

Tyvek® Protective Apparel
Recycling Program
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Cell and Gene
Therapy Insight
Pages 12-13, 20-21

A detailed microscopic image showing various biological structures. In the foreground, a large, textured red cell with a complex, fibrous surface is prominent. Surrounding it are numerous smaller, translucent blue cells with smooth or slightly irregular surfaces. The background is a deep blue, creating a sense of depth and focus on the cellular details.

FOCUS: PRODUCTION

VOLUME 1 ISSUE 1

Solutions that enable your process

From breakthrough discovery to agile delivery of advanced products and services around the globe, Avantor® helps biopharmaceutical companies overcome regulatory challenges, boost process performance, and improve time-to-market for new treatments that benefit the world.

Whether you are producing vaccines, monoclonal antibodies, recombinant proteins, or cell and gene therapies, count on Avantor's proven industry expertise and the logistics strength of our channel brand, VWR, part of Avantor, to enable your success.

Visit [vwr.com/bioprocessing](https://www.vwr.com/bioprocessing) for product details and purchasing information.



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solutions for protection

VWR® PROTECTIVE EYEWEAR WITH WRAPAROUND LENS

Eyewear offers stylish and secure personal protection, with an array of comfort features to assist the wearer throughout extended use.

- Lightweight design combines sleek appearance with rugged durability
- Rubberized temple tips and integrated nosepiece for extra comfort
- Fits comfortably with half-mask respirators
- Impact-resistant, scratch-resistant polycarbonate lenses
- Provides 99.9% UV protection



Frame Color	Lens Tint	Unit	Cat. No.
Clear	Clear	Pack of 12 / Case of 144	89187-986



Are you Dressed For Success™?

KIMBERLY-CLARK PROFESSIONAL PURPLE NITRILE™ EXAM GLOVES

Your gloves should protect your work from contamination and not put your results – or your scientists – at risk. Make sure you're dressed to deliver world-class research with Purple Nitrile™ Gloves from Kimberly-Clark Professional.

The #1-selling nitrile exam glove in the U.S., Purple Nitrile™ Gloves are guaranteed to withstand the daily hazards of your research lab. They're tested against the highest safety and quality standards in the research industry. Plus, they're up to 50% stronger than typical exam gloves, with textured fingertips and a beaded cuff for easy donning.

- 6.0mil thickness
- Ambidextrous
- Powder-free
- FDA cleared for use with chemotherapy drugs
- Tested for use with 29 chemotherapy drugs and 4 hormones, per ASTM D6978-05
- Meets USP <800> guidelines
- Not made with natural rubber latex
- Static dissipative in use
- Available in 9.5" and 12" lengths



Keep your science safe from contamination with Kimberly-Clark Professional Purple Nitrile™ Gloves.

Description	Cat. No.
Purple Nitrile™ Exam Gloves	
X-Small	32934-076
Small	32934-078
Medium	32934-080
Large	32934-082
X-Large	32934-084
Purple Nitrile-Xtra™ Exam Gloves	
X-Small	32933-968
Small	32933-970
Medium	32933-972
Large	32933-974
X-Large	32933-976



WELLS LAMONT
Industrial



solutions for protection

VWR® STERILIZED SOFTSIDE SAFETY GOGGLES

Goggles feature a green tint frame with an indirect cap-vented frame for exceptional eye protection, splash resistance, and a fog-free lens. These economically priced safety goggles feature a soft construction that delivers a comfortable fit and allows for good peripheral vision.

- Green tinted frame with fog-free lens
- Indirect cap-vented frame provides splash resistance
- Soft, clear plastic construction for a comfortable fit and good peripheral vision

Description	Unit	Cat. No.
Indirect Venting Goggle	Case of 50	69100-210

VWR® is your total solution provider for controlled environments

Working in controlled environments requires the highest degree of expertise, experience, and diligence in order to ensure efficient and safe contamination control of both products and personnel. Our broad production supply line has everything from wipers to paper to disinfectants, ensuring you have everything you need to operate efficiently in your controlled environment.

Visit vwr.com for more information

Protect your hands with gloves from Wells Lamont Industrial

REUSABLE NYLON GLOVE LINERS

- Made of 100% continuous nylon filament
- Low lint product
- Fully launderable up to 30 times
- Full finger
- Ambidextrous
- Made in the USA



Size	Cat. No.
Small	32935-559
Medium	32935-561
Large	32935-563
X-Large	32935-565

POLYESTER/WIRE CUT-RESISTANT GLOVE LINERS

- Can be worn as a liner or stand alone glove
- Low lint product
- ANSI Level 4 cut resistant
- Highly launderable
- Ambidextrous
- Made in the USA



Size	Cat. No.
Small	32935-392
Medium	32935-394
Large	32935-396
X-Large	32935-398

REUSABLE NYLON GLOVE LINERS

- Made of 100% continuous nylon filament
- Low lint product
- Fully launderable up to 30 times
- Half finger
- Ambidextrous
- Made in the USA



Style	Cat. No.
Mens	32935-569
Womens	32935-567



solutions for protection

VWR® BASIC PROTECTION SPP BOUFFANT CAPS

Caps are manufactured from a spunbonded polypropylene (SPP) fabric that is strong, lightweight, and breathable. They protect against dirt, grime, and certain dry particulates in nonhazardous environments. These general-purpose garments are ideal for less critical areas or pre-gowning entry rooms.

- Economical first-line barrier
- Non-linting
- Latex-free

Size, in.	Color	Cat. No.
Pleated, Latex-Free		
21	White	89522-670
24	White	89522-672
Latex-Free		
21	Blue	89131-620
21	White	89107-768
24	Blue	89131-622
24	White	89107-770
28	White	89186-064
28	Blue	76003-494

solutions for protection

VWR® ADVANCED PROTECTION HOOD

Manufactured from a specially formulated, breathable microporous fabric, the hood is exceptionally clean and durable. Garment allows full range of motion and vision, and exhibits excellent water vapor transmission to optimize breathability and user comfort. Appropriate for industrial, pharmaceutical, food processing, and certain environmental cleanup applications.

- Significant fluid and particulate barrier
- Durable, lightweight, soft cloth-like fabric
- Excellent breathability and water vapor transmission rate
- Provides resistance to common laboratory chemicals
- Features ties to ensure a secure and comfortable fit
- Color: White

Size	Unit	Cat. No.
Universal	Case of 125/Pallet of 3250	414004-503



solutions for protection

VWR® BASIC PROTECTION SMS COVERALLS

Manufactured from a unique multilayered spunbonded-meltblown-spunbonded (SMS) fabric that offers high tensile strength while remaining soft, comfortable, and breathable. These static-dissipative garments act as a fluid and particulate barrier without sacrificing comfort or restricting movement. Feature inset sleeves, front zipper, tapered collar, and elastic cuffs, ankles, and back. Provide light chemical splash resistance. The material is low-linting and resistant to tears and punctures. Ideally suited for use in high-class protection areas of medical, industrial, laboratory, electronic, and pharmaceutical environments.

- Multilayer SMS material protection
- Light fluid and particulate barrier
- Excellent breathability
- No pockets
- Serged seams

Size	Cat. No.
Blue	
Small	414004-328
Medium	414004-327
Large	414004-325
X-Large	414004-324
XX-Large	414004-322
White	
Medium	414004-333
Large	414004-331
X-Large	414004-330

Visit vwr.com for a full listing of sizes and styles.

solutions for protection

VWR® CERTICLEAN® CLASS 100 NITRILE GLOVES

- Ambidextrous
- Powder-free
- Feature a beaded cuff for strength and reduction of cuff roll down
- Low particle count
- Strong, puncture-resistant construction
- Textured fingertips for a reliable grip
- Color: White

Size	Cat. No.
X-Small	40101-220
Small	40101-222
Medium	40101-224
Large	40101-226
Large +	40101-227
X-Large	40101-228



Tyvek® Protective Apparel Recycling Program

For greater good™



Help the environment



Conserve materials and energy



Increase eligibility for grants and incentives



Lower waste-related costs



Meet your ISO 14001 goals



Boost employee morale

DuPont™ Tyvek® is proud to offer a garment recycling program that helps our customers within the continental United States manage used Tyvek® and IsoClean® protective apparel and reduce waste. The program includes setup, collection, transportation, storage and recycling of garments.

WHY RECYCLE?

The DuPont™ Tyvek® protective apparel recycling program offers the chance to divert garments away from landfills and give them a second life in products like containers, lumber pallets, and park benches.

PREDICTED SAVINGS

For every case of 25 Tyvek® coveralls that is recycled, 7.5 lbs. of Tyvek® are diverted from the waste stream and given a second life in products like pallets and park benches. DuPont™ offers this service for free to qualifying customers. On an annualized usage basis, the savings really add up.

RECYCLING PROCESS



DUPONT SUSTAINABILITY

Sustainability is at the core of what we do—from reducing our operational footprint and creating market-facing sustainable solutions to addressing the global challenges of the future. This program is yet another example of the DuPont commitment to sustainability. The DuPont™ Tyvek® protective apparel recycling program is easy to participate in and is a cost-effective and responsible choice.



Consistent cleanroom performance meets sustainability



TYVEK® ISOCLEAN® APPAREL

- Tyvek® Recycling Program can accept coveralls, sleeves, frocks, and many more styles
- Available in bulk, clean-processed, sterile, and clean & sterile options
- Relevant industries include pharmaceuticals, biotechnology, food processing, electronics, semiconductors, and medical device manufacturing

Size	Cat. No.	Case of
Coveralls with Dolman Sleeves		
Small	89129-656	25
Medium	89129-654	25
Large	89129-652	25
X-Large	89129-660	25
2X-Large	89129-640	25
3X-Large	89129-642	25
4X-Large	89129-644	25
5X-Large	89129-646	25
Sleeves		
Universal	89127-350	100
Universal	89127-352	100
Universal	89127-354	100
Universal	89125-646	100
Frocks with Raglan Sleeves		
Small	89127-314	30
Medium	89125-624	30
Large	89127-310	30
X-Large	89125-626	30
2X-Large	89127-306	30
3X-Large	10016-074	30
4X-Large	10016-078	30

Additional options available. Visit vwr.com for a full product listing.



solutions for protection

VWR® SIGNATURE™ COVERALLS MADE WITH DUPONT™ TYVEK® ISOCLEAN® MATERIAL

- Protective, durable, and comfortable
- Excellent barrier against dry particulates, nonhazardous liquids, and microorganisms
- Chemically and biologically inert, low linting, and static free until laundered
- Serged seams, laydown collar, front zipper closure, and elastic wrists
- Available with elastic ankles, with attached Gripper™ boots, or with attached boots and hood
- Boot attachments combine embossed PVC exterior sole with textured interior to ensure secure, nonslip fit and feel
- Color: White

Size	Cat. No.
Coveralls with Elastic Ankles	
Small	89012-822
Medium	89012-824
Large	89012-826
X-Large	89012-828
XX-Large	89012-830
3X-Large	89012-832
4X-Large	89012-834
Coveralls with Attached Boots	
Medium	80200-620
Large	80200-622
X-Large	80200-624
XX-Large	80200-626
3X-Large	80200-628
Coveralls with Attached Boots and Hood	
Medium	89127-188
Large	89128-782
X-Large	89128-784
XX-Large	89128-778
3X-Large	89128-780



solutions for protection

VWR® ADVANCED PROTECTION SLEEVES

VWR® Advanced Protection Sleeves are manufactured from a specially formulated breathable microporous fabric that is exceptionally clean and durable. These protective garments provide a fluid barrier and dry-particulate protection, as well as resistance to common laboratory chemicals. Appropriate for industrial, pharmaceutical, food processing, construction, and certain environmental cleanup applications.

- Significant fluid and particulate barrier
- Durable, lightweight fabric
- Excellent breathability and water vapor transmission rate
- Soft tactile feel
- Thumb loop versions also available

Size	Length, cm (in.)	Cat. No.
Sleeves without Thumb Loop		
Universal	49.5 (19½)	414004-421
X-Large	54.6 (21½)	414004-420
Sleeves with Thumb Loop		
Universal	49.5 (19½)	76169-442
X-Large	54.6 (21½)	76169-444

solutions for protection

VWR® ADVANCED PROTECTION LAB COATS

Lab coats are manufactured from a specially formulated breathable microporous fabric that is exceptionally clean and durable. These low-linting garments provide a fluid barrier and dry-particulate protection, as well as resistance to common laboratory chemicals. Appropriate for industrial, pharmaceutical, food processing, construction, and certain environmental cleanup applications. Garments feature tapered collar, snap front, inset sleeves, elastic cuffs, and three pockets.

- Significant fluid and particulate barrier
- Durable lightweight fabric
- Excellent breathability and water vapor transmission rate
- Soft tactile feel
- Color: White

Size	Cat. No.
Small	414004-380
Medium	414004-378
Large	414004-376
X-Large	414004-375
XX-Large	414004-379
3X-Large	414004-377

Shop vwr.com for additional sizes.



solutions for protection

VWR® CLEANROOM CLOGS

Cleanroom clogs provide comfort and durability for use in cleanroom environments. Smooth surface and aeration holes on both sides provide day long comfort.

- Antistatic
- Autoclavable
- Smooth surface for day-long comfort
- Special conical design prevents spilled liquids from entering clog
- Heel strap
- Non-slip sole
- Anatomic heel basin
- Color: White

Size	Cat. No.
X-Small	76077-098
Small	76076-792
Medium	76076-794
Large	76076-796
X-Large	76076-798
XX-Large	76076-866

solutions for protection

VWR® MAXIMUM PROTECTION FLUID-IMPERVIOUS ANKLE-HIGH BOOT COVERS

These boot covers are the cleanest and most durable within the entire VWR® Protection line of apparel. Appropriate for industrial, pharmaceutical, food processing, and certain environmental cleanup applications.

- Fluid-impervious material with seamless bottom to repel water
- Skid resistance on wet and smooth surfaces
- Excellent particulate barrier
- Low linting
- Engineered to optimize barrier protection, cleanliness, and comfort

Size	Color	Cat. No.
Universal	White	414004-640
X-Large	Blue	414004-638
XX-Large	Black	414004-639

Opportunities and challenges in cell and gene therapy development: an interview with Dr. Ger Brophy, Avantor's Executive Vice President for Biopharma Production



One of the most revolutionary trends driving the biopharmaceutical sector is cell and gene therapy. At its most basic definition, gene therapy (also called human gene transfer) is the therapeutic delivery of nucleic acid into a patient's cells as a drug to treat disease.

According to documentation published in The Journal of Gene Medicine, as of November 2017 nearly 2,600 gene therapy clinical trials have been undertaken in 38 countries around the world.

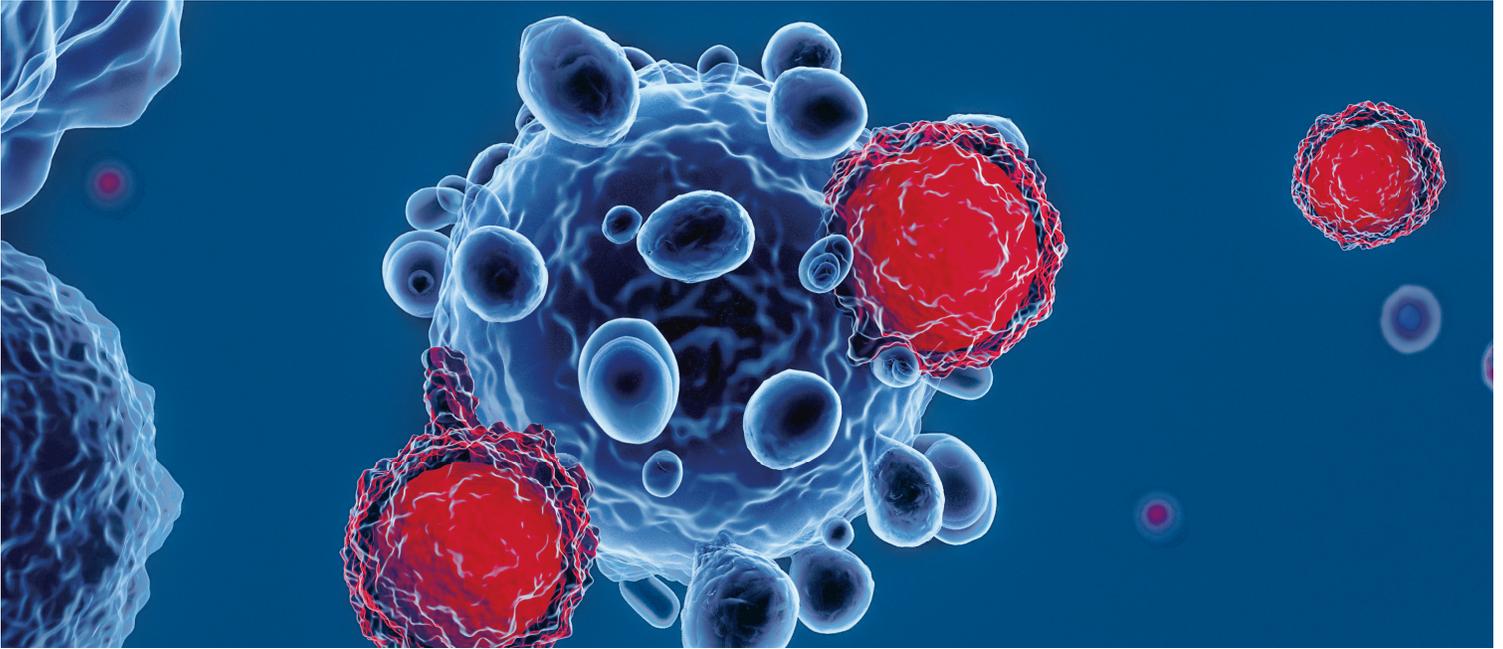
We interviewed Dr. Ger Brophy, Executive Vice President, Biopharma Production at Avantor, to get his perspective on this exciting segment of the bioprocessing industry. He is especially eager to work with innovative leaders, scientists and researchers in the industry who are seeking to explore and expand the potential for gene therapy.



There is a great deal of attention around a select number of approved cell and gene therapies for relatively small patient groups. Can you describe the most exciting benefits arising from these therapies?

I think it is a very exciting space, and we're seeing the number of trials grow. But it's probably most exciting because of the technology's ability to impact patients' lives.

Yes, the numbers of patients are relatively small at this point in



time. But that's predictable. Many of the biopharma researchers and manufacturers started with smaller defined patient populations, and in particular those with pediatric relapse refractory acute lymphoblastic leukemia. That's partly because they wanted to deal with small populations that they understood well and, in many cases, that didn't really have many other options for treatments.

We're seeing these companies moving on now to larger populations — starting with leukemia, now lymphomas. From our perspective, the key is multiple myeloma. If those patients begin to see benefits from cell and gene therapies, I think the excitement will feel justified.

? What are the real game changers driving the progress with cell and gene therapy?

For the first time, people are talking about curing these dreadful diseases. We're seeing the patient's own immune system used to fight these cancers. Among the first patients treated for acute lymphoblastic leukemia, several are alive and thriving — four, five, six years later.

The game changer here is that you are using the body's own systems, either from a cellular immune system or from the ability

to repair and replace defective or missing genes. CAR-T cell therapy is arguably among the most personalized medicine one can consider. The patient's own T cells are extracted, modified, activated, expanded, purified, and returned to that patient.

We're actually beginning to see real, tangible effects from the molecular knowledge, now that we have an understanding of how the disease develops and how the patient responds.

? Tell us about the industry — what kind of companies are working today in cell and gene therapy, and do you think this will change?

Many of the early movers in cell and gene therapy were small biotech startups. In some cases, these treatments were supported by major hospital centers. Increasingly, we've all seen a greater interest by the major biopharma industry. Novartis was probably the biggest; it started the earliest, and was successful in getting approval for Kymriah. But in the last year, we've seen Kite being acquired by Gilead, Juno being acquired by Celgene, and other companies in China driving major strategic partnerships with major biopharma companies.

Continued on page 20



Water for a wide range of applications



USP QUALITY WATER

Rocky Mountain Biologicals manufactures and distributes high purity water meeting or exceeding USP, EP, and ASTM requirements for a wide range of scientific research and biomanufacturing applications.

- Water for Injection Quality, USP/EP
- USP Water for Irrigation
- USP Purified Water

Description	Size, L	Cat. No.
Water for Injection, USP	1 x 6	10837-190
Water for Injection, USP	200	10837-194
Water for Irrigation, Sterile	1 x 6	10837-196
Water for Irrigation, Sterile	200	10837-200
Purified Water, Sterile	1 x 6	10837-202
Purified Water, Sterile	200	10837-206
Purified Water, Nonsterile	20	10837-210
Purified Water, Nonsterile	200	10837-212

This is a representative sample of the products available from RMBIO. Contact your VWR Sales Representative for a complete size and price list of RMBIO high purity water, saline, salt solutions, and buffers.



Trust your ingredients

SPECTRUM IS FOCUSED ON QUALITY... SO YOU CAN FOCUS ON DISCOVERY



LARGEST SELECTION OF USP/NF CHEMICALS IN THE INDUSTRY

Size	Packaging	Cat. No.
Dehydrated Alcohol, 200 Proof, Undenatured, USP		
4 L	Amber Glass	89085-244
200 L	Drum	89085-248
Trolamine, NF		
4 L	Amber Glass	95036-486
200 L	Drum	700006-960
Dimethyl Sulfoxide, USP		
500 mL	Amber Glass	95032-948
Alcohol, 190 Proof, USP		
20 L	Poly Drum	75811-090
4 x 4 L	Amber Glass	75811-092
Isopropyl Myristate, NF		
4 L	Amber Glass	95033-736
200 L	Drum	89078-812
Polysorbate 20, NF		
4 L	Amber Glass	95035-038
200 L	Drum	700011-048
Castor Oil, USP		
4 L	Amber Glass	95032-462
200 L	Drum	700000-138
Glycerin, Synthetic, USP, EP, BP, JP		
4 L	Amber Glass	95033-430
200 L	Drum	89050-420
Potassium Acetate, Crystalline Powder, USP		
125 g	Poly Bottle	95035-068
Strong Ammonia Solution, NF		
4 L	Poly-Coated Glass	95031-434
200 L	Drum	89079-040
Calcium Chloride, Dihydrate, USP, EP, BP, JP		
500 g	Poly Bottle	95032-248
50 kg	Fiber Drum	89050-408
Methylene Chloride, NF		
4 L	Amber Glass	95031-334
200 L	Drum	89078-892
Isopropyl Alcohol, USP, EP, BP, JP		
4 L	Amber Glass	700002-616
20 L	Steel Pail	700002-614

This is just a small sample of our vast product offering. Multiple sizes and packaging options available. To see our full line of products, visit vwr.com and enter 'Spectrum Chemicals' in the search bar. These products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.



solutions for production

VWR LIFE SCIENCE SERADIGM

VWR Life Science Seradigm is a fully-integrated supplier of animal sera, providing the cell culture community with access to the most reliable supply of high performance, exceptional quality Fetal Bovine Serum (FBS) and FBS alternatives, including:

Ultimate Grade FBS, Premium Grade FBS, Ultra Low IgG FBS, Iron Supplemented Bovine Calf Serum, and FB Essence, a cost-effective FBS alternative

Learn more today at vwr.com/seradigm



Description	Volume	Origin	Endotoxin	Hemoglobin	Cat. No.
VWR Life Science Seradigm Fetal Bovine Serum (FBS)					
Fetal Bovine Serum, Ultimate Grade	500 mL	U.S.A.	<10 EU/mL	<25 mg/dL	97068-101
Fetal Bovine Serum, Ultimate Grade, Heat Inactivated	500 mL	U.S.A.	<10 EU/mL	<25 mg/dL	97068-107
Fetal Bovine Serum, Premium Grade	500 mL	U.S.A.	<20 EU/mL	<25 mg/dL	97068-085
Fetal Bovine Serum, Premium Grade, Heat Inactivated	500 mL	U.S.A.	<20 EU/mL	<25 mg/dL	97068-091
Fetal Bovine Serum, Ultra Low IgG	500 mL	U.S.A.	≤20 EU/mL	≤25 mg/dL	10018-826
Fetal Bovine Serum, Ultra Low IgG, Heat Inactivated	500 mL	U.S.A.	≤20 EU/mL	≤25 mg/dL	10018-830
VWR Life Science Seradigm Bovine Calf Serum, Iron Supplemented					
Bovine Calf Serum, Iron Supplemented	500 mL	U.S.A.	<20 EU/mL	<30 mg/dL	10158-358
Bovine Calf Serum, Iron Supplemented	1 L	U.S.A.	<20 EU/mL	<30 mg/dL	10153-134
Bovine Calf Serum, Iron Supplemented, Gamma Irradiated min 25 kGy	1 L	U.S.A.	<20 EU/mL	<30 mg/dL	10153-136
VWR Life Science Seradigm FB Essence					
FB Essence, FBS Alternative	500 mL	U.S.A.	<20 EU/mL	<25 mg/dL	10803-034
FB Essence, FBS Alternative, Heat Inactivated	500 mL	U.S.A.	<20 EU/mL	<25 mg/dL	10799-390

Not all water is created equal



AQUAPUR PURIFIED WATER

WATER, WATER EVERYWHERE...BUT DOES IT REALLY MEET USP SPEC?

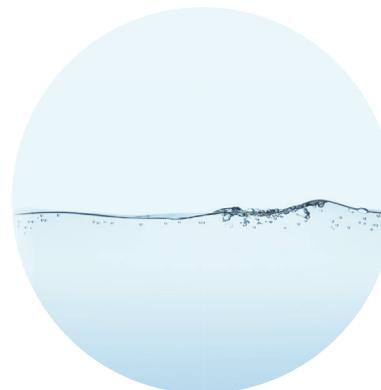
Not all water is created equal! It's easy to make water that meets USP spec today... but, what about after it sits on a shelf for 2 weeks, 2 months or 12 months? Our testing of major brands of packaged purified water show a high amount of microbial growth which can affect TOC and other parameters. Decon's proprietary manufacturing process ensures that our AquaPur Purified Water meets spec when you use it.

Purified Water

- Meets USP/EP Specs
- Made in FDA-registered / cGMP facility
- Validated system incorporating deionization, UV, and ultrafiltration
- Maintains microbial spec through expiration date

Sterile Purified Water

- Meets USP Specs
- Double bagged, gamma irradiated
- Meets USP WFI spec for sterility and endotoxin
- For applications in lab or production environments that require sterile purified water
- Lot Specific Document detailing testing shipped with each case



Description	Size, L (gal.)	Cat. No.
AquaPur Purified Water	3.8 (1)	71003-548
AquaPur Purified Water	20 (5)	71003-550
AquaPur Purified Water	210 (55)	71003-552
AquaPur ST Sterile Purified Water	3.8 (1)	71003-690

Bioprocessing chemicals. More product solutions.

solutions for production

VWR BIOPROCESSING CHEMICALS AND EXCIPIENTS

Avantor manufactures cGMP biological buffers, chemicals, and biochemicals that are suitable for bioprocessing and excipient use. Available in convenient standard pack sizes as well as custom packaging, VWR Bioprocessing Chemicals and Excipients are backed by our analytical laboratory and regulatory support, and change management processes.

Additionally, our diverse sourcing capabilities, dedicated manufacturing and service teams, and audit support of raw material manufacturers help to provide our customers with the resources they need and a transparent, robust supply chain to help meet the needs of highly regulated markets.

Other features:

- BSE-/TSE-free
- Custom testing available on select products
- Three-lot sample availability

NEWLY
EXPANDED
LINE



Description	CAS No.	Molecular Weight	Grade	Available Sizes	Cat. No.
Amino Acid Derivatives					
Asparagine, Anhydrous	70-47-3	132.12	Bioreagent	100g, 1kg, 5kg, 25kg	VWRB15005
L-Cystine Dihydrochloride	30925-07-6	313.23	Bioreagent	100g, 1kg, 5kg, 25kg	VWRB21502
Hypoxanthine Disodium Salt	102-32-9	180.11	Bioreagent	100g, 1kg, 5kg, 25kg	VWRB31608
Hypoxanthine Sodium Salt	45738-97-4	158.11	Bioreagent	100g, 1kg, 5kg, 25kg	VWRB31752
L-Lysine Anhydrous	56-87-1	146.19	Bioreagent	100g, 1kg, 5kg, 25kg	VWRB42307
L-Tyrosine Disodium, Dihydrate	122666-87-9	261.19	Bioreagent	1kg, 5kg, 25kg	VWRB87058
Biological Buffers					
HEPES Free Acid	7365-45-9	238.3	Bioreagent	1kg, 5kg, 25kg	VWRB30487
HEPES Sodium Salt	75277-39-3	260.3	Bioreagent	1kg, 5kg, 25kg	VWRB30567
PIPES Free Acid	5625-37-6	302.37	Bioreagent	1kg, 5kg, 25kg	VWRB73007
PIPES Disodium Salt	76836-02-7	346.33	Bioreagent	1kg, 5kg, 25kg	VWRB73305
PIPES Sequisodium Salt	100037-69-2	670.69	Bioreagent	1kg, 5kg, 25kg	VWRB73257
TRIS Hydrochloride	1185-53-1	157.6	Bioreagent	1kg, 5kg, 25kg	VWRB85827
Tromethamine (TRIS)	77-86-1	121.14	USP, EP, BP, JPC, Endotoxin Tested	500g, 2.5kg, 12kg, 50kg	VWRB497
Carbohydrates					
Dextrose, Anhydrous	50-99-7	180.16	USP, EP, BP, JP, Endotoxin Tested	1kg, 2.5kg, 12kg, 100lb, 200lb	VWRB876
Chaotic Agents					
Urea	57-13-6	60.06	USP, EP, BP, JP, Endotoxin Tested	500g*, 12kg, 50kg	VWRB568
Inorganic Salts					
Ammonium Sulfate	7783-20-2	132.14	ACS, NF, Endotoxin Tested	500g, 2.5kg, 12kg, 100kg	VWRB191
Calcium Chloride, Dihydrate	10035-04-8	147.02	USP, EP, BP, JP, Endotoxin Tested	1kg, 12kg	VWRB556
Potassium Phosphate Monobasic, Anhydrous	7778-77-0	136.09	NF, EP, BP, Endotoxin Tested	1kg, 12kg	VWRB0781
Sodium Chloride	7647-14-5	58.44	USP, EP, BP, JP, Endotoxin Tested	1kg, 2.5kg, 12kg, 50kg, 350lb	VWRB241
Sodium Phosphate Dibasic, Anhydrous	7558-79-4	141.96	USP, EP, Endotoxin Tested	1kg, 12kg	VWRB0404
Sodium Phosphate Dibasic, Heptahydrate	7782-85-6	268.07	ACS, USP, Endotoxin Tested	1kg, 12kg	VWRB0348
Sodium Phosphate Monobasic, Monohydrate	10049-21-5	137.99	ACS, USP, BP, Endotoxin Tested	1kg, 12kg	VWRB0823
Sodium Sulfate, Anhydrous	7757-82-6	142.04	USP, EP, Endotoxin Tested	500g, 2.5kg, 12kg, 100kg	VWRB836

*This specific product is not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region. For complete listing, go to vwr.com/bioprocesschemicals

The Avantor[®] portfolio of chemicals: delivering results from beaker to bulk

Application	J.T.Baker [®]	Macron Fine Chemicals [™]	VWR Chemicals BDH [®]	VWR Bioprocess Chemicals	VWR Collection Chemicals
					
Analytical - Chromatography	X	X	X		X
Analytical - Spectroscopy	X	X	X		
Analytical - Electrochemistry	X	X	X		X
Clinical - Histology/Hematology	X	X	X		X
Biopharma - Small Molecule R&D	X	X	X	X	
Biopharma - Large Molecule R&D	X	X	X	X	
Biopharma - Upstream Manufacturing	X	X		X	X
Biopharma - Downstream/Fill & Finish	X	X		X	X
Biopharma - Quality Control	X		X		
Environmental - Field Testing	X		X		
Environmental - Lab Testing	X	X	X		X
Microelectronics	X				

Avantor J.T.Baker® brand: Trusted for the world's most demanding applications for over a century



The Avantor J.T.Baker® brand has stood for excellence along every step of our customers' processes—from the laboratory to full-scale production—for over a century. Choose from a range of high-purity acids, solvents, and chromatography products that provide the quality you want for the results you need.



J.T.BAKER® HIGH-PURITY ACIDS

Offered in four distinct levels of purity from general use to trace-metal analysis

Description	Size	Packaging	Cat. No.
Acetic Acid, Glacial, BAKER ANALYZED® A.C.S. Reagent, (Aldehyde Free)	4 L	Poly Bottle	JT9508-6
Hydrochloric Acid, ULTREX® II Ultrapure Reagent	500 mL	Fluoropolymer Bottle	JT6900-5
Hydrochloric Acid, 36.5-38.0%, BAKER INSTRA-ANALYZED® Reagent	2.5 L	Clear PVC Coated Glass Bottle	JT9530-33
Hydrofluoric Acid, 48.0-51.0%, BAKER ANALYZED® A.C.S. Reagent	4 L	Poly Bottle, Bagged	JT9560-6
Nitric Acid, 69.0-70.0%, BAKER INSTRA-ANALYZED® Reagent	2.5 L	Clear PVC Coated Glass Bottle	JT9598-5
Nitric Acid, ULTREX® II Ultrapure Reagent	500 mL	Fluoropolymer Bottle	JT6901-5
Phosphoric Acid, BAKER ANALYZED® A.C.S. Reagent	2.5 L	Clear Glass Bottle	JT0260-5
Perchloric Acid, 70%, BAKER INSTRA-ANALYZED® Plus, for Trace Metal Analysis	500 mL	HDPE Bottle	JT9359-1
Sulfuric Acid, BAKER ANALYZED® A.C.S. Reagent	2.5 L	Clear PVC Coated Glass Bottle	JT9681-33
Sulfuric Acid, BAKER INSTRA-ANALYZED® Reagent, Low Selenium, for Trace Metal Analysis	2.5 L	Clear PVC Coated Glass Bottle	JT9673-33

J.T.BAKER® LC/MS SOLVENTS

High purity to provide the performance needed with minimal risk of contaminants

Description	Size	Packaging	Cat. No.
Acetonitrile, BAKER ANALYZED® LC/MS	4 L	Narrow Mouth Amber Glass Bottle	JT9829-3
Acetonitrile, BAKER ANALYZED® ULTRA LC/MS	1 L	Narrow Mouth Flint Bottle	JT9853-2
Methanol, BAKER ANALYZED® LC/MS	4 L	Narrow Mouth Amber Glass Bottle	JT9830-3
Methanol, BAKER ANALYZED® ULTRA LC/MS	1 L	Narrow Mouth Flint Bottle	JT9863-2
Water, BAKER ANALYZED® LC/MS	4 L	Narrow Mouth Amber Glass Bottle	JT9831-3
Water, BAKER ANALYZED® ULTRA LC/MS	1 L	Narrow Mouth Flint Bottle	JT9823-2
Acetonitrile-0.1% Trifluoroacetic Acid LC/MS	4 L	Narrow Mouth Amber Glass Bottle	JT9835-3
Water-0.1% Trifluoroacetic Acid, LC/MS	4 L	Narrow Mouth Amber Glass Bottle	JT9836-3
Acetonitrile-0.1% Formic Acid LC/MS	4 L	Narrow Mouth Amber Glass Bottle	JT9832-3
Water-0.1% Formic Acid LC/MS	4 L	Narrow Mouth Amber Glass Bottle	JT9834-3

J.T.BAKER® CHROMATOGRAPHY PRODUCTS

High-performance solid phase extraction columns, media, and other equipment

Description	Cat. No.
BAKERBOND® Wide-Pore WP Octyl (C8) Column, Analytical	JT7105-1
BAKERBOND® Narrow-Pore Prep Packings	JT7025-1
Baker-flex® Precoated Flexible TLC Sheets, 200µm Thickness, F254, 25 x 75mm Plate, Silica Gel Coating	JT4463-2
Baker-flex® Precoated Flexible TLC Sheets, 250µm Thickness, F254, 25 x 75mm Plate, Silica Gel Coating	JT4449-2
BAKERBOND® SPE Columns, Reversed Phase, Octadecyl, 6 mL	JT7020-6
Extraction Disks, 50 mm	
Normal Water Samples	JT8055-6
Water-Samples, Polar to Non-Polar Analytes	JT8055-7
Diquat/Paraquat Samples	JT8057-6
Hydrocarbons/Oil & Grease	JT8060-6



VWR® Returnable Container Advantage Program (ReCAP)

solutions for research & analysis

Performance | Convenience | Safety

YOUR FACILITY THRIVES OFF THESE VITAL FACTORS, AND WITH VWR RECAP, YOU ARE OPTIMIZING ALL THREE IN ONE SIMPLE SOLUTION.

Built on the foundation of supply chain innovation, VWR's Returnable Container Advantage Program (ReCAP) reliably delivers performance, convenience, and safety for your high-purity solvents.

The program starts with your choice of sealed 200L stainless steel containers, filled with BDH high-purity Acetonitrile or Methanol (choose your specification). Once at your facility, solvent can be safely dispensed without risking product contamination, spillage, or personal exposure. When the container is almost empty, let us know and we will replace it with a full one so your work remains uninterrupted.

- Inert gas pressurizes container to smoothly dispense high-purity solvent
- High quality and safety with 304 stainless steel
- Tamper-evident seal for peace of mind
- Relief valve for pressure regulation
- Convenience through Swagelok® Quick-Connects
- Serialized containers for precise tracking
- Integrated fork channels for hassle-free transport



Description	Cat. No.
Acetonitrile HiPerSolv CHROMANORM® Super Gradient for HPLC	BDH83639.201
Acetonitrile HiPerSolv CHROMANORM® LC-MS	BDH83640.201
Acetonitrile HiPerSolv Ultra Low Water for Biopharma	BDH85500.201
Acetonitrile for DNA Synthesis	BDH85501.201
Acetonitrile HiPerSolv CHROMANORM® Ultra LC-MS	BDH83642.201
Methanol HiPerSolv CHROMANORM® Ultra LC-MS	BDH85800.201
Methanol HiPerSolv CHROMANORM® Super Gradient for HPLC	BDH85681.201
Methanol HiPerSolv CHROMANORM® Gradient for HPLC	BDH20864.201

Standard Containers are industry-standard, single-wall construction 304 stainless steel drums.

This ReCAP program is not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.

Contact your VWR Production Chemical Specialist for more information.

Approximately 200 lbs of glass, cardboard, and foam inserts are eliminated by each 200L container.





Avantor is excited to be involved in this groundbreaking new pathway to treat some of the most complex and difficult diseases the world faces.

Continued from page 13

As companies of this size get involved, we expect they will leverage their increased breadth and depth to develop new labels, develop new trials, and find ways to manufacture these therapies at scale.

 **What are the critical challenges for companies working or going into this field?**

Scalability and manufacturability — that's the next question we will all be looking at. Can we manufacture cell and gene therapies at scale? If we can manufacture these treatments at scale, then can we do so safely? Can we do so at a reasonable cost so the populations that are affected by these diseases can access treatments?

The issue is process standardization. When you're talking about a cell therapy, the single biggest point of variability is the patient's own cells. And by its very nature, this is individual to the patient, and individual to the health of the patient at the time of leukapheresis.

Variables and failure modes have to be taken out of the process. We can standardize, close systems so that they're not exposed to failure modes, miniaturize these systems — all of this can help. We can improve technologies, like sterile fluid transfer, if we can use excipient technology to further stabilize and use analytical technology to understand what will make a successful or less successful therapy. We can increase the efficacy, decrease the risk, and decrease the cost.

This is where Avantor can help, since we supply cell-culture components, production chemicals, and single-use technologies that aid in these processes. I think our knowledge — of cell culture, of technology development, sterile fluid transfer, fill and finish, excipients, and the technology surrounding those — will be valuable and applicable to helping make these technologies available at scale.

 **How can companies react to those challenges? What are the tools or solutions they are looking for?**

We need to better analyze and understand the variability that comes from the research data, even at the early stages of these trials, and use it to correlate to both clinical and process outcomes. Taking out manual steps as early as possible is going to be important, as well as creating closed systems using sterile fluid transfer technologies.

We need solutions around side effects, which is one of the most significant challenges. As we understand how to provide a more efficacious dose, perhaps using less cells, some of the side effects of these drug therapies may be improved.

And we must find scalable ways to address costs, which are far too high. There is a need to look at systems of reimbursement — for example, should reimbursement be made dependent on outcomes?

Ultimately, these drugs must be developed in a more cost-effective manner. That's an area where technology providers and suppliers, like our company and others, can play a significant role by closing and automating systems, and by understanding the contribution of labor and overhead and possible economies of scale from reducing processes.

 **A big issue for companies working in these therapies are the regulatory hurdles. What insights can you share about regulatory issues for cell and gene therapy?**

I think the regulatory groups have been encouraging. To a degree, there's a perceived competition between and among different

regional bodies – in Europe and in the UK, in China and in Japan, in different ways and within different specialties. We have seen that regulatory bodies have been very open and collaborative in acknowledging that cell and gene therapy is different. They are willing to put into place the appropriate regulatory system to enable the drugs to get to market, and to monitor them going forward.

The FDA's support on CAR-T technologies is a good example. Regulators are allowing flexibility in the normal hierarchy of how clinical trials are performed, particularly in phase II and III trails, but the companies must still address the FDA's post-marketing commitments and safety issues.



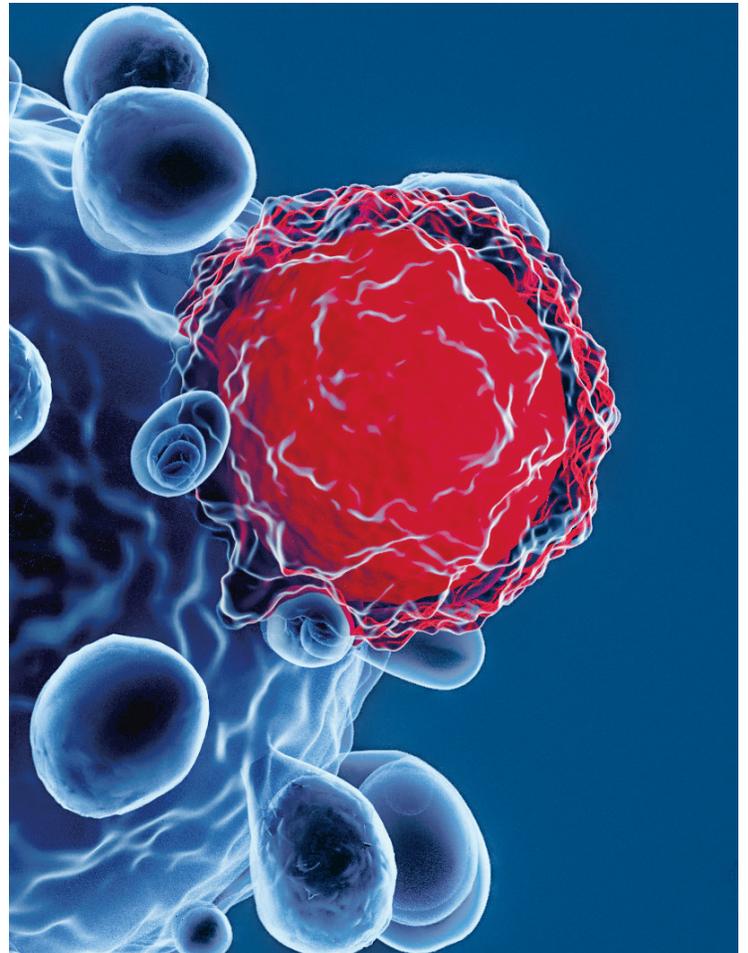
Do you think cell and gene therapy will be the single focus in the future for biopharma? Will it replace small molecules and biologics?

I don't think so. I think each type of drug product will find its niche. People tend to forget about small molecules, but they are still incredibly important in the market. Large molecules are also being developed for areas like neuro-degeneration. I think they'll have a continued role to play there.

Monoclonals and biopharmaceuticals have really only started to make a significant impact in the last 15 to 20 years. Cell and gene therapies are just starting and have yet to obviously make a significant market impact. With that considered, who's to say what's next?

With the amount of strong research into developing, understanding and characterizing drug targets, and figuring out how to make these in production level volumes, this will be a constantly changing landscape. And, there will be many parts to patient treatment options going forward.

Avantor is excited to be involved in this groundbreaking new space to treat some of the most complex and difficult diseases the world faces. It's clear that cell and gene therapy can succeed as one more healing tool — as with other treatments that moved from theoretical possibilities to real results, we see the issues that need to be addressed more clearly, and we're ready to help get the next stage of development in motion.



Dr. Ger Brophy is Executive Vice President, Biopharma Production at Avantor. In his current role, Dr. Brophy is responsible for developing and implementing our Biopharma Production offering to support the current and future needs of our customers. Prior to joining Avantor, Dr. Brophy held a variety of research and development, strategy, advanced systems and business development positions in the healthcare space with GE Healthcare Life Sciences, GE Healthcare Medical Diagnostics and Amersham for nearly 30 years. Dr. Brophy earned a B.Sc. in biotechnology as well as a Ph.D. in molecular biology from Dublin City University, Ireland.

SUPPLIES

OMNITOP ASSEMBLIES, PRE-STERILIZED SINGLE-USE SAMPLE TUBES®

OmniTop Sample Tubes are a convenient device that can be used to obtain fluid samples. Each OmniTop tube comes with a pre-attached 0.2µm vent filter and 18" of tubing (C-Flex®, TYGON®, silicone or PharMed®).

- Customizable cap system
- Ability to use different ID and OD tubing diameters
- Easily configured with virtually any type of tubing
- Eliminate cleaning validation
- Flexible manufacturing
- Design permits quick delivery on small lots
- Available individually packaged or configured in manifold

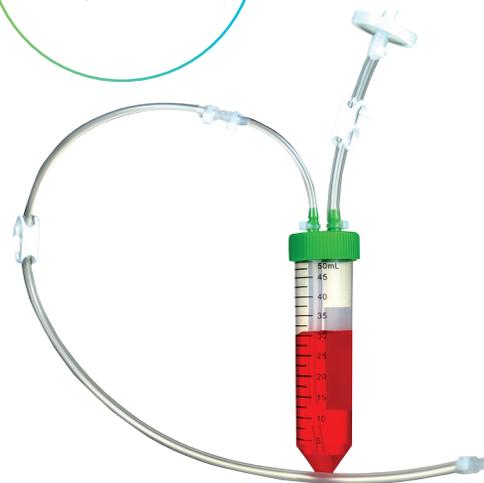
Application(s):

- Transfer of biopharmaceutical products and reagents in a closed system
- Gas exchange transfer
- Sampling of biopharmaceutical products and reagents in a closed system
- Storage of biopharmaceutical products and reagents
- Use with bench top, pilot plant, and production bioreactors
- Use with sterile connecting devices and thermal or RF tubing sealers

These tubes are available with or without internal dip-tubes to facilitate removal of the fluid inside. OmniTop Sample Tubes are available in a wide variety of standard configurations or they can be customized to suit your specific applications.



View a brief aseptic sampling video at www.vwr.com/Omnitop-Demo-Video



Description	Cat. No.
15mL OmniTop Standard, PP	75840-758
50mL OmniTop Standard, PP	75840-774

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solutions for production

VWR® SILICONE TUBING

Low-volatile grade, platinum-cured silicone tubing is produced in a certified ISO Class 6 (FED-STD-209E Class 1000/M4.5) cleanroom for use in critical pharmaceutical, biomedical, laboratory, food, and cosmetic applications.

- Non-contaminating
- Extremely flexible
- Resistant to temperature changes
- Chemically resistant
- Ideally suited for single use/disposable research and development and production processes
- Supplied in 15.2m (50') lengths
- Free of animal-derived ingredients

I.D. x O.D. (in.)	Wall Thickness (in.)	Cat. No.
0.062 x 0.125	0.032	89068-468
0.125 x 0.250	0.063	89068-474
0.188 x 0.313	0.063	89068-478
0.188 x 0.375	0.094	89068-480
0.250 x 0.375	0.063	89068-482
0.250 x 0.500	0.125	89068-484
0.313 x 0.500	0.094	89068-488
0.375 x 0.500	0.063	89068-456
0.375 x 0.625	0.125	89068-490
0.500 x 0.688	0.094	89068-460
0.500 x 0.750	0.125	89068-492
0.625 x 0.875	0.125	89068-494

Shop vwr.com for additional sizes.



solutions for production



VWR® STERILE PETG SINGLE-USE BOTTLE ASSEMBLIES

Sterile containers with weldable tubing provide the maximum amount of flexibility and reliability.

- Sterile bottles come individually bagged and process ready
- Multiple bottle sizes allow for process-specific flexibility
- Gamma irradiated to Sterility Assurance Level (SAL) 10⁻⁶
- Tubing Material: C-Flex
- Assembled in an ISO Class 7 cleanroom and manufactured from USP Class VI materials
- Offered in a comprehensive size selection with tubing that is completely weldable/sealable

Capacity, mL (oz.)	Tubing Length	Cap Size	Tubing Connection	Tubing Size	Cat No.
125 (4)	Port 1: 24" Port 2: 3"	38-430	Port 1: PP Tube Plug Port 2: 25mm Hydrophobic PE Vent Filter	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	10830-292
250 (8)	Port 1: 24" Port 2: 3"	38-430	Port 1: PP Tube Plug Port 2: 25mm Hydrophobic PE Vent Filter	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	10830-294
500 (16)	Port 1: 24" Port 2: 3"	38-430	Port 1: PP Tube Plug Port 2: 25mm Hydrophobic PE Vent Filter	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	10830-296
1000 (32)	Port 1: 24" Port 2: 3"	38-430	Port 1: PP Tube Plug Port 2: 25mm Hydrophobic PE Vent Filter	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	10830-298
2000 (64)	Port 1: 24" Port 2: 3"	38-430	Port 1: PP Tube Plug Port 2: 25mm Hydrophobic PE Vent Filter	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	75835-988
2000 (64)	Port 1: 12" Port 2: 3" Port 3: 12"	53B	Port 1: PP Tube Plug Port 2: 50mm PTFE Vent Filter Port 3: PP Tube Plug	Port 1: 3/8 x 1/2" Port 2: 1/4 x 3/8" Port 3: 3/8 x 1/2"	10830-300



PAW BIOSCIENCE WFI SAMPLER

WFI Samplers are an easy and convenient solution for obtaining perfect fluid samples from a WFI water drop.

- Class VI compliant materials: made from platinum-cured, medical-grade silicone tubing, with certificates included
- Polypropylene fitting is inert and strong
- Silicone tubing and gasket: unlike TPE materials, silicone will not contribute to TOC counts
- Gamma-irradiation eliminates additional bio-burden concerns
- Certified free from any animal-derived components or processes
- Each WFI Sampler is double-polypouched for cleanroom use, and irradiated

Length, in.	Cat. No.
WFI Sampler, with Mini-TC Flange	
18	76175-268
36	76175-270
WFI Sampler, with 1.5" TC Flange	
18	76175-272
36	76175-274



Single-use solutions

JM BIOCONNECT® PILLOW BAGS

JM BioConnect® Pillow Bags are designed 2D-style and have hose barb ports heat-sealed into the bottom of the bag. The bags are available from 50mL to 50L volume. Pillow Bags are designed for hanging which facilitates complete fluid recovery and ease of handling.

JM BioConnect Pillow Bags are made of high-quality JMS Flex Film, which consist of a ULDPE fluid contact layer and a LDPE outer layer. A high oxygen barrier layer (EVOH) is coextruded between both layers. The bag film has a high clarity and flexibility and is resistant to a wide range of chemicals.

VWR is also able to deliver customer-specific JM BioConnect® Pillow Bags or other bag designs like 3D Cubic Bags and Mixing Bags. For more information, please visit vwr.com/single-use.



Description	Capacity	Cat. No.
2-Port Pillow Bags		
2 Ports for Welding	50 mL (1.69 oz)	75874-848
2 Ports for Welding	500 mL (16.9 oz)	75874-850
2 Ports for Welding	1 L (33.8 oz)	75874-354
2 Ports Luer	50 mL (1.69 oz)	75874-364
2 Ports Luer	500 mL (16.9 oz)	75874-366
2 Ports Luer	1 L (33.8 oz)	75874-368
2 Ports MPC	50 mL (1.69 oz)	75874-370
2 Ports MPC	500 mL (16.9 oz)	75874-372
2 Ports MPC	1 L (33.8 oz)	75874-374

Description	Capacity	Cat. No.
3-Port Pillow Bags		
3 Ports for Welding	5 L (1.3 Gal)	75874-356
3 Ports for Welding	10 L (2.6 Gal)	75874-358
3 Ports for Welding	20 L (5.3 Gal)	75874-360
3 Ports for Welding	50 L (13.2 Gal)	75874-362
3 Ports MPC	5 L (1.3 Gal)	75874-376
3 Ports MPC	10 L (2.6 Gal)	75874-378
3 Ports MPC	20 L (5.3 Gal)	75874-380
3 Ports MPC	50 L (13.2 Gal)	75874-382

Shop vwr.com for port sizes and additional product information.

JM BIOCONNECT® SINGLE-USE TANK LINERS

JM BioConnect® Tank Liners are single-use bags with an open top, designed to fit in cylindrical vessels. These bags are used as liner into a vessel to avoid cleaning of the vessel after media and buffer preparation.

JM BioConnect Tank Liners are made of a clean medical grade multi-layer film designed for bioprocess applications such as open-top Tank Liners. The fluid contact layer is a medical grade LLDPE.

The Tank Liners are available in both 2D and 3D style. The bags will be delivered gamma irradiated and ready to use.

VWR is also able to deliver customer-specific JM BioConnect Tank Liners. The bags can be made for almost all vessels up to 1.500 L, optionally with bottom drain. For more information about customization, please visit vwr.com/single-use.



Capacity	Cat. No.
2D Tank Liners	
19 L (5 Gal)	75874-384
38 L (10 Gal)	75874-386
50 L (13.2 Gal)	75874-388
100 L (26.4 Gal)	75874-390
200 L (52.8 Gal)	75874-392
300 L (79.2 Gal)	75874-394
560 L (147.9 Gal)	75874-396

Capacity	Cat. No.
3D Tank Liners	
50 L (13.2 Gal)	75874-398
100 L (26.4 Gal)	75874-400
200 L (52.8 Gal)	75874-402
300 L (79.2 Gal)	75874-404
560 L (147.9 Gal)	75874-406

See vwr.com for additional product information.



CONTEC EASYREACH™ CLEANING TOOL

Contec's lightweight stainless steel EasyReach™ Cleaning Tool is designed for cleaning mini-environments such as isolators, laminar air flow hoods, and glove boxes. Rectangular shape makes overlapping straight-line action easy to achieve. Hinged joint and lightweight design makes one-handed cleaning comfortable and improves access to hard-to-reach areas.

The single-use 100% polyester EasyReach™ cleaning pads provide a low level of particulates which is essential for use in product contact areas. The pads are very absorbent, ensuring good even coverage of disinfectant or IPA. Easy grab edge on the cleaning pad ensures the pad fits tightly on the mop frame but is easy to replace with gloved hands. Sterile pads presaturated with 70% IPA are also available.

Description	Size, cm (in.)	Material	Sterility	Packaging	Cat. No.
EasyReach Disposable Cleaning Pads	19.6 × 6.9 (7.75 × 2.75)	Quilted Polyester	Sterile	4/Bag; 15 Bags/Case	89094-580
EasyReach Disposable Cleaning Pads	19.6 × 6.9 (7.75 × 2.75)	Quilted Polyester	Nonsterile	4/Bag; 15 Bags/Case	89094-578
EasyReach Cleaning Pads	19.6 × 6.9 (7.75 × 2.75)	Quilted Polyester	Sterile	8/Bag; 8 Bags/Case	76289-450
EasyReach Cleaning Pads, Sterile, Presaturated, 70% IPA/30% DI Water	19.6 × 6.9 (7.75 × 2.75)	Quilted Polyester	Sterile	8/Bag; 8 Bags/Case	89094-582
QuickConnect EasyReach™ Mop Head Frame	19 (7½)	Lightweight Stainless Steel	Nonsterile	1 Each/Case	89107-994
EasyReach Cleaning Tool, One-piece Handle and Mop Head Frame	43 (17)	Lightweight Stainless Steel	Nonsterile	1 Each/Case	89094-584
QuickConnect Handle, for EasyReach™ Mop Head Frame	41 (16)	Lightweight Stainless Steel	Nonsterile	1 Each/Case	89107-996

STERILE PERIDOXRTU® DISINFECTANT AND CLEANER

Sterile PeridoxRTU® is an EPA-registered sporicide, bactericide, virucide, tuberculocide, and fungicide one-step disinfectant and hard surface cleaner with a 3-minute sporicidal claim at 99.9999% efficacy. Sterile PeridoxRTU is validated sterile to 10⁻⁶ SAL. For biodecontamination in the most critical of cleanrooms and controlled environments, and for daily cleaning and disinfecting tasks such as wiping surfaces and mopping floors. PeridoxRTU is an effective component of monthly cleaning protocols. PeridoxRTU is ideal for use in pharmaceutical, biopharmaceutical, and medical device facilities.

Size	Cat. No.
32 oz.	10148-324
3.8 L (1 gal.)	10746-534

These products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.



Designed for use in controlled environments

DISPENSERS TO ORGANIZE AND PROTECT YOUR PPE AND CLEANROOM SUPPLIES

Organize and maintain your personal protection equipment and cleanroom supplies. To see our full line of products, visit vwr.com and enter "S-Curve" in the search bar.

- Designed to organize supplies and protect from contamination
- Maximize space utilization in gowning room and production areas
- Keep supplies easily accessible and identifiable with clear dispensers
- Easy wall mounting and removal for cleaning
- All dispensers are available in chemical-resistant PETG material

Description	Cat. No.
4-Compartment Glove Dispenser	98106-922
Wiper Dispensers for 9x9 Wipes	98106-940
Triple Glove Box Holder	87000-008



- 1 Four-compartment glove dispenser
- 2 Triple glove box holder
- 3 Wiper dispenser for 9 x9 wipes

solutions for production



VWR® SPEC-WIPE® 5 WIPER

Durable, mechanically bonded wiper for cleaning cleanroom surfaces and laminar flow benches. Absorbs water spills as well as most common solvents.

- 45% polyester and 55% cellulose blend
- Can absorb 4x the weight of wiper
- Proprietary treatment
- Reduced particle generation



W x L, cm (in.)	Unit	Cat. No.
22.9 x 22.9 (9 x 9)	Pack of 300 / Case of 6000	21913-211

solutions for production

VWR® PUREIMAGE™ CLEANROOM PAPER

Cleanroom paper is designed for writing, printing, and photocopying in cleanroom environments where the prevention of chemical exportation and particle contamination is critical. Polyethylene binding technology results in very low levels of particles, nonvolatile residue (NVR), and ion extractables.

- Write, print, and photocopy in cleanroom environments
- Features high tensile strength and excellent heat resistance
- Web-cleaned on both sides prior to sheeting



Color	Paper Size	Cat. No.
Latex-Impregnated Paper		
Blue	8½ X 11	94001-264
Green	8½ X 11	87004-194
Pink	8½ X 11	89038-762
White	8½ X 11	87004-188
Yellow	8½ X 11	87004-192
Non-Latex Paper		
Blue	11 x 17	89201-138
Blue	8½ X 11	87003-436
Crème	8½ X 11	82030-866
Green	8½ X 11	87004-164
Pink	11 x 17	76076-774
White	8½ X 11	87003-434
White	11 x 17	89201-142
Non-Latex Paper, Three-Hole Punched		
Blue	8½ X 11	87003-432
White	8½ X 11	87003-430

For a complete listing of sizes, colors, and styles, please visit vwr.com.

solutions for production

VWR® SPEC-WIPE® 4 PRESATURATED WIPERS

These Spec-Wipes are excellent for cleaning rough, abrasive, or irregular surfaces, yet soft enough for delicate surfaces. Designed for critical-process cleaning and environments where low particle- and fiber-generation is critical. Wipers are presaturated with semiconductor grade solvent to allow for safe storage and dispensing of cleaning solvents while reducing hazardous waste. Durable interlock knit allows for rigorous cleaning. Continuous filament creates softness for delicate surfaces.

- 100% white interlock knit polyester
- Presaturated
- Continuous filament

Appropriate for electronics, pharmaceutical, biotechnology, chemical and petroleum, environmental, and education industries.



W x L, cm (in.)	Solvent	Unit	Cat. No.
22.9 x 22.9 (9 x 9)	70% IPA/30% DI H ₂ O	Pack of 30 / Case of 360	47751-462

Compliance was never so easy

TSB MEDIA BAGS FOR VERIFICATION OF YOUR ASEPTIC TECHNIQUE ACCORDING TO USP <797>

Media Bag™ by Hardy Diagnostics is ideal for verifying aseptic technique of pharmacists, nurses, or pharmaceutical manufacturing technicians. Available in both 100ml fills as well as larger 700ml fill bags. Media Bag has both a needle port and spike port, is terminally autoclaved for high sterility assurance, and features a hang notch on the top allowing the technician to hang the bag.

- The Media Bag has both a spike-port and needle-port
- Quality tested to USP <71> Standards
- Growth promotion testing performed on each lot of media
- Tryptic Soy Broth (TSB) is manufactured in an ISO 13485 Facility



Description	Size, mL	Packaging info	Cat. No.
TSB, USP	700	Pack of 5	75846-314
TSB, USP	100	Pack of 10	75814-002

solutions for production

VWR® STERILE SAMPLE BAGS

These sample bags are ideal for transportation and storage of solids, semisolids, and liquids for environmental and carcass sampling, biomedical and pharmaceutical research, quality assurance procedures, food industry applications, and clinical and veterinary medicine.

- Sterile
- Pliant polyethylene sterile tubing
- Highly resistant
- Wire closure for an airtight seal
- Wide-sealed bottoms for leakproof protection

Bags are made of pliant, highly resistant virgin polyethylene sterile tubing with no side seals. They feature a wire closure for an airtight seal, and wide-sealed bottoms for added leakproof protection. To use, tear off perforated top, pull tabs to open bag, fill, grab ends of tape closure and pull shut, twirl bag three or four times to seal, and bend ends of closure inward to lock the seal.



W x H, cm (in.)	Capacity, mL (oz.)	Thickness, mil	Cat. No.
Round Wire Bags			
14 x 22.9 (5½ x 9)	650 (22)	3	82007-698
11.4 x 30.5 (4½ x 12)	900 (30)	2.5	82007-696
14 x 38.1 (5½ x 15)	1500 (50)	3	82007-700
17.8 x 30.5 (7 x 12)	1650 (55)	3	82007-728
Round Wire Bags with White Marking Area			
11.4 x 22.9 (4½ x 9)	450 (15)	2.5	82007-706
14 x 22.9 (5½ x 9)	650 (22)	3	82007-708
17.8 x 30.5 (7 x 12)	1650 (55)	3	82007-726

Shop vwr.com for additional sizes and varieties.



Micronova's modular cleaning system

MZONE FLAT MOPS

This lightweight, slip-on cleanroom mop is available in a choice of widths and selection of fabrics to address cleaning and disinfecting in ISO 5 to 9 areas.

- Easy to maneuver on floors, walls, ceilings, and in awkward corners
- Compatible with alcohol, strong disinfectants, and steam sterilization
- Available irradiated

Description	Cat. No.
FlatMop, PolySorb 9"	89498-074
FlatMop, Polysorb 14"	89498-078
FlatMop, Polysorb 18"	75848-692
FlatMop, MegaTex 14"	76214-286



MEGAWRINGER

The MegaWringer is ideal for consistent flat mop wringing with minimal effort. Modular and lightweight, this down press wringer easily attaches to bucket.

- The unique design allows for an ergonomic, no operator bend, one-hand action, as the mop handle slides into the wringer grip and provides the leverage to create the wringing pressure
- Minimizes dripping and over saturation of flat head style mops, removing much more liquid than a sieve-style wringer

Size, in.	Weight	Cat. No.
22L x 7D x 9H	5 Lbs.	76299-864



BUCKET BINDERS

A COST-EFFICIENT, ERGONOMIC, AND SIMPLE MULTI-BUCKET SYSTEM THAT DOES AWAY WITH THE NEED FOR BULKY CARTS AND FRAMES

The Bucket Binder kit includes two or three polypropylene buckets with caster along with one or two sets of Bucket Binders (bucket connectors). The system offers easy cleaning and storage — for both small and large controlled environments and the sterile core.

- Polyketone 'hooks' firmly secure two or three rectangular buckets together
- Sturdy enough to secure two or three buckets with up to 15 litres of liquid in each
- Lightweight — less than 2 lbs per pair

Description	Cat. No.
Bucket Binder Double Bucket Kit	
Blue and Yellow Buckets/One set of Bucket Binders	76289-876
Triple Bucket Kit	
Blue, Red, and Yellow Buckets/Two sets of Bucket Binders	76289-878



Essential cleaning tools for critical environments



PERFEX TRUCLEAN MOPPING SYSTEMS

TruCLEAN Mopping Systems effectively capture and isolate contaminants, ensuring the delivery of pure cleaning agents. No more reapplying dirty water or weakened solutions. Mopping systems include high quality stainless-steel components and temperature-resistant polypropylene buckets. Configurations suitable to large and small area cleanrooms of any grade. Designed to be easy-to-use and maintain, delivering the cleaning performance you expect.

- Prevent dangerous cross-contamination
- Compatible with gamma, ethylene oxide, and autoclave sterilization

Color	Cat. No.
TruCLEAN Triple Bucket Mopping System*	
Red	22940-012
White	22940-015
Blue	22940-014
TruCLEAN 2	
Red	89095-990
Blue	89095-992

*Also available in green and yellow

PERFEX TRUCLEAN SPONGE AND FIBER MOPS

TruCLEAN Mops are designed for use in cleanroom environments with ultra-low particulate level requirements. Prevent dangerous cross-contamination and ensure compliance with infection control protocols. TruCLEAN Sponge Mops are ideal for applying cleaning solution to floors, walls, and ceilings, whereas our fiber mops offer functionality, high absorbency, and cost-effective advantages.

- Excellent surface coherence, tear resistant
- Reusable mops provide extended service life

Description	Cat. No.
TruCLEAN Clean Room Mop	89096-038
TruCLEAN Microfiber Mop	89096-040
TruCLEAN Anti-Microbial Mop	89096-036
TruCLEAN Sponge Mop	22940-023
TruCLEAN Mop Cover	22940-191



solutions for production

HYPO-CHLOR® CLEANING AGENT, VELTEK ASSOCIATES

Sterile sodium hypochlorite solutions are filtered at 0.2µm, gamma-irradiated, double-bagged, and delivered with lot-specific sterile documentation.

Premixed concentrations are formulated with USP purified water. The 473mL (16 oz.) sizes come with sterile spray attachments.



Size	Concentration	Cat. No.
Bottle		
3.8 L (1 gal.)	0.0025	14003-324
3.8 L (1 gal.)	0.0052	14003-328
3.8 L (1 gal.)	0.0525	14003-334
3.8 L (1 gal.)	0.0525	14003-336
384 mL (13 oz.)	0.0525	14003-333
473 mL (16 oz.)	0.0052	14218-554
Trigger Sprayer		
473 mL (16 oz.)	0.0025	14218-552
473 mL (16 oz.)	0.0525	14218-556

These products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.

Easy dispensing with safe blade storage



solutions for every day use

VWR® POP UP RAZOR BLADE DISPENSER

THE VWR POP UP RAZOR BLADE DISPENSER IS DESIGNED TO REDUCE INJURIES IN THE LAB

Refill cartridges are packaged 10 cartridges per case. Each cartridge is labeled with a blade-type detail ("CS" for carbon steel blades, SB for steel back blades, "W" for washed blades, or "3" for 3-facet blades).

- Heavy-duty design with non-skid, heavy bottom
- Flip-open front enables easy cartridge loading and removal
- In-use blade holder included
- Reloadable
- Clamshell packaging is cleanroom ready



Description	Cat. No.
Pop Up Razor Blade Dispenser	10835-969

Blade Steel	Blade Size, In.	Coated Blade	Backing Material	Washed, Degreased	Cat. No.
2-Facet Blades					
Carbon	0.009	No	Steel	Yes	10835-967
Carbon	0.009	No	Steel	No	10835-981
Carbon	0.012	No	Steel	Yes	10835-965
3-Facet Blades					
Stainless	0.009	Yes	Steel	No	10835-971
Carbon	0.009	No	Steel	Yes	10835-973
Stainless	0.009	Yes	Steel	Yes	10835-963
Carbon	0.009	No	Steel	No	10835-975
Stainless	0.009	No	Steel	Yes	10835-977
Stainless	0.009	No	Stainless	Yes	10835-979

FOCUS: PRODUCTION VOLUME 1 ISSUE 1



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