# Reliable sterile filtration. Consistent cultures.

MilliporeSigma is the U.S. and Canada Life Science business of Merck KGaA, Darmstadt, Germany.

Millipore®

Preparation, Separation, Filtration & Monitoring Products

# Millipore® – the name you trust for sterile filtration

Millipore® is the brand of choice for sterile filters–for everything from media preparation for your cell culture, to sterilization of critical drug compounds:

## Selection

From 1 mL to 20 L, we offer an array of both vacuum- and pressure-driven devices that incorporate our long-trusted membrane technology.

## Expertise

With over 50 years of expertise in the sterile filtration business, we set the industry standard for high performance membrane technology and application in sterile filtration.

## Innovation

As protocols requiring sterile filtration evolve, we continually qualify our filter systems to provide application-specific data.

## Improving on Sustainability

We offer Stericup® E and Steritop® E sterile filtration devices, designed to ensure trouble-free cell culture, while diminishing environmental impact. Groundbreaking device design maintains exceptional Stericup® filtration while dramatically reducing the use of disposable plastic and packaging materials. (see p. 8)

## Membrane Technology

Sterile filtration performance depends on the quality of the membranes used. Our Millipore Express® PLUS, Durapore®, MF-Millipore™ and Fluoropore™ brand membranes set the industry standard for their application-specific properties (see below).

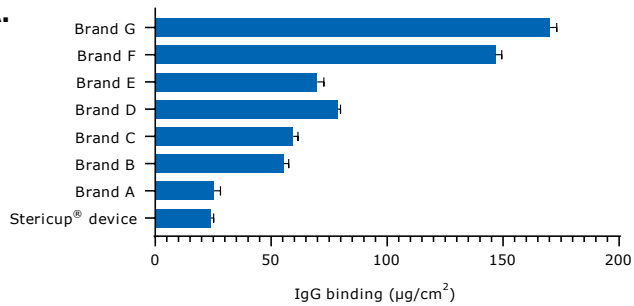
To learn more, please visit:
**SigmaAldrich.com/membrane-center**

## Fit-for-Application Membrane Chemistries

- Fastest flow, low protein-binding of aqueous solutions with Millipore Express® and Express® PLUS polyethersulfone (PES) membrane devices
- Fast flow and low protein-binding Mixed Cellulose Esters (MCE)
- Broad chemical compatibility and very low protein-binding polyvinylidene fluoride (PVDF)

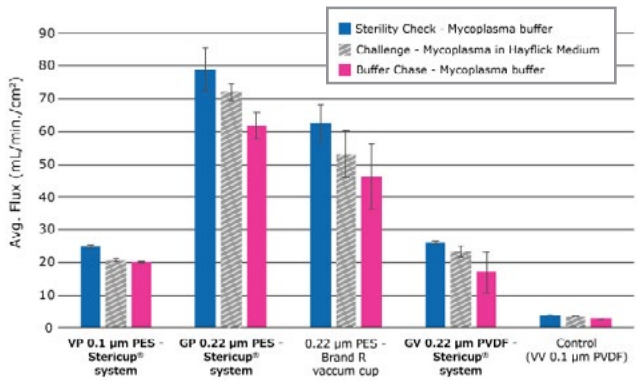
To learn more, visit:
**SigmaAldrich.com/SterileFiltration**

**A.**



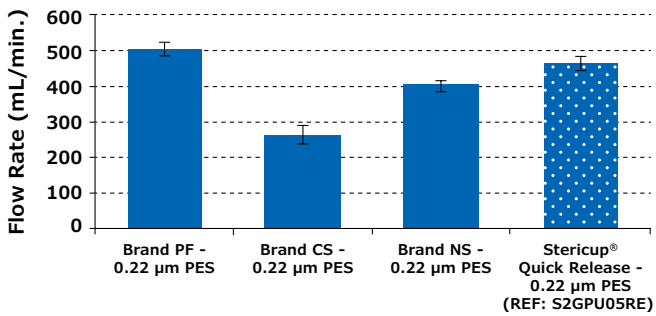

A. Amount of $^{125}$I-goat IgG bound per square area of PES filters from different sterile vacuum filtration devices. The amount of bound IgG protein ranged from ~24 µg/cm² to 170 µg/cm². The PES filter from the Stericup® sterile vacuum filtration device exhibited the lowest binding of all devices tested. More information at: **SigmaAldrich.com/Protein-Binding**

**B.**




B. Calculated flux for 0.1 and 0.22 µm PES and PVDF membrane Filters. VP = 0.1 µm PES membrane. GP = 0.22 µm PES membrane. GV = 0.22 µm PVDF membrane. VV = 0.1 µm PVDF membrane. More information at: **SigmaAldrich.com/Mycoplasma-Clearance**

**C.**




C. Flow rate comparison for the sterile filtration of FBS. Brand CS had the lowest flow rate at 4.49mL/sec, followed by Brand NS (6.72mL/ sec), Stericup® Quick Release (7.80mL/sec), and Brand PF with the highest flow rate at 8.44mL/sec. More information at: **SigmaAldrich.com/FBS-Filtration**

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Learn more

## What people are saying...

"For over 40 years we've trusted MilliporeSigma to provide the quality filtration tools we need."

James T. Voss, NRRPT, CHP Fellow, Health Physics Society, President of Voss Associates.

"Trusted partners like MilliporeSigma are rare but central to our success."

Dr. Michael West, CEO, BioTime, Inc., Renowned thought leader in stem cell therapeutics

"I found that both the Stericup® E and Steritop® E were incredibly easy to use. I really appreciate that both the Stericup® E and Steritop® E are designed to reduce plastic use in the lab without compromising performance. The Stericup® E and Steritop® E are an ideal way for our lab to address some of the criteria outlined by LEAF (Laboratory Efficiency Assessment Framework) which helps us progress toward more sustainable practices in the lab."

Bianca Briscas, University of NSW

# Summary of Sterile Filtration Products

## Vacuum filtration devices for cell culture media preparation

| Description | Pore Size (µm) | Membrane | Maximum Process Volume | |
|---|---|---|---|---|
| Stericup® Quick Release Filtration | 0.1<br>0.22<br>0.45 | Millipore Express® PLUS (PES), Durapore® (PVDF) | 150 mL<br>250 mL<br>500 mL<br>1000 mL | |
| Steritop® Quick Release Bottle-Top Filtration Units | 0.1<br>0.22 | Millipore Express® PLUS (PES), Durapore (PVDF) | 150 mL<br>250 mL<br>500 mL<br>1000 mL | |
| Stericup® E Filtration Units | 0.22 | Millipore Express® PLUS (PES) | 500 mL<br>1000 mL | |
| Steritop® E Bottle-Top Filtration Units | 0.22 | Millipore Express® PLUS (PES) | All Volumes | |
| Steriflip® Filtration Units | 0.22<br>0.45 | Millipore Express® PLUS (PES), Durapore® (PVDF), Nylon Net | 50 mL | |
| Click Seal Receiver Bottles and Caps | | | 250 mL<br>500 mL<br>1000 mL | |

## Sterile syringe filters for cell culture media preparation and small volume filtration

| Description | Pore Size (µm) | Membrane | Maximum Process Volume | |
|---|---|---|---|---|
| Millex® Syringe Filters (4, 13, 25 mm) | 0.2<br>0.22<br>0.45<br>0.8<br>5.0 | Millipore Express® PLUS (PES), Durapore® (PVDF), MCE, hydrophilic PTFE | 1 – 100 mL | |
| Millex® Syringe Filters (33 mm) | 0.1<br>0.22<br>0.45 | Millipore Express® PLUS (PES), Durapore® (PVDF), MCE | 10 – 200 mL | |

## Large-scale sterile filtration devices

| Description | Pore Size (µm) | Membrane | Maximum Process Volume | |
|---|---|---|---|---|
| Stericap™ PLUS Vacuum-driven Filters | 0.22 | Millipore Express® PLUS (PES) | 2 – 10 L | |
| Sterivex® Pressure-driven Filters | 0.22<br>0.45 | Millipore Express® PLUS (PES), Durapore® (PVDF) | Up to 2 L | |
| Millex®-GP 50 mm Pressure-driven Filters | 0.22 | Millipore Express® PLUS (PES) | Up to 4 L | |
| Steripak™ Pressure-driven Filters | 0.22 | Millipore Express® PLUS (PES) | 10 L<br>20 L | |

## Hydrophobic filters for gas filtration

| Description | Pore Size (µm) | Inlet-Outlet Fittings | Membrane | |
|---|---|---|---|---|
| Dualex™ and Millex®-FG 25 mm Syringe Filters | 0.2<br>0.22 | FLL-MLS, FLL-MLL, FLS-MLS, FLL-Spike | Hydrophobic PTFE, Hydrophobic PVDF | |
| Millex® 50 mm for gas filtration and protection of vacuum pumps | 0.2<br>1.0 | Stepped hose barb and/or 1/8 in. NPTM | Hydrophobic PTFE | |

FLL = Female Luer-Lok®
FLS = Female Luer slip
MLL = Male Luer-Lok®
MLS = Male Luer slip

# Bench-scale Filters

## Stericup® & Steritop® Filter Units

Stericup® and Steritop® sterile filtration devices combine superior flow rates and throughput with low non-specific binding and a stable, no-tip design.

### Fast flow, low-binding membranes

Membranes with low protein binding ensure that key growth factors and proteins won't be absorbed onto the filter. Millipore Express® PLUS membranes feature low protein binding and faster flow than other membranes. For applications that require ultra-low protein binding, use a device with a Durapore® PVDF membrane.

## Stericup® Quick Release Filtration Systems

### Work With Ease. Filter With Confidence.

Stericup® Quick Release Filtration Systems streamline your workflow with ergonomic design updates and safeguard your results with the proven performance of Millipore membranes.

1. Quarter-Turn Quick Release Funnel Removal
2. Frosted Writing Surface
3. Lighter Color for Legibility
4. Click-Seal Confidence Cap

### Additional Features:

- Cap Rests on the Side to Avoid Risk of Contamination
- Stackable Bottles to Save Space

Learn more about Stericup® Quick Release Filtration Systems at:
**SigmaAldrich.com/StericupQuickRelease**

# Stericup® Quick Release & Steritop® Filter Units

## Stericup® Filter Units

Stericup® Filtration Systems combine a filter unit with a receiver flask and cap for processing and storage.

| Description | Membrane/Application | Pore Size (µm) | Funnel Capacity (mL) | Receiver Bottle (mL) | Qty/Pk | Cat No. |
|---|---|---|---|---|---|---|
| Stericup®-GP Quick Release Filter Units† | Millipore Express® PLUS (PES)/fast filtration of tissue culture media and buffers | 0.22 | 150 | 150 | 12 | **S2GPU01RE** |
| | | | 250 | 250 | 12 | **S2GPU02RE** |
| | | | 500 | 500 | 12 | **S2GPU05RE** |
| | | | 500 | 1000 | 12 | **S2GPU10RE** |
| | | | 1000 | 1000 | 12 | **S2GPU11RE** |
| Stericup®-HV Quick Release Filter Units | Durapore®(PVDF)/filtration of high value biomolecules, lowest protein binding | 0.45 | 150 | 150 | 12 | **S2HVU01RE** |
| | | | 250 | 250 | 12 | **S2HVU02RE** |
| | | | 500 | 500 | 12 | **S2HVU05RE** |
| | | | 1000 | 1000 | 12 | **S2HVU11RE** |
| Stericup®-VP Quick Release Filter Units | Millipore Express® (PES) / removal of mycoplasma* | 0.1 | 250 | 250 | 12 | **S2VPU02RE** |
| | | | 1000 | 1000 | 12 | **S2VPU11RE** |
| Stericup®-GV Quick Release Filter Units | Durapore® (PVDF) / filtration of high value biomolecules, lowest protein binding | 0.22 | 150 | 150 | 12 | **S2GVU01RE** |
| | | | 250 | 250 | 12 | **S2GVU02RE** |
| | | | 500 | 500 | 12 | **S2GVU05RE** |
| | | | 500 | 1000 | 12 | **S2GVU10RE** |
| | | | 1000 | 1000 | 12 | **S2GVU11RE** |

## Steritop® Filter Units

Steritop® bottle-top filter units can be used on bottles with 33 mm or 45 mm thread.

| Description | Membrane/Application | Pore Size (µm) | Funnel Capacity (mL) | Thread Size (mm) | Qty/Pk | Cat No. |
|---|---|---|---|---|---|---|
| Steritop® QR Filter Units† | Millipore Express® PLUS (PES)/fast filtration of tissue culture media and buffers | 0.22 | 150 | 45 | 12 | **S2GPT01RE** |
| | | | 250 | 45 | 12 | **S2GPT02RE** |
| | | | 500 | 45 | 12 | **S2GPT05RE** |
| | | | 1000 | 45 | 12 | **S2GPT10RE** |
| Steritop®-GP Filter Units | Millipore Express® PLUS (PES) / filtration of high value biomolecules, lowest protein binding | 0.22 | 150 | 33 | 12 | **SCGPS01RE** |
| | | | 250 | 33 | 12 | **SCGPS02RE** |
| | | | 500 | 33 | 12 | **SCGPS05RE** |
| Steritop®-GV Filter Units | Durapore® (PVDF) / filtration of high value biomolecules, lowest protein binding | 0.22 | 500 | 45 | 12 | **S2GVT05RE** |
| Steritop®-VP Filter Units | Millipore Express® (PES)/ removal or mycoplasma* | 0.1 | 1000 | 45 | 12 | **S2VPT10RE** |

## Stericup® Receiver Bottles

Receiver bottles and caps, available in various quantities.

| Description | Funnel Capacity (mL) | Thread Size (mm) | Qty/Pk | Cat No. |
|---|---|---|---|---|
| Click Seal Receiver Bottles and Caps | 250 | 45 | 12 | **S200B02RE** |
| | 500 | 45 | 12 | **S200B05RE** |
| | 1000 | 45 | 12 | **S200B10RE** |

* 0.10 µm pore size is designed to enhance maximum filtration of tissue culture media but it is not a guarantee of complete mycoplasma removal.

† Selected stem cell research publications citing Stericup® or Steritop® device for sterile filtration of medium:


1. Feeder independent culture of human embryonic stem cells. Teneille E. Ludwig et al. Nature Methods Vol. 3 No. 8 August 2006 637-646.
2. Roelandt P et al. Differentiation of rat multipotent adult progenitor cells to functional hepatocyte-like cells by mimicking embryonic liver development. Nat Protoc. 2010 Jul;5(7):1324-36.
3. Hu BY et al. Differentiation of human oligodendrocytes from pluripotent stem cells. Nat Protoc. 2009;4(11):1614-22. Epub 2009 Oct 15.
4. Hu BY, Zhang SC. Differentiation of spinal motor neurons from pluripotent human stem cells. Nat Protoc. 2009;4(9):1295-304.
5. Bigdeli N et al. Adaptation of human embryonic stem cells to feeder-free and matrix-free culture conditions directly on plastic surfaces. J Biotechnol. 2008 Jan 1;133(1):146-53.
6. Dravid G et al. Culture of human embryonic stem cells on human and mouse feeder cells. Methods Mol Biol. 2006;331:91-104.

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## Stericup® E and Steritop® E Filter Units

| Description | Membrane/Application | Pore Size (µm) | Receiver Bottle (mL) | Thread Size (mm) | Qty/Pk | Cat No. |
|---|---|---|---|---|---|---|
| Stericup® E-GP Sterile Vacuum Filtration System | Millipore Express® PLUS (PES)/fast filtration of tissue culture media and buffers | 0.22 | 500 | 38 | 12 | **SEGPU0538** |
| | | | 500 | 45 | 12 | **SEGPU0545** |
| | | | 1000 | 38 | 12 | **SEGPU1138** |
| | | | 1000 | 45 | 12 | **SEGPU1145** |
| Steritop® E-GP Sterile Vacuum Filtration System | Millipore Express® PLUS (PES)/fast filtration of tissue culture media and buffers | 0.22 | Not Included | 38 | 12 | **SEGPT0038** |
| | | | | 45 | 12 | **SEGPT0045** |

### Stericup® E & Steritop® E Filter Systems

These 'E' additions to the Stericup® family eliminate the plastic filter funnel entirely by threading directly onto the media bottle. Stericup® E and Steritop® E filter devices reduce environmental impact by cutting down on:

- Disposable plastic
- Hazardous waste
- Lab storage space requirements

### Usage Guidelines

- Choose a collar thread (38 mm or 45 mm) that is compatible with your glass or plastic media/ buffer bottle.
- The 38 mm thread is recommended for our media bottles and majority of other standard commercial media bottles.
- The 45 mm thread is recommended for wider neck media bottles (such as Gibco®) or 45mm thread glass bottles.
- Use only glass or plastic bottles designed for vacuum applications. For the Steritop® E filter, use a 45 mm threaded glass or plastic receiver bottle no larger than 2 liters.

### Your eco-impact, by the numbers:

| | Plastics* | Packaging* |
|---|---|---|
| **Stericup® E Sterile filter** Eliminates disposable filler funnel | Up to 26% | Up to 20% |
| **Steritop® E Sterile filter** Eliminates disposable filler funnel & receiver bottle | Up to 48% | Up to 69% |

Both Stericup® E and Steritop® E **sterile filters thread directly onto virtually any commercial media bottle or glass bottle**

Stericup® E products use **significantly less packaging** made from materials that reduce environmental impact

Learn more about the Stericup® E and the Steritop® E at:
**SigmaAldrich.com/Stericup-E**

Learn more about our commitment to responsible life science tools at
**SigmaAldrich.com/green**

## Stericup® E and Steritop® E Filter Units Sustainability Checklist

Stericup® E and Steritop® E filters thread directly onto any commercial media bottle or glass bottle:

- Reduces plastic and hazardous waste.
- Frees-up storage in smaller tissue culture rooms, where space is at a premium.
- Enhances laboratory compliance with institutional sustainability requirements—or a means for achieving individual environmental responsibility goals.

Stericup® E and Steritop® E filters are packaged in individual, recyclable pouches for sterility.

Stericup E® and Steritop® E user guides are accessible via **SigmaAldrich.com** or by scanning the QR code on the product label or box, to reduce paper waste.

The Stericup® E and Steritop® E corrugated boxes and dividers have sustainable forestry certification.

## Difference between Stericup® Quick Release and Stericup® E Filter Units

| | Product | Funnel | Filter Collar | Receiver Bottle |
|---|---|---|---|---|
| | **Stericup® Quick Release Filtration** | ✔ | ✔ | ✔ |
| | **Steritop® Quick Release Bottle-Top Filtration Units** | ✔ | ✔ | |
| | **Stericup® E Filtration and Storage Units** **Greener Solution** | | ✔ | ✔ |
| | **Steritop® E Bottle-Top Filtration Units** **Greener Solution** | | ✔ | |

## Steriflip® Filter Units

For filtering 10 mL to 50 mL volumes without sample transfer steps.

### Filter up to 50 mL directly into a centrifuge tube

- Attach the device to a standard 50 mL centrifuge tube containing your sample, flip it over and apply vacuum
- Filtrate collects in the attached 50 mL tube
- Available with optional funnel accessory

| Description | Membrane | Pore Size (µm) | Qty/Pk | Cat No. |
|---|---|---|---|---|
| Steriflip®-GP Filter Unit | Millipore Express® PLUS (PES) | 0.22 | 25 | **SCGP00525** |
| Steriflip®-GV Filter Unit | Durapore® (PVDF) | 0.22 | 25 | **SE1M179M6** |
| Steriflip®-HV Filter Unit | Durapore® (PVDF) | 0.45 | 25 | **SE1M003M00** |
| Steriflip® Steri-Strainer | Nylon Net | 100 | 25 | **SCNY00100** |
| | | 60 | 25 | **SCNY00060** |
| | | 40 | 25 | **SCNY00040** |
| | | 20 | 25 | **SCNY00020** |
| **Accessory** | | | | |
| Steriflip® Funnel Attachment | | | 25 | **SC50FL025** |

## Sterile Millex® Syringe Filters

Millex® syringe filters provide convenient sterilization of small volumes and are ideal for solutions such as antibiotics and tissue culture additives. Their unsurpassed quality and consistency of results has led to the development of many sample preparation methods that specify Millex® filters.

### Manufactured for reliable performance

Manufacturing occurs in a controlled environment using an automated process. Sterile devices are provided with a certificate of quality.

### Faster flow rate

33 mm Millex® filters have 20% more filter surface than 25 mm filters for significantly higher flow rate and throughput. The 33 mm Millex has the same hold-up volume as the 25mm Millex.

### Higher operating pressure

With a maximum housing pressure of up to 150 psig (10 bar), solutions can be filtered faster.

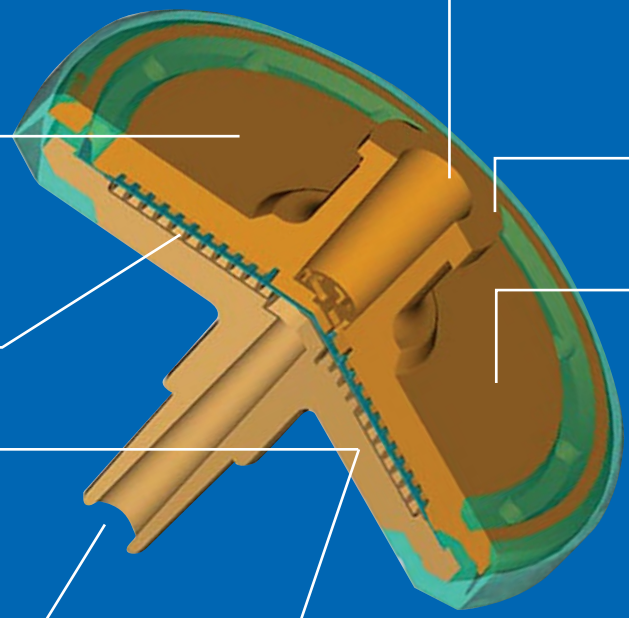
### Low extractables, low binding

A variety of membranes and housings ensure chemical compatibility with a range of samples and solvents

# Anatomy of a 33 mm Millex® filter

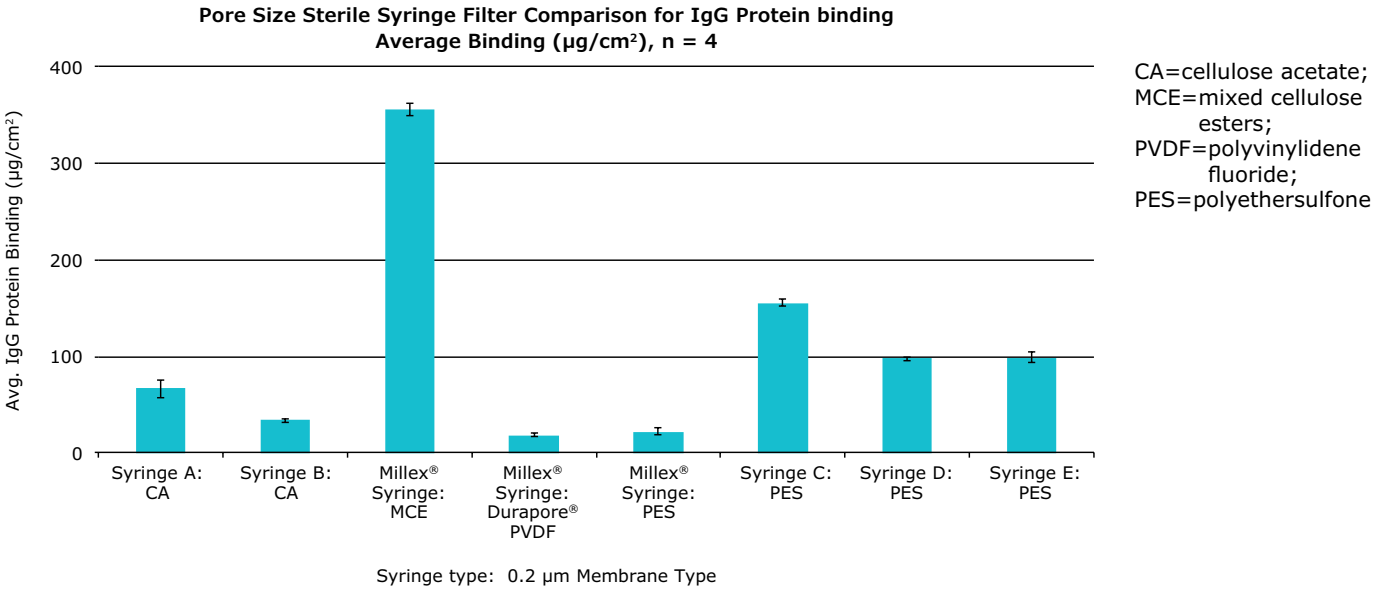
**Reliable syringe filtration requires thoughtful device engineering that incorporates robust housing design features which will:**

- **Prevent leakage**
- **Minimize holdup volume**
- **Ensure high particle retention**
- **Tolerate high operating pressures**
- **Reduce extractables**



# Sterile Millex® Syringe Filters

| Membrane | Pore Size (µm) | Diameter (mm) | Process Volume (hold-up) | Housing, sterilization method | Connections (inlet\|outlet) | 25 PK | 50 PK | 100 PK | 250 PK |
|---|---|---|---|---|---|---|---|---|---|
| **PES Millipore Express® Plus Membrane** Fast flow and low binding for cell culture media preparation | 0.22 | 25 | 100 mL (< 100 µL) | PVC, EO | FLL \| MLS | | **SLMPR25SS** | | |
| | | 33 | 200 mL (< 100 µL) | Modified acrylic, RS | FLL \| MLS | | **SLGPR33RS** | | **SLGPR33RB** |
| | 0.45 | 33 | 200 mL (< 100 µL) | Modified acrylic, RS | FLL \| MLS | | **SLHPR33RS** | | **SLHPR33RB** |
| **PVDF Durapore® Membrane** Lowest binding for protein rich solutions | 0.1 | 33 | 100 mL (< 100 µL) | Modified acrylic, RS | FLL \| MLS | | **SLVVR33RS** | | |
| | 0.22 | 4 | 1 mL (< 10 µL) | HDPE, EO | FLL \| Male stepped | | | **SLGV004SL** | |
| | | 13 | 10 mL (< 25 µL) | HDPE, EO | FLL \| MLS | | | **SLGVR13SL** | |
| | | 25 | 100 mL (< 100 µL) | PVC, EO | Vented FLL\|MLS | | **SLGVVR255F** | | |
| | | 33 | 100 mL (< 100 µL) | Modified acrylic, RS | FLL \| MLS | | **SLGVR33RS** | | **SLGVR33RB** |
| | 0.45 | 4 | 1 mL (< 10 µL) | HDPE, EO | FLL \| Male stepped | | | **SLHV004SL** | |
| | | 13 | 10 mL (< 25 µL) | HDPE, EO | FLL \| MLS | | | **SLHVR13SL** | |
| | | 33 | 100 mL (< 100 µL) | Modified acrylic, RS | FLL \| MLS | | **SLHVR33RS** | | **SLHVR33RB** |
| | 5.0 | 25 | 100 mL (< 100 µL) | PVC, EO | FLL \| MLS | | **SLSV0R25LS** | | |
| **PVDF Durapel™ Membrane** Superhydrophobic for air venting and gas filtration | 0.22 | 25 | N/A | PVC, EO | FLL \| MLL | | **SLGVSR25US** | | |
| **MCE MF-Millipore™ Membrane** Most referenced general purpose membrane | 0.22 | 25 | 100 mL (< 100 µL) | PVC, EO | Vented FLL\|MLS | | **SLGSVR255F** | | |
| | | 33 | 100 mL (< 100 µL) | Modified acrylic, EO | FLL \| MLS | | **SLGSR33SS** | | **SLGSR33SB** |
| | 0.45 | 33 | 100 mL (< 100 µL) | Modified acrylic, EO | FLL \| MLS | | **SLHAR33SS** | | **SLHAR33SB** |
| | 0.8 | 33 | 100 mL (< 100 µL) | Modified acrylic, EO | FLL \| MLS | | **SLAAR33SS** | | **SLAAR33SB** |
| **Hydrophilic PTFE Membrane** Broad chemical compatibility | 0.2 | 13 | 10 mL (< 25 µL) | HDPE, EO | FLL \| MLS | | | **SLLG013SL** | |
| | | 25 | 100 mL (< 100 µL) | HDPE, EO | FLL \| MLS | | **SLLG025SS** | | |
| **PTFE Fluoropore™ Membrane** Hydrophobic for gas and alcohol filtration | 0.2 | 25 | 100 mL (< 100 µL) | PVC, EO | FLL \| MLS | | **SLFGR25LS** | | |
| | | | | | FLL \| MLL | | **SLFGL25BS** | | |
| | | | | | FLL \| MLS with Needle | **SLFGNR25VS** | | | |




CA=cellulose acetate;
MCE=mixed cellulose esters;
PVDF=polyvinylidene fluoride;
PES=polyethersulfone

# Large-scale Sterile Filtration Devices

## Sterivex® Filters

### Pressure-driven devices for filtering up to 2 L

Sterivex® filter units work with syringes, peristaltic pumps, or pressure vessels, and are designed to dispense into any storage container.

| Description | Process Volume (mL) | Membrane | Pore Size (µm) | Fitting Outlet | Qty/Pk | Cat No. |
|---|---|---|---|---|---|---|
| **Sterivex®-GP Filter Units** | | | | | | |
| Sterivex®-GP Filter Unit | 2000 | Millipore Express® PLUS (PES) | 0.22 | Filling Bell | 10 | SVGPB1010 |
| | | | | Male Luer-Lok® | 15 | SVGPL10RC |
| | | | | Male Nipple | 15 | SVGP01015 |
| | | | | | 50 | SVGP01050 |
| **Sterivex®-GV Filter Units** | | | | | | |
| Sterivex®-GV Filter Unit | 1000 | Durapore® (PVDF) | 0.22 | Filling Bell | 10 | SVGVB1010 |
| | | | | Male Luer-Lok® | 15 | SVGVL10RC |
| | | | | Male Nipple | 15 | SVGV01015 |
| | | | | | 50 | SVGV010RS |
| **Sterivex®-HV Filter Units** | | | | | | |
| Sterivex®-HV Filter Unit | 1000 | Durapore® (PVDF) | 0.45 | Filling Bell | 10 | SVHVB1010 |
| | | | | Male Luer-Lok® | 15 | SVHVL10RC |
| | | | | Male Nipple | 15 | SVHV01015 |
| | | | | | 50 | SVHV010RS |

## Stericap™ PLUS Filters

### Universal bottle-top devices for filtering 2 to 10 L

- Fits on any vacuum-rated bottle, 20 to 67 mm in diameter
- Vented to help prevent filter air lock
- Features fast-flowing, low protein binding Millipore Express® PLUS membrane
- Ideal for fast sterilization of tissue culture media, serum, buffers, or other biological solutions

| Description | Membrane | Pore Size (µm) | Qty/Pk | Cat No. |
|---|---|---|---|---|
| Stericap™ PLUS Filter | Millipore Express® PLUS (PES) | 0.22 | 10 | **SCGPCAPRE** |

## Millex®-GP 50 mm Pump-Driven Filters

### Sterilized and individually packed

| Description | Pore Size (µm) | Type | Process Volume (mL) | Hold-up Volume (after air purge, mL) | Sterilization Method | Qty/Pk | Cat No. |
|---|---|---|---|---|---|---|---|
| **50 mm Diameter** | | | | | | | |
| Millipore Express® PLUS (PES) Membrane | 0.22 | GP50 | 4000 | < 1 | RS | 10 | SLGP05010 |
| | | GP50 with filling bell | | | | 10 | SLGPB5010 |
| Glass Filter for Prefiltration | NA | AP | 4000 | <1 | Autoclavable | 10 | SLAP05010 |

†EO = ethylene oxide

## Steripak™ Filters

### Pump-driven filters for volumes up to 20 L

Steripak™ filters are designed for larger scale pressure-driven filtration of tissue culture media, with or without serum. The units are single-use and come in two volume sizes. They are supplied sterile and ready to connect to a pump or pressure vessel.

| Description | Membrane | Pore Size (µm) | Filter area, cm² | Qty/Pk | Cat No. |
|---|---|---|---|---|---|
| Steripak™-GP10 Filter | Millipore Express® (PES) | 0.22 | 100 | 3 | **SPGPM10RJ** |
| Steripak™-GP20 Filter | Millipore Express® (PES) | 0.22 | 200 | 3 | **SPGPM20RJ** |

## Hydrophobic Millex® Filters for Gas Filtration

| Description | Application | Pore Size (µm) | Sterility | Inlet-Outlet Fitting | Qty/Pk | Cat No. |
|---|---|---|---|---|---|---|
| **Millex® 25 mm Diameter Filters** | | | | | | |
| Hydrophobic PTFE | Vacuum line protection and gas filtration | 0.2 | Ethylene oxide | FLL-MLS | 50 | **SLFGR25LS** |
| | | | | FLL-MLL | 50 | **SLFGL25BS** |
| | | | Autoclavable | FLL-MLS | 50 | **SLFG02550** |
| Hydrophobic PVDF | Transducer protector | 0.22 | Ethylene oxide | FLL-MLL | 50 | **SLGVSR25US** |
| **Pump-driven Millex® 50 mm Diameter Filters** | | | | | | |
| Hydrophobic PTFE | Vacuum line protection and gas filtration | 0.2 | Autoclavable | Stepped Hose Barb | 10 | **SLFG05010** |
| | | | | | 100 | **SLFG05000** |
| | | | | Stepped Hose Barb – 1/8 in. NPTM | 10 | **SLFG55010** |
| | | | | 1/8 in. NPTM | 10 | **SLFG75010** |
| | | | | | 100 | **SLFG75000** |
| | | 1.0 | Autoclavable | Stepped Hose Barb | 10 | **SLFA05010** |
| | | | | | 100 | **SLFA05000** |

FLL = Female Luer-Lok®
FLS = Female Luer slip
MLL = Male Luer-Lok®
MLS = Male Luer slip

## Test Kit

| Description | Cat No. |
|---|---|
| Integrity test kit for bubble-point testing of small filter units, such as Millex® and Sterivex® units | **SLTEST000** |

# Accessories for Stericup® and Steritop® Systems

For pressure-driven filtration (such as Steripak® and Sterivex®), pressure vessels and pressure peristaltic pumps are available. Please contact Technical Service for further information.

| Description | Size | Qty/Pk | Cat No. |
|---|---|---|---|
| Glass fiber prefilters | 75 mm | 100/pk | **AP2007500** |
| Silicone rubber tubing, 3/16 in. (4.8 mm) ID, with adapter | 4.5 ft (1.4 m) | 1/pk | **XX7100004** |
| Vacuum/Pressure Pump 115 V, 60 Hz | N/A | 1/pk | **WP6111560** |
| Vacuum/Pressure Pump 100 V, 50/60 Hz | N/A | 1/pk | **WP6110060** |
| Vacuum/Pressure Pump 220 V, 50 Hz | N/A | 1/pk | **WP6122050** |
| Millivac-Maxi Vacuum Pump, 230 V | N/A | 1/pk | **SD1P014M04** |
| Millivac-Mini Vacuum Pump, 230 V | N/A | 1/pk | **XF5423050** |
| Millivac Mini Vacuum Pump, 115 V | N/A | 1/pk | **XX5411560** |

# Related Products: Multiwell Plates

## MultiScreen®$_{HTS}$ Filter Plates

Automation-compatible MultiScreen® filter plates that contain a microporous membrane are ideal for clarifying samples or separating suspensions in diverse workflows, including sample clean-up prior to instrument analysis, removal of cellular debris, extraction of natural products and bead washing for immunoassay procedures.

| Membrane | Pore Size | Type | Well Number | Plate Color | Plate Material | Qty/Pk | Cat. No. |
|---|---|---|---|---|---|---|---|
| Hydrophilic Durapore® PVDF | 0.22 µm | GV | 96 | Clear | Acrylic | 10 | **MSGVS2210** |
| | 0.45 µm | HV | 96 | Clear | Styrene | 10 | **MSHVS4510** |
| | 1.2 µm | BV | 96 | Clear | Styrene | 10 | **MSBVS1210** |
| Hydrophobic Immobilon®-P PVDF | 0.45 µm | IP | 96 | Clear | Acrylic | 10 | **MSIPS4510** |
| | 0.45 µm | IP | 96 | White | Acrylic | 10 | **MSIPS4W10** |
| Hydrophilic MCE | 0.45 µm | MCE | 96 | Clear | Styrene | 10 | **MSHAS4510** |
| | 0.45 µm | MCE | 96 | White | Barex®/TiO2 | 10 | **MSHAS4B10** |

## Millicell® Microporous Membrane-Based Cell Culture Plates

Millicell® plates feature membranes that allow easy access to both the apical and basolateral sides of cells. This encourages three-dimensional growth and provides a more accurate *in vitro* model than traditional plastic plates. Both the 24-well and 96-well cell culture plates incorporate patented design features simplifying media exchange for high performance cell-based assays. The plates simplify handling of multiple samples simultaneously, maintain assay integrity, and prevent monolayer disruption during analysis. The assemblies include a choice of a multi-well or single-well feeder tray.

| Membrane | Pore Size | Plate Material | Qty/Pk | Cat. No. |
|---|---|---|---|---|
| Millicell®-24 cell culture plate | 24-well cell culture plate, 24-well receiver tray and lid | PCF (3.0 µm) | 5 | **PSST010R5** |
| | | PCF (5.0 µm) | 5 | **PSMT010R5** |
| | | PCF (8.0 µm) | 5 | **PSET010R5** |
| | 24-well cell culture plate, single-well feeder tray and lid | PCF (0.4 µm) | 5 | **PSHT010R5** |
| | | PET (1.0 µm) | 5 | **PSRP010R5** |
| Millicell®-96 cell culture plate | 96-well cell culture plate, 96-well receiver tray and lid | PCF (0.4 µm) | 5 | **PSHT004S5** |
| | 96-well cell culture plate, single-well feeder tray and lid | PCF (0.4 µm) | 5 | **PSHT004R5** |
| | | PET (1.0 µm) | 5 | **PSRP004R5** |

### Custom MultiScreen® Filter Plates

In need of customized plates? We'll create the perfect plate for your assay, with a combination of filter membrane, housing material and other required specifications.

For more information about MultiScreen® filter plates, please visit:
**SigmaAldrich.com/multiscreen**

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