Membrane Filtration Microbiology

Online Ordering Available
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• Santa Maria, CA - Manufacturing
• Olympia, WA
• Salt Lake City, UT
• Phoenix, AZ
• Dallas, TX
• Springboro, OH - Manufacturing
• Lake City, FL
• Raleigh, NC
• Albany, NY

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Hardy Diagnostics

Now with
9 Distribution Centers & 2 Manufacturing Plants
to serve you better!

Orders placed before 1:30 p.m. for all time zones (except Hawaii and Alaska) are processed and shipped out the same day. Most orders are received the next morning.
Our Advantage

Hardy Diagnostics manufactures over 3,500 prepared culture media products and provides a complete selection of over 13,000 microbiology supply items. Founded in 1980, Hardy Diagnostics has grown to service over 9,000 microbiology laboratories within the United States and throughout the world.

In addition to manufacturing culture media, Hardy Diagnostics is also an authorized distributor for over 80 other fine diagnostic manufacturers. Among them are Sartorius, Denka Seiken, Hygiena, Copan, Puritan, Medical Chemical, and Microbiologics.

• **USP Compliant Quality Control**
  For items designated USP, Hardy Diagnostics quality control testing is performed in accordance with the requirements set forth in USP/NF, Microbiological Examination of Nonsterile Products: Microbial Enumeration Tests <61>, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>, and Sterility Tests <71>. Rockville, MD: US Pharmacopeial Convention.

• **Quality Control Program**
  All of the products manufactured by Hardy Diagnostics are tested to the highest standards for quality and performance. To assist our industrial customers with ISO and cGMP requirements, a “Certificate of Analysis” is available online.

• **ISO Certified**
  The Quality management system of the Hardy Diagnostics’ California and Ohio manufacturing facilities has been certified to ISO 13485, a quality standard specifically for medical device manufacturers.

• **Online Catalog and Ordering**
  To save time, you can quickly locate any of our products, including current pricing, at our website www.HardyDiagnostics.com. Ordering online is easy and allows you to save a list of your “favorite” products, view past orders, and receive order status email notifications.

• **Custom Product Manufacturing**
  Hardy Diagnostics is willing and able to manufacture products specific to your needs. Special container and formula requests are welcome. Simply contact our Director of Sales for details at (800) 266-2222 ext. 5696.

• **Two Manufacturing Plants**
  Hardy Diagnostics is the only culture media company with bi-coastal manufacturing plants that provide our customers with the additional security of product availability.
Sterility Testing <USP 71>

Sterisart® Universal Pump Sterility Testing System

USP requires the complete sterility of pharmaceutical products, such as parenterals, that are injected into the blood stream or that otherwise enter the body below the skin surface.

The preferred method for sterility testing is the membrane filter method using a closed sterility test system. The Sterisart® Universal Pump is a peristaltic pump made of stainless steel and is equipped with appropriate features for attaching a Sterisart® sterility test canister (Closed System).

After the Sterisart® canisters have been positioned and the sterility test system spike has been inserted into the sample container, the pump is started. The pump draws liquid from the sample container into the specially designed double tubing, distributing the liquid equally to both Sterisart® canisters. Similarly, the pump then flushes the Sterisart® canisters with rinse liquid such as Fluid A (Cat. no. U109). Finally, the pump fills the two Sterisart® canisters with culture media, such as Tryptic Soy Broth 100ml (Cat. no. U46) or Fluid Thioglycollate Medium 100ml (Cat. no. U84). The Sterisart® canisters are then sealed and incubated.
Sterisart® Universal Pump
The Sterisart® Universal Pump can be used in clean rooms, integrated into clean benches, or installed in the work area of isolators. Each..................................................16420

Features and Benefits
• Closed system – for enhanced assurance of no accidental contamination.
• Rugged and maintenance-free.
• Compact and ergonomic construction.
• Modular design.
• Pump available with special software (menu-driven prompts for operator guidance).
• All process sequences able to be logged.
• Barcode recognition.
• Convenient foot switch activator.
• Pump design for elimination of any fan exhaust stirring up air in your testing area.
• Designed for easy cleaning.
• Durable German engineering.
• Made of stainless steel.

Support rod
Spring loaded fastening arm for media containers
Tryptic Soy Broth
Bottle holding ring
Pump clamping lever
Carrying handle
Control unit
Optional ampoule breaker
Control unit
Pump head
Speed selection knob
Pre-installed color-coded tube clamps to distinguish between TSB and FTM.
Sterisart® NF disposable canisters (see pages 4-8)
Draining container
Draining tube
Pump
Clamping lever
Control unit
Support rod
Spring loaded fastening arm for media containers
Tryptic Soy Broth
Bottle holding ring
Pump clamping lever
Carrying handle
Control unit
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Bottle holding ring
Pump clamping lever
Carrying handle
Control unit
Optional ampoule breaker
Control unit
Pump head
Speed selection knob
Pre-installed color-coded tube clamps to distinguish between TSB and FTM.
Sterisart® NF disposable canisters (see pages 4-8)
Draining container
Draining tube

Sterisart® NF Canisters for Sterility Testing

Disposable Sample Canisters and Adapters for use with Sterisart® Universal Pump

For sterility testing in isolators. Individually sterile, double-packaged, gamma irradiated, needles made of stainless steel.

Sterisart® NF Canisters can be ordered with or without a needle port septum for sub-culturing of positive results.

Pre-installed color-coded tube clamps to distinguish between TSB and FTM.

VHP resistant packaging.

Stainless steel septum needle. Other attachments are available.

Easy-to-read graduated marks

Reliable membrane for high retention of microbes

Disposable Sample Canisters and Adapter descriptions on pages 5-9
Sterisart® NF Canisters are available with a variety of needles, depending on your sample type!

**Sterisart® NF Canister for Closed Sample Containers with Septum**
The 16466 is equipped with a stainless steel dual-needle spike (built in venting), which is designed for closed sample containers. The flammable spike allows changing sample containers while minimizing the risk of contamination. Unlike plastic needles, metal needles do not snap off when tilted under pressure. Additionally, the large protective plate on the spike makes it easy to pierce the stoppers. The plate construction also helps prevent injury to fingers. The 4cm length dual-needle allows the spike to be used for a variety of closures.

**Application:** LVPs* in closed glass containers with septum.

10/pk ................................................................. 16466GBD
10/pk (septum version) ......................................... 16466GSD

---

**Sterisart® NF Canister for Open Containers**
The 16467 is designed for use with open containers, such as ampoules or collapsible plastic bags that do not require venting when samples are removed. The thickness and length of the individual needle enables samples to be drawn evenly from exceptionally small ampoules with narrow openings. In addition, the length of the needle makes it easy to remove samples from plastic bags without piercing the bag itself. The stainless steel needle can be briefly flamed, minimizing the risk of contamination when changing sample containers.

**Application:** LVPs* or SVPs** in open containers, i.e. glass ampoules, glass vials, collapsible bags.

10/pk ................................................................. 16467GBD
10/pk (septum version) ......................................... 16467GSD

---

*Large Volume Parenterals
**Small Volume Parenterals
Sterisart® NF Canister for Collapsible Medical Devices with Luer or Luer Lock Connectors
The 16468 is equipped with a male luer connector onto which a detachable double female luer lock adapter is fitted. With this system, it is possible to draw samples from collapsible medical devices/bags fitted with either female luer lock or male luer lock connectors. After the sample is removed from the collapsible bag, the double luer lock adapter is disconnected and replaced by the supplied 6cm needle for drawing rinsing solution and culture media. A venting needle is included.
Application: Medical devices, i.e. tubing systems and bags with luer or luer lock connectors.
10/pk ................................................................. 16468GBD

Sterisart® NF Canister for Pre-filled Syringes
The 16469 is designed for sterility testing liquids in pre-filled syringes of various sizes (versions with and without needles). The system allows the exterior of needles attached to syringes to be sterility tested. The special retainer on the double tubing system is used as an adapter for attaching pre-filled syringes. The contents of these syringes are drained into the Sterisart® system and simultaneously mixed with rinsing solution drawn through a dual-needle metal spike. The mixed liquid is pumped in equal volumes into the two Sterisart® containers and filtered.
Application: Pre-filled syringes with or without needles.
10/pk ................................................................. 16469GBD
10/pk (septum version) ...................................... 16469GSD
Sterisart® NF Canister for Easy-To-Dissolve Powders in Closed Glass Vials with Septum
The 16475 is designed for sterility testing easy-to-dissolve powders (e.g. lyophilized antibiotics in powder form). A dual-needle metal spike with a vent filter is used to remove dilution solution from closed vials. A shorter dual-needle metal spike is used to add dilution solution and to dissolve the powder in the sample container (e.g. lyophilized antibiotic powder).

**Application:** Soluble powders, lyophilisates, and liquid antibiotics in closed glass vials with septum.

10/pk.................................................................16475GBD
10/pk (septum version).................................16475GSD

Sterisart® NF Canister for Closed, Unvented Sample Containers
The 16476 is designed for sterility testing of closed, unvented sample containers. The 2.4cm long double-metal needle (built in venting) considerably reduces the dead volume, which can remain in the sample container during sampling. The resulting sample is pumped in equal volumes into the two Sterisart® containers and filtered. Unlike plastic needles, metal needles do not snap off when tilted under pressure. This benefit, together with the large protective plate on the spike, makes for easy stopper piercing and helps prevent injury to fingers by preventing breakage or slippage.

**Application:** SVPs** in closed glass vials with septum.

10/pk.................................................................16476GBD
10/pk (septum version).................................16476GSD

**Small Volume Parenterals**
Sterisart® NF Canister for Plastic Containers
The 16477 is designed for sterility testing of liquids in plastic containers. The unvented, non-coring needle with solid pointed tip and side opening minimizes clogging by particles when piercing the plastic container. The sample is pumped in equal volumes into the two Sterisart® containers and filtered. The enclosed venting needle guarantees venting of the container during sample transfers, rinsing procedures, and media transfers.

Application: LVPs*, SVPs**, and eye drops in closed plastic containers/vials, ampoules, or blow-fill-seal packs.

10/pk ........................................................................................................16477GBD

Sterisart® NF Canister for Containers with Male Luer Lock Connectors
The 16478 is equipped with a dual-needle metal spike with a vent filter connected to the Sterisart® NF system by a single hose and Y-distributor. A second shorter hose is attached to the other end of the Y-distributor fitted with a female luer lock connector. Using this connector, it is possible to draw samples from collapsible medical devices like bags fitted with male luer lock connectors. The dual-needle metal spike with vent filter is used to transfer rinsing solutions and/or nutrient media from closed vials.

Application: Medical devices, i.e. containers/bags with male luer lock connectors.

10/pk ........................................................................................................16478GBD
Sterisart® NF Gamma Tubing System
The 16470 is designed for dissolving and diluting powders with exceptionally low solubility. When used in combination with Sterisart® systems 16466 and 16467, the 16470 allows sterility testing of these powders in closed, unvented vials. The tubing system consists of a 3.6cm dual-needle metal spike (yellow color-coded) and a 2.3cm metal dual-needle spike, which are connected with each other by double tubing. Half the length of the double tubing is separated into single tubes identified by plastic ring sheaths.

Application: Difficult-to-dissolve powders in closed glass vials with septum (non-expanded).

10/pk ................................................................. 16470GBD

Sterisart® Venting Needle
4cm, stainless steel, gamma irradiated.

Application: Sterile venting of containers with rinsing solution and nutrient media (TSB, FTM).

50/pk ................................................................. 16596HNK
Combisart® Filter Station
Membrane Filtration Manifolds

Vented, Individual and Multi-Branch Systems
The Combisart® system enables you to select the optimal hardware and consumables for your needs in microbiological analysis and quality assurance. At the heart of the Combisart® system is a high-grade stainless steel manifold designed to accommodate most types of filter holders and funnels.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cat. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-branch manifold</td>
<td>16844</td>
</tr>
<tr>
<td>Combi.jet™ 2-branch manifold</td>
<td>16848CJ</td>
</tr>
<tr>
<td>3-branch manifold</td>
<td>16842</td>
</tr>
<tr>
<td>6-branch manifold</td>
<td>16843</td>
</tr>
<tr>
<td>Biosart® 250ml Funnel (autoclavable), Cat. no. 1640725ACK</td>
<td></td>
</tr>
<tr>
<td>100ml Stainless Steel Funnel Lid, Cat. no. 6981063</td>
<td></td>
</tr>
<tr>
<td>100ml Stainless Steel Funnel with Closure Clamp, Cat. no. 6981065</td>
<td></td>
</tr>
<tr>
<td>Minisart® Sterile Air Filter, Cat. no. 17575ACK</td>
<td></td>
</tr>
<tr>
<td>Universal Base with 50mm Frit, Cat. no. 1ZU0002</td>
<td></td>
</tr>
<tr>
<td>Open/Close Valve Lever</td>
<td></td>
</tr>
</tbody>
</table>

phone: (800) 266-2222
dai: (805) 346-2760
email: Sales@HardyDiagnostics.com
website: www.HardyDiagnostics.com
Features and Benefits

• Each filter station can be individually vented, ruling out secondary contamination of the underside of the filter.
• Easy for left or right-handed users, as funnels can be positioned to suit the individual user.
• Switch from reusable filter holders to disposable units without requiring new equipment.
• Base can be easily unscrewed, exposing all areas of the manifold to sterilization.
**Microsart® Combi.jet 2-Branch Manifold**

Combi.jet is a 2-branch stainless steel manifold for microbiological analysis. This manifold is specifically designed for use with the Microsart® e.jet pump. It can easily be connected and disassembled by the innovative quick connection coupling and nipples. Compact in size, Combi.jet is perfect for small, clean bench work stations. Combi.jet requires two stainless steel universal bases (Cat. no. 1ZU0002) to attach different funnel systems. Each.............................................................................................................. 16848CJ
Features and Benefits

• Compact design, small footprint, ideal for pharmaceutical applications.
• Sterile venting with two stainless steel three-way valves.
• Vacuum can be individually controlled for each filter holder.
• Each filter station can be vented separately.

• Easy to clean and sanitize.
• Smooth and reliable filtration functionality.
• No need for suction flasks or water traps.
• Made of high quality stainless steel.
• Accommodates various funnel types.
Combisart® Stainless Steel Reusable Funnels

For use with Combisart® Filter Station Manifolds

**Stainless Steel Lid for 100ml Funnel**
Each......................................................................................6981063

**Stainless Steel Lid for 500ml Funnel**
Each......................................................................................6981001

**Lid Seal for 100ml Stainless Steel Funnel**
Each......................................................................................6981064

**Lid Seal for 500ml Stainless Steel Funnel**
Each......................................................................................6981003

**100ml Stainless Steel Funnel with Closure Clamp**
Each......................................................................................6981065

**500ml Stainless Steel Funnel with Closure Clamp**
Each......................................................................................6981002
Microsart® @
Disposable Funnel System

For use with Combisart® Filter Station Manifolds

The Microsart® @ Funnel/Filter System combines a sterile, ready-to-use funnel and a built-in gridded membrane filter in one unit. The optimized design of Microsart® @ filter permits thorough rinsing of the system subsequent to filtration with no liquid retained in the filter funnel. Specifically developed for the detection and enumeration of microorganisms from pharmaceutical products.

Features and Benefits
• Ready-to-use.
• Sterile packed in bags.
• Built-in membrane filter to reduce accidental contamination.
• Funnel and a gridded membrane filter in one unit.
• Marked graduations for accurate sample volumes.
• Funnel made of polypropylene.

100ml volume, 47mm filter diameter, 0.45μm pore size, filter color: white with black grid.
60/pk ................................................................. 16D0110H6BL
100ml volume, 47mm filter diameter, 0.45μm pore size, filter color: green with dark green grid.
60/pk ................................................................. 16D021006BL
250ml volume, 47mm filter diameter, 0.45μm pore size, filter color: white with black grid.
48/pk ................................................................. 16D0125H6BK
250ml volume, 47mm filter diameter, 0.45μm pore size, filter color: green with dark green grid.
48/pk ................................................................. 16D022506BK

Lid for Microsart® Funnels
For use with Microsart® and Microsart® @
100ml and 250ml funnels.
100/bx ................................................................. 1ZSFK0007

Microsart® Funnel Dispenser
For reliable removal of sterile Microsart® and Microsart® @
100ml and 250ml funnels.
Each................................................................. 16A08
Microsart® Disposable Funnels

For use with CombiSart® Filter Station Manifolds

Microsart® Funnels are sterile plastic funnels that allow quick performance of filtrations required for routine testing.

Features and Benefits
- Reliable results – use a new, sterile funnel for each test, avoiding possible cross contamination.
- Time-saving – just change the funnel rather than spending time sanitizing it.
- Simple handling – no more holding hot funnels.
- Sterile-packed.
- Funnel made of polypropylene.
- Packaged in sleeves.

100ml volume, 100/pk ................................................... 16A0710N
250ml volume, 96/pk ................................................... 16A0725N

Lid for Microsart® Funnels
For use with Microsart® and Microsart® @ Funnel/Filter
100ml and 250ml.
100/bx ................................................................. 1ZSFK0007

Microsart® Funnel Dispenser
For reliable removal of sterile Microsart® and Microsart® @ 100ml and 250ml funnels.
Each .................................................. 16A08
The Microsart® e.jet is a laboratory vacuum pump able to create sufficient vacuum filtration for transferring the filtered liquid directly to waste. This second generation of Microsart® e.jet achieves a better trans-membrane pressure and a higher flow rate. Provides constant flow rates and smooth and reliable filtration.

**Microsart® e.jet Pump** .................................................. 166MP4

**Quick Connect Silicone Tubing**
for connecting manifold with e.jet pump .............................................. 1ZA0006

**Quick Connect Silicone Tubing**
for connecting e.jet pump with receptacle flask .............................. 1ZAS0007

Enough suction for 1-3 stage manifolds only. Call (800) 266-2222 for a selection of more powerful pumps.

**250ml Glass Receptacle Flask**
Heavy wall, graduated

Flask features heavy-duty rim to reduce chipping, white, permanent graduations, and large marking squares. Made from high-quality borosilicate. Borosilicate glass provides uniform wall thickness resulting in the optimum balance between thermal shock resistance and mechanical strength.

- Capacity - 250ml
- Graduation Range - 75 to 250ml
- Graduation Interval - 25ml
- Approximate Height - 86 x 160mm

6/pk .......................................................................................... 20074250
Gridded Membrane Filters

Cellulose nitrate (cellulose ester) membrane filters are offered in a choice of four different color/grid combinations to suit your specific test application and provide a high-contrast background. For simple evaluation of the results, the grid divides the filtration area into 130 squares, each measuring 3.1mm x 3.1mm. The membrane filters are individually packaged and sterilized and undergo stringent quality assurance testing. The certificate included in every package documents the quality assurance tests as well as the compliance of the 0.45μm membrane filter with ISO 7704. The special pore structure of the new 0.45μm high-flow membrane filters allow shorter filtration times due to higher flow rates and throughputs.

### Cellulose Nitrate (CN) Membrane Filter
*Individually wrapped on single sheet, sterile packed, 47mm*

<table>
<thead>
<tr>
<th>Filter Color / Grid</th>
<th>Pore Size</th>
<th>Pack Size</th>
<th>Cat. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/black</td>
<td>0.45μm</td>
<td>100</td>
<td>1140647ACN</td>
</tr>
<tr>
<td>White/black</td>
<td>0.45μm High-Flow</td>
<td>100</td>
<td>114H647ACN</td>
</tr>
<tr>
<td>Gray/white</td>
<td>0.45μm</td>
<td>100</td>
<td>1300647ACN</td>
</tr>
<tr>
<td>Green/dark green</td>
<td>0.45μm</td>
<td>100</td>
<td>1380647ACN</td>
</tr>
<tr>
<td>White/green</td>
<td>0.45μm</td>
<td>100</td>
<td>1390647ACN</td>
</tr>
<tr>
<td>White/green</td>
<td>0.45μm High-Flow</td>
<td>100</td>
<td>139H647ACN</td>
</tr>
</tbody>
</table>

### Microsart® e.motion Membrane Filters
- For use with Microsart® e.motion, motion activated filter dispenser.
- Filters are individually sterile-sealed on a band.
- Special pleating and shape of sealing band around membrane filters ensures perfectly flat and uniform dispensing of individual filters.

*Individually wrapped on pleated rolls, sterile packed, 47mm*

<table>
<thead>
<tr>
<th>Filter Color / Grid</th>
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<th>Pack Size</th>
<th>Cat. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/black</td>
<td>0.45μm</td>
<td>300</td>
<td>11406Z47SCM</td>
</tr>
<tr>
<td>White/black</td>
<td>0.45μm High-Flow</td>
<td>300</td>
<td>114H6Z47SCM</td>
</tr>
<tr>
<td>White/black</td>
<td>0.45μm High-Flow</td>
<td>450</td>
<td>114H6Z47SFM</td>
</tr>
<tr>
<td>Gray/white</td>
<td>0.45μm</td>
<td>300</td>
<td>13006Z47SCM</td>
</tr>
<tr>
<td>Green/dark green</td>
<td>0.45μm</td>
<td>300</td>
<td>13806Z47SCM</td>
</tr>
<tr>
<td>White/green</td>
<td>0.45μm</td>
<td>300</td>
<td>13906Z47SCM</td>
</tr>
<tr>
<td>White/green</td>
<td>0.45μm High-Flow</td>
<td>300</td>
<td>139H6Z47SCM</td>
</tr>
</tbody>
</table>
Accessories

Microsart™ e.motion Membrane Filter Dispenser
The membrane filters are automatically released from their sterile packaging at the touch of a button or hands-free when the optical sensor detects approaching tweezers.

Features and Benefits
• Sprocket feed roll technology for reliable filter dispensing.
• Specially developed controller prevents dispensing several filters at a time.
• Compact design for quick and easy cleaning.
• Easy insertion of the filter roll.
• Light weight.
• Optional pedal switch.

Microsart™ e.motion Dispenser.................................16712
Pedal Switch...........................................................1ZE0028

LabFlame IR Loop Sterilizer, Bunsen Burner
LabFlame IR is optimized for use in microbiology laboratories.
• Rapid and precise ignition.
• One piece stainless steel housing, free of gaps or rims, easy to clean, fully UV resistant.
• Optimized air-flow system provides a uniform and constant flame, even in safety cabinets with horizontal or vertical air flow.
• Connectable to any kind of gas source.
• Automatically cuts gas supply after every flame extinguish and checks burner temperature.
• Hands-free operation with foot-switch or touch-free IR-sensor ignition.
Each.............................................................................LF8000000

State-of-the-art

Tweezers, Stainless Steel
Membrane filters should only be handled with suitable tweezers in order to avoid contamination which can result from hand contact.
• Stainless steel tweezers can be flamed and are autoclavable.
• Blunt-edged tips for a careful, firm hold of the membrane filter.
Each.............................................................................16625
Prepared Culture Media
(60mm Plates)

A8 Agar
For the selective isolation of Mycoplasma hominis and Ureaplasma urealyticum. 10/pk............................................ G02

Barney Miller Agar
For the cultivation of microorganisms significant in the brewing industry. 10/pk............................................ G93

Corn Meal Agar with Tween®
For the cultivation of fungi. Induces chlamydospore formation by Candida spp. 10/pk.................................G101

KF Streptococcus Agar
For the selective isolation and enumeration of fecal streptococci (including Enterococcus) from water and food samples. 10/pk .................................................G276

Lactobacilli MRS Agar with Cyclohexamide
For the selective isolation and cultivation of Lactobacillus spp. 10/pk.............................................................G179

m-EI Agar
For the selective chromogenic detection and enumeration of Enterococci in water. 10/pk..........................G124

m-Endo LES Agar
For the enumeration of coliforms from water. 10/pk.................................................................G128

m-FC Agar with 1% Rosolic Acid
For the isolation and enumeration of fecal coliforms. 10/pk.................................................................G126

m-HPC (Heterotrophic Plate Count) Agar
For the enumeration of heterotrophic organisms in water. 10/pk.............................................................G95

m-PA Agar
For the cultivation and enumeration of Pseudomonas aeruginosa in water. 10/pk.................................G133

m-PA-C Agar
For the selective recovery and enumeration of Pseudomonas aeruginosa in water. 10/pk......................G150

m-TEC Agar, Modified
For selective chromatographic differentiation and enumeration of E. coli in water. 10/pk.................................G106

Nutrient Agar with MUG
For the detection and enumeration of E. coli in water. 10/pk.................................................................G114

Orange Serum Agar
For the cultivation and enumeration of aciduric bacteria and fungi by membrane filtration methods. 10/pk .................................................................G91

Potato Dextrose Agar with TA (Tartaric Acid)
For the cultivation and enumeration of fungi. 10/pk .................................................................G94

PPLO Selective Agar
For the selective isolation of pleuropneumonia-like organisms, especially Mycoplasma pneumoniae. 10/pk .................................................................G04

PPLO Selective Agar, TAAP
PPLO Selective Agar plus thallium acetate, amphotericin B, and penicillin G to prevent bacterial overgrowth. 10/pk .................................................................G248

Pseudomonas Isolation Agar
For the selective isolation of Pseudomonas aeruginosa. 10/pk.................................................................G145

R2A Agar
For the detection of heterotrophic bacteria in water. 10/pk .................................................................G03

Sabdex Agar with Gentamicin and Chloramphenicol
For the selective cultivation of fungi and dermatophytes. 10/pk.................................................................G159

Skim Milk Agar
For the cultivation and differentiation of microorganisms based on proteolytic activity. 10/pk.................................G138

SP4 Agar with Arginine
For the selective cultivation and differentiation of Mycoplasma species based on the ability to utilize arginine. 10/pk .................................................................G32

SP4 Agar with Glucose
For the selective cultivation and differentiation of mycoplasma including Mycoplasma hominis, Mycoplasma pneumoniae, and Ureaplasma urealyticum. 10/pk .................................................................G21
Tryptic Soy Agar
For use as a general growth medium for the isolation and cultivation of microorganisms. 10/pk........................................G151

Universal Beer Agar with Cyclohexamide
For the selective isolation and cultivation of microorganisms significant in the brewing industry. 10/pk.....................................................G151

XLT-4 Agar
For the selective isolation of non-typhi Salmonella spp. 10/pk.................................................................G277

Prepared Culture Media
(100mm Plates)

Cetrimide Selective Agar, USP
For the selective isolation of Pseudomonas aeruginosa. 15x100mm plate, 18ml fill, 10/pk .................................G18

Columbia Agar, USP
For the isolation and cultivation of non-fastidious and fastidious microorganisms. 15x100mm plate, 18ml fill, 10/pk ......................G250

MacConkey Agar, USP
For the isolation and differentiation of Gram-negative bacteria. 15x100mm plate, 19ml fill, 10/pk ..........................G603
15x100mm plate, 19ml fill, 100/bx.................................G603BX

Mannitol Salt Agar (MSA), USP
For the selective isolation and differentiation of Staphylococcus spp. (This product is for laboratory use only; not for human diagnostic use.) 15x100mm plate, 18ml fill, 10/pk ..........................G602

Pseudomonas Agar F
For the identification of Pseudomonas aeruginosa and the detection of fluorescein. 15x100mm plate, 18ml fill, 10/pk ..................................G198

Pseudomonas Agar P
For the identification of Pseudomonas aeruginosa and the detection of pyocyanin. 15x100mm plate, 18ml fill, 10/pk ..................................G201

R2A Agar
For the detection of heterotrophic bacteria in water samples. 15x100mm plate, 26ml fill, 20/pk ...............................G54

R2A Agar, Irradiated, Triple Bagged
For the detection of heterotrophic bacteria in water. 15x100mm plate, 26ml fill, 10/pk .................................W3540

WL Differential Medium
For the isolation of bacteria in brewing and fermentation processes. 10/pk..................................................G163

WL Nutrient Agar with Gentamicin and Streptomycin
For the cultivation of yeast and mold in the fermentation process. 10/pk ..................................................G191

Reinforced Clostridial Medium with Na Lactate
For the cultivation and enumeration of clostridia and other anaerobic and facultative bacteria. 15x100mm plate, 18ml fill, 10/pk ..................................G351

Sabouraud Dextrose Agar, Irradiated, Triple Bagged
For the detection and enumeration of fungi. 15x100mm plate, USP, 26ml fill, 10/pk ..................................W1770

Tryptic Soy Agar (TSA), USP
For the cultivation of microorganisms. Also known as Soybean-Casein Digest Agar. 15x100mm plate, 18ml fill, 10/pk .........................G601

Tryptic Soy Agar, Irradiated, Triple Bagged, USP
For the cultivation of microorganisms. 15x100mm plate, 32ml fill, 10/pk ..............................................W3670

Tryptic Soy Agar with Lecithin and Tween® 80
For the cultivation and enumeration of microorganisms. 15x100mm plate, 27ml fill, USP, 10/pk .........................G41

Violet Red Bile with Glucose Agar, USP
For the detection of coliforms. 15x100mm plate, 18ml fill, 10/pk ..................................................G178

Xylose Lysine Deoxycholate (XLD) Agar, USP
For the selective isolation of pathogenic, Gram-negative enteric bacteria. 15x100mm plate, 18ml fill, 10/pk ..........................G604
Bottled Media with Septum
For Sterility Testing<USP 71> by Direct Innoculation or Closed System Testing

Septum cover available by special request

A 20ml glass bottle with flip seal
B 100ml glass bottle with flip seal
C 125ml polycarbonate bottle
D 200ml glass bottle with flip seal
E 16x125mm glass tube
F 600ml glass bottle
G 500ml polycarbonate bottle
H 1L polypropylene bottle
Fluid A, USP
A rinsing and diluting fluid.
B 100ml glass bottle, 100ml fill, 20/pk..................U109
D 200ml glass bottle, 200ml fill, 10/pk..................U209
G 500ml polycarbonate bottle, 300ml fill, 10/pk.....U349
F 600ml glass bottle, 300ml fill, 10/pk..................U342
F 600ml glass bottle, 600ml fill, 10/pk..................U249

Fluid D, USP
A rinsing and diluting fluid.
B 100ml glass bottle, 100ml fill, 20/pk...............U110
F 600ml glass bottle, 300ml fill, 10/pk..................U346

Fluid K, USP
To ensure sterility of pharmaceuticals and medical devices.
F 600ml glass bottle, 300ml fill, 10/pk..................U348

Fluid Thioglycollate Broth with Indicator, USP
For the cultivation of microorganisms and USP sterility procedures.
E 16x125mm glass tube, 10ml fill, 20/pk.............K282
A 20ml glass bottle, 15ml fill, 50/pk...............U66
A 20ml glass bottle, 20ml fill 50/pk..................U68
B 100ml glass bottle, 100ml fill, 20/pk..............U84
C 125ml polycarbonate bottle, 100ml fill, 20/pk.....U121
D 200ml glass bottle, 150ml fill, 10/pk...............U207
D 200ml glass bottle, 150ml fill, 21/pk...............U426
F 600ml glass bottle, 300ml fill, 10/pk..................U427
F 600ml glass bottle, 500ml fill, 10/pk..................U273

Fluid Thioglycollate with Lecithin and Tween® 80
For use in detecting microorganisms in normally sterile materials.
D 200ml glass bottle, 150ml fill, 21/pk.................U430

Phosphate Buffered Saline with Tween (0.02M)
For use in the determination of total bioburden levels in unsterilized product.
H 1L polypropylene bottle, 300ml fill, 10/pk.........U323
H 1L polypropylene bottle, 600ml fill, 10/pk.........U326

Reinforced Clostridial Medium, USP
For the cultivation of Clostridium spp. and other anaerobic and facultative bacteria.
C 125ml polycarbonate bottle, 100ml fill, 16/pk......U172

Tryptic Soy Broth, USP
For use as a general purpose medium for the isolation and cultivation of bacteria and fungi.
G 16x125mm glass tube, 7ml fill, 20/pk..............K283
G 16x125mm glass tube, 10ml fill, 20/pk..............K82
A 20ml glass bottle, 10ml fill, 50/pk..................U8210
A 20ml glass bottle, 15ml fill, 50/pk..................U82
A 20ml glass bottle, 20ml fill, 50/pk..................U38
B 100ml glass bottle, 50ml fill, 20/pk...............U267
B 100ml glass bottle, 70ml fill, 20/pk...............U79
B 100ml glass bottle, 100ml fill, 20/pk..............U46
B 100ml glass bottle, unlabeled, 100ml fill, 20/pk...U56
D 200ml glass bottle, 150ml fill, 12/pk..............U420
C 125ml polycarbonate bottle, 100ml fill, 16/pk.....U141
F 600ml glass bottle, 300ml fill, 10/pk..................U421
F 600ml glass bottle, 400ml fill, 12/pk...............U271
F 600ml glass bottle, 500ml fill, 10/pk..................U274

Tryptic Soy Broth with 10% Glycerol
For the preservation of microorganisms by freezing.
B 100ml glass bottle, 100ml fill, 20/pk...............U127

Tryptic Soy Broth with Lecithin and Tween® 80
For the cultivation of microorganisms.
A 20ml glass bottle, 10ml fill, 50/pk..................U423
D 200ml glass bottle, 150ml fill, 21/pk...............U424
F 600ml glass bottle, 300ml fill, 10/pk...............U425

Sabouraud Dextrose Broth, USP
For the cultivation of fungi.
C 125ml polycarbonate bottle, 100ml fill, 16/pk......U73

Saline, 0.85% with 0.05% Tween® 80
For preparing dilutions and suspensions of microorganisms.
B 100ml glass bottle, 100ml fill, 20/pk...............U330
Quality Control Organisms for Water Testing from Microbiologics

KWIK-STIK™, KWIK-STIK™ Plus and LYFO DISK®

KWIK-STIK™ is well-known for its clever design and accurate, repeatable results. Each KWIK-STIK™ device features a single QC microorganism strain in a lyophilized pellet, a reservoir of hydrating fluid, and an inoculating swab. For added convenience, a peel-off identification label is included for easy documentation. The KWIK-STIK™ is available in packs of 2 or 6.

KWIK-STIK™ Plus microorganisms have the same characteristics as the KWIK-STIK™ but contains an organism that has had only two passages from ATCC origin. Five swabs a single strain per package. Rehydrating fluid is built into the KWIK-STIK™ unit.

LYFO DISK® is a lyophilized pellet containing a single strain of a QC microorganism and is the most economical reference stock culture option. LYFO DISK® is known for its ease-of-use; simply re-hydrate the pellet and inoculate. LYFO DISK® is available in a re-sealable vial containing 6 pellets of a single QC microorganism strain.

Aeromonas hydrophila ATCC® 35654™

KWIK-STIK™, 2/pk ....................................................... 0910P
6/pk ...................................................................... 0910K
LYFO DISK®, 6 pellet vial ........................................ 0910L

Aspergillus brasiliensis ATCC® 16404™

KWIK-STIK™, 2/pk ....................................................... 0392P
6/pk ...................................................................... 0392K
KWIK-STIK™ Plus, 5/pk ........................................... 0392X
LYFO DISK®, 6 pellet vial ........................................ 0392L

Bacillus spizizenii ATCC® 6633™*

KWIK-STIK™, 2/pk ....................................................... 0486P
6/pk ...................................................................... 0486K
KWIK-STIK™ Plus, 5/pk ........................................... 0486X
LYFO DISK®, 6 pellet vial ........................................ 0486L

Candida albicans ATCC® 10231™

KWIK- STIK™, 2/pk ....................................................... 0443P
6/pk ...................................................................... 0443K
KWIK- STIK™ Plus, 5/pk ........................................... 0443X
LYFO DISK®, 6 pellet vial ........................................ 0443L

Enterobacter aerogenes ATCC® 13048™

KWIK- STIK™, 2/pk ....................................................... 0306P
6/pk ...................................................................... 0306K
KWIK- STIK™ Plus, 5/pk ........................................... 0306X
LYFO DISK®, 6 pellet vial ........................................ 0306L

Enterobacter cloacae ATCC® 23355™

KWIK- STIK™, 2/pk ....................................................... 0313P
6/pk ...................................................................... 0313K
LYFO DISK®, 6 pellet vial ........................................ 0313L

Enterococcus faecalis ATCC® 19433™

KWIK- STIK™, 2/pk ....................................................... 0367P
6/pk ...................................................................... 0367K
LYFO DISK®, 6 pellet vial ........................................ 0367L

Enterococcus faecalis ATCC® 29212™

KWIK- STIK™, 2/pk ....................................................... 0366P
6/pk ...................................................................... 0366K
KWIK- STIK™ Plus, 5/pk ........................................... 0366X
LYFO DISK®, 6 pellet vial ........................................ 0366L

Escherichia coli ATCC® 8739™

KWIK- STIK™, 2/pk ....................................................... 0483P
6/pk ...................................................................... 0483K
KWIK- STIK™ Plus, 5/pk ........................................... 0483X
LYFO DISK®, 6 pellet vial ........................................ 0483L

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**Look for the ATCC Licensed Derivative “emblem” for products derived from ATCC® cultures. These products will incur a hazmat shipping fee. You can expect your order to arrive 3 to 5 days after order placement.
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The Epower™ lyophilized and assayed control microorganism pellets add convenience to special projects and internal proficiency plans. Offers microorganism preparations manufactured at a predetermined concentration for versatile laboratory testing requirements. Process controls from one hundred to over a billion CFU/prepare. Shelf life of 10-20 months.

**Features and Benefits:**
- Quantitative
- Refrigerated storage
- Peel-off Certificate of Assay
- Online Certificate of Analysis
- Traceable to reference culture
- Product warranty
- Saves time and reduces labor by delivering a specific number of colony forming units (CFU)
- Easily manipulated to deliver desired CFU levels

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<th>Microorganism</th>
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<th>CFU per pellet, 10 pellet vial</th>
<th>ATCC® No.</th>
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<td>1.0 to 9.9 x 10⁴ CFU</td>
<td>0360E4</td>
<td></td>
</tr>
<tr>
<td>Staphylococcus epidermidis ATCC® 12228™</td>
<td></td>
<td>1.0 to 9.9 x 10³ CFU</td>
<td>0371E3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0 to 9.9 x 10⁴ CFU</td>
<td>0371E4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0 to 9.9 x 10⁸ CFU</td>
<td>0371E8</td>
<td></td>
</tr>
</tbody>
</table>

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*Look for the ATCC Licensed Derivative® emblem for products derived from ATCC cultures. These products will incur a hazmat shipping fee. You can expect your order to arrive 3 to 5 days after order placement.*
Epower™ CRM lyophilized microorganisms are available in concentrations ranging from $10^2$ to $10^8$ CFU per pellet. For added convenience, a peel-off Certificate of Assay is included for quality control documentation. Epower™ CRM is packaged in a vial containing 10 pellets of a single microorganism strain.

For Enumeration Test Methods such as:
• Membrane Filtration
• Heterotrophic Plate Count
• Most Probable Number
• Multiple Tube Fermentation

**Bacillus spizizenii ATCC® 6633™**
1.0 to 9.9 x $10^3$ CFU per pellet, 10 pellet vial....0486E3CRM
1.0 to 9.9 x $10^4$ CFU per pellet, 10 pellet vial....0486E4CRM
1.0 to 9.9 x $10^6$ CFU per pellet, 10 pellet vial....0486E6CRM

**Candida albicans ATCC® 10231™**
1.0 to 9.9 x $10^4$ CFU per pellet, 10 pellet vial....0443E4CRM

EZ-Accu Shot™ is designed to deliver less than 100 CFU per 0.1 ml of hydrated suspension. Each 1.2 ml vial of hydrated suspension offers 10 inocula. For added convenience, a peel-off Certificate of Assay is included for quality control documentation.

**EZ-Accu Shot™ kits include:**
• 5 vials of a single enumerated QC microorganism (1 lyophilized pellet per vial)
• 5 vials of hydrating fluid (1.2 ml in each vial)
• Peel-Off Certificate of Assay

**Aspergillus brasiliensis ATCC® 16404™**............0392A
**Bacillus spizizenii ATCC® 6633™**..........................0486A
**Candida albicans ATCC® 10231™**..............................0443A
**Enterobacter aerogenes ATCC® 13048™**...............0306A
**Escherichia coli ATCC® 8739™**.................................0483A
**Pseudomonas aeruginosa ATCC® 9027™**........0484A
**Salmonella Typhimurium ATCC® 14028™**.......0363A
**Staphylococcus aureus subsp. aureus**
ATCC® 6538™.............................................................0485A

**Staphylococcus aureus subsp. aureus**
ATCC® 25923™..........................................................0360A
**Staphylococcus epidermidis**
ATCC® 12228™..........................................................0371A
**EZ CFU™ and EZ CFU™ One Step**

EZ-CFU™ is used to perform Growth Promotion Tests of culture media with ease. EZ-CFU™ lyophilized QC microorganism preparations deliver 10-100 CFU per 0.1 ml when processed as directed. A one log dilution in pH 7.2 phosphate buffer is required. Following the dilution step, EZ-CFU™ provides over 90 inocula using the same suspension. For added convenience, a peel-off Certificate of Assay is included for quality control documentation.

**EZ-CFU™ kits include:**
- 20 lyophilized pellets of a single quantitative QC microorganism
- 10 vials of hydrating fluid (2 ml in each vial)
- Peel-Off Certificate of Assay

**EZ-CFU™ One Step** quantitative QC microorganism preparations are used to perform Growth Promotion Tests of culture media with ease. No dilutions are required. EZ-CFU™ One Step is designed to deliver 10-100 CFU with each 0.1 ml inoculum. Each 2 ml vial of hydrated suspension offers 19 inocula. EZ-CFU™ One Step can be used for up to eight hours after hydration if the suspension is refrigerated between uses**. For added convenience, a peel-off Certificate of Assay is included for quality control documentation.

**EZ-CFU™ One Step kits include:**
- 20 lyophilized pellets of a single quantitative QC microorganism
- 10 vials of hydrating fluid (2 ml in each vial)
- Peel-Off Certificate of Assay

**Aspergillus brasiliensis ATCC® 16404™**
- EZ-CFU™ .......................................................... 0392C
- EZ-CFU™ One Step ............................................. 0392Z

**Bacillus spizizenii ATCC® 6633™**
- EZ-CFU™ .......................................................... 0486C
- EZ-CFU™ One Step ............................................. 0486Z

**Candida albicans ATCC® 10231™**
- EZ-CFU™ .......................................................... 0443C
- EZ-CFU™ One Step ............................................. 0443Z

**Enterobacter aerogenes ATCC® 13048™**
- EZ-CFU™ .......................................................... 0306C
- EZ-CFU™ One Step ............................................. 0306Z

**Enterococcus faecalis ATCC® 29212™**
- EZ-CFU™ .......................................................... 0366C
- EZ-CFU™ One Step ............................................. 0366Z

**Escherichia coli ATCC® 8739™**
- EZ-CFU™ .......................................................... 0483C
- EZ-CFU™ One Step ............................................. 0483Z

**Escherichia coli ATCC® 25922™**
- EZ-CFU™ .......................................................... 0335C

**Pseudomonas aeruginosa ATCC® 9027™**
- EZ-CFU™ .......................................................... 0484C
- EZ-CFU™ One Step ............................................. 0484Z

**Pseudomonas aeruginosa ATCC® 27853™**
- EZ-CFU™ .......................................................... 0353C
- EZ-CFU™ One Step ............................................. 0353Z

**Salmonella Typhimurium ATCC® 14028™**
- EZ-CFU™ .......................................................... 0363C
- EZ-CFU™ One Step ............................................. 0363Z

**Staphylococcus aureus ATCC® 6538™**
- EZ-CFU™ .......................................................... 0485C
- EZ-CFU™ One Step ............................................. 0485Z

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Lab-Elite™ Certified Reference Material

Lab-Elite™ Certified Reference Material (CRM) helps ISO 17025 accredited laboratories meet the requirements of this standard. Lab-Elite™ Certified Reference Material is delivered in an easy-to-use KWIK-STIK™ format and includes a Certificate of Analysis inside the canister. Perfect for validation and verification of processes and instruments.

Kit Includes:
- One self-contained device including a lyophilized microorganism pellet, reservoir of hydrating fluid, and inoculating swab (KWIK-STIK™ format)
- Certificate of Analysis in the canister

Features and Applications:
- Easy-to-use KWIK-STIK format
- Traceable to reference culture
- Highly characterized microorganisms
- Supported by the highest accreditations in the industry
- For use in ISO 17025 accredited labs
- Quality Control Research
- For validation and verification of processes and instruments

Aspergillus brasiliensis ATCC® 16404™......0392CRM
Bacillus spizizenii ATCC® 6633™............0486CRM
Candida albicans ATCC® 10231™............0443CRM
Enterobacter aerogenes ATCC® 13048™.....0306CRM
Enterococcus faecalis ATCC® 19433™......0367CRM
Enterococcus faecalis ATCC® 29212™......0366CRM
Escherichia coli ATCC® 8739™..............0483CRM
Escherichia coli ATCC® 25922™............0351CRM
Klebsiella pneumoniae ATCC® 13883™......0351CRM

Staphylococcus aureus ATCC® 25923™........0360C
Staphylococcus epidermidis ATCC® 12228™.0371C
Streptococcus pyogenes ATCC® 19615™......0385C

Pseudomonas aeruginosa ATCC® 9027™.......0484CRM
Pseudomonas aeruginosa ATCC® 2783™.......0353CRM
Salmonella Typhimurium ATCC® 14028™....0363CRM
Staphylococcus aureus ATCC® 6538™........0485CRM
Staphylococcus aureus ATCC® 25923™.......0360CRM
Staphylococcus epidermidis ATCC® 12228™.0371CRM
Streptococcus pyogenes ATCC® 19615™......0385CRM