Information:** Supplied with a two year parts and labor warranty, with an additional three year warranty on compressor parts.

Electrical	Volume, L (cu. ft.)	Ext. Dim., W x D x H, cm (in.)	Door Type	No. of Shelves	Cat. No.	Each
115V, 4A	396 (14)	81 x 81 x 154 (32 x 32 x 60)	Single Solid Door	1 Adjustable, 2 Fixed	97055-740	3704.47
115V, 4A	481 (17)	81 x 81 x 165 (32 x 32 x 65)	Single Solid Door with 5 Bins	1 Adjustable, 2 Fixed	97055-744	3942.39
115V, 4A	566 (20)	81 x 86 x 180 (32 x 34 x 71)	Single Solid Door with 5 Bins	1 Adjustable, 3 Fixed	97055-748	4553.58
115V, 7A	849.5 (30)	89 x 89 x 183 (35 x 35 x 72)	Single Solid Door	5 Adjustable	97055-728	7474.21

Visit [vwr.com](http://vwr.com) for additional styles and options.



## VWR® Contour Deluxe Class 100/ ISO Class 5 Clean Room Chairs

- Black vinyl upholstery
- 58.42cm (23") diameter composite base
- Pneumatic seat-height adjustment
- Backrest tilt
- 47Wx42Dcm with 7.6cm thick (18.5x16.5x3") contoured-foam cushioned seat
- 39.4Wx36.8H cm (15.5x14.5") backrest with kidney support
- Medium bench height and high bench height chairs also have a 50.8cm (20") diameter adjustable-height footring

Description	Seat Height, cm (in.)	Shipping Weight, kg (lbs.)	Cat. No.	Each
Desk Height	43.2–55.9 (17–22)	17.7 kg (39 lbs.)	89413-162	656.00
Medium Bench Height	53.3–71.1 (21–28)	19.5 kg (43 lbs.)	89413-164	760.00
High Bench Height	53.3–78.7 (21–31)	19.5 kg (43 lbs.)	89413-166	770.00



# READYRACK™

A convenient way to bring media into a controlled area while avoiding outside contamination.



Remove ReadyRack from box outside of cleanroom.



Take into cleanroom, then remove plastic bag.



Spray down entire ReadyRack with isopropyl alcohol.



### Tryptic Soy Broth (TSB), USP

16x125mm tube, 10ml fill, 80/pk - 10436-342 - 266.82

### Fluid Thioglycollate Medium (FTM), USP

16x125mm tube, 10ml fill, 80/pk - 10436-340 - 313.92

The ReadyRack comes filled with 80 tubes of media. Other tube formats and fill volumes are available upon request.

## Irradiated Contact Plates

For Cleanroom Quality Assurance

- **Sterile by Irradiation** - Validated for a Sterility Assurance Level (SAL) of 10<sup>-6</sup>.
- **Triple Bagged** - Two nylon inner bags with twist ties. One outer Mylar® bag that is heat sealed.
- **Hydrogen Peroxide Vapor (HPV) Barrier** - Impermeable outer bag for use with HPV systems.
- **Certified to ISO 13485**
- **Long Shelf Life** - 180 day shelf life from the date of manufacture.
- **Room temperature storage**

\*Exception: D/E Neutralizing Agar has a shorter shelf life and is stored in the refrigerator.

Manufactured by  
**HARDY**  
DIAGNOSTICS



\*The petri-dish is tinted red to easily differentiate it from SabDex.



Gently press plate to surface to collect sample.



After sample collection, place lid on plate.



Tap lid into place.



Lid is secure.

### Tryptic Soy Agar (TSA) with Lecithin and Tween®

10/pk - 10142-324 - 55.64

### Tryptic Soy Agar (TSA) with Lecithin and Tween®, Red Tinted Plate\*

10/pk - 10146-962 - 55.64

### Sabdex (Sabouraud Dextrose) Agar with Lecithin and Tween® 80

10/pk - 10142-448 - 55.64

### D/E Neutralizing Agar\*

10/pk - 10142-498 - 66.04

## Micronova® M-Zone™ SnapMop Series

- Designed for controlled environments, pharmaceutical production and hospital pharmacies
- Quality features of covered foam combined with ergonomic design
- Low profile design
- Angled head for easy application of disinfectant or detergent
- Variety of sizes (9", 14", 18")
- Available in polyester, microfiber, MegaTex™ and PolySorb™ materials
- Launderable/autoclavable
- Available irradiated

A flat head mop that fits either a plastic or electropolished stainless steel frame, the M-Zone SnapMop features a swivel joint to allow easy coverage of floors, walls and awkward corners.

The option of using a plastic frame with fiberglass handle offers an economical hardware solution for small labs, startups and support areas and the light weight addresses ergonomic concerns.

The SnapMop covers feature a thin urethane foam interior completely encased in polyester – no exposed foam. This combination translates to less bulk and faster drying.

The original SnapMop is available in 100% Polyester or with the addition of 'cleaning bands'.

- Microfiber for additional cleaning power and increased absorbency.
- MegaTex for cleaning rough/textured surfaces or removing heavy deposits.

PolySorb covers offer the qualities of 100% polyester with additional absorbency through the unique waffle weave pattern of the fabric. PolySorb covers are available with and without foam interiors.

All SnapMops can be laundered, re-used and will hold up to alcohol, strong disinfectants and steam sterilization.



Description	Cat. No.	Case of
Plastic Adapter (14")	89140-694	1/ 70.20
Stainless Adapter (14")	11310-598	1/ 233.75
Stainless Extendible Handle (38-72")	68400-164	1/ 177.18
Polyester SnapMop (14")	89131-858	24/ 379.43
Polyester SnapMop Sterile (14")	89131-864	24/ 511.89
Microfiber SnapMop (14")	89107-748	24/ 402.39
MegaTex SnapMop (14")	89134-778	24/ 365.81
PolySorb SnapMop (14")	89236-640	24/ 396.44
Slim-T™ Double Bucket Cart	68400-670	1/ 998.22
Slim-T™ Wringer	68400-672	1/ 229.70
Plastic Coated Fiberglass Handle With Acme Threaded End (60")	89428-632	1/ 31.77



## Contec® DualClean™ Softwall Strip Cleaner

The Contec DualClean Softwall Strip Cleaner is ideal for cleaning curtain strips and barriers in all environments from clean workspace enclosures to ISO Class 5 isolated cleanroom work cells. This unique system enables one operator to quickly and easily clean both sides of 4" - 12" plastic curtain strips in a single pass. The system consists of a fabric cover that is snugly installed over a stainless steel frame with two curved-surface arms. The curtain strip to be cleaned is positioned between the two arms of the frame, with the arms contacting both sides of the curtain at once. With slight tension maintained on the curtain strip, the DualClean system is moved down the length of the strip, easily and uniformly cleaning both sides of the entire length of the strip.

DualClean Softwall Strip Cleaner is ideal for cleaning softwall curtain strips in modular softwall enclosures and cleanrooms, soft curtain barriers in pharmaceutical and biomedical manufacturing, segregated clean work cells, contamination sensitive laboratory processes, and general production areas where cleanliness is important.



Description	Cat. No.	Price
QuickConnect Handle, 37.5 - 65.5" (95 - 166cm), Fiberglass	10797-034	Ea./ 68.68
Contec DualClean Softwall Strip Cleaner Frame, Stainless Steel	10797-032	Ea./ 303.73
DualClean Cover, Microfiber Terrycloth	10797-038	Cs. of 80/ 555.00
DualClean Cover, Quiltec Knit Polyester	10797-036	Cs. of 80/ 333.00



## Contec® PROSAT® Sterile™ Low Endotoxin Wipes

PROSAT Sterile Low Endotoxin Wipes are made from 100% knitted polyester Polynit Heatseal wipes presaturated with a blend of 70% IPA and Water for Injection (WFI). Each batch of wipes has a guaranteed endotoxin level of less than <math><0.25\text{EU/mL}</math> per device. Suitable for use in aseptic suites. The sealed edge wipe produces a very low level of particles and fibers and is ideal for use near product contact surfaces.

Each pouch contains a small number of wipes eliminating any waste at the end of a session. Triple bagged for easy entry into sterile suites. Validated sterile, these Low Endotoxin wipes are suitable for use in the most critical pharmaceutical cleanrooms.

Description	Cat. No.	Case of 600
PROSAT Sterile Low Endotoxin Wipes 70% Isopropanol / 30% WFI, 12 x 12" (30x30cm)	52428-882	1545.15



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If addressee is no longer with the organization, please deliver to laboratory products buyer. Thank you.



## VWR® Sterile 70% Isopropanol

Filtered to 0.2µ and induction sealed to assure sterility. Each bottle is lot coded and has an expiration date. Excellent for wipedown of isolators, cabinets, laminar flow hoods. Suitable for wipedown of products and equipment for pass through to controlled environments. Can be used on gloved hands in sterile environments.

- Contains 70% USP grade isopropanol and 30% USP grade deionized water
- Double-bagged and gamma-irradiated to a Sterility Assurance Level of 10-6
- Ideal for use with sterile cleanroom wipers
- USP-compliant

Description	Size	Cat. No.	Case of
Bottle	3.8 L (1 gal.)	89108-162	4/ 205.11
Trigger Spray	946 mL (32 oz.)	89499-420	4/ 165.20
Trigger Spray Bottle	473 mL (16 oz.)	89108-160	12/ 152.52

