User Guide

Stericup® E and Steritop® E

Filtration and Storage Systems

Introduction

Stericup® E and Steritop® E systems are funnel-less filter products for use in the sterile vacuum filtration of aqueous solutions such as tissue culture media and buffers. The two new formats (38 and 45 mm thread-compatible connector) are designed specifically for direct attachment to all commercially-available media and buffer bottles. Eliminating the funnel greatly reduced the plastic content of the system; beyond improved sustainability, the smaller device results in a significantly reduced footprint both in storage and biohazard waste disposal. All systems contain 0.22 µm Millipore Express® PLUS polyethersulfone (PES) membrane for maximal flow rate with minimal protein loss or denaturation. The Steritop® system has a standard threaded 45 mm connection and does not include a bottle. Stericup® and Steritop® systems are sterile and non-pyrogenic.

Usage Guidelines

Stericup® E and Steritop® E systems devices are designed specifically for filtration from compatible bottles (38 and 45 mm neck size). If you are filtering media or buffers prepared in another vessel type, we recommend using the funnel-based Stericup® or Steritop® devices

- The Stericup® E system has a capacity large enough to accommodate the volume of fluid being filtered. Systems are available in 500 and 1,000 milliliter (mL) capacity.
- Choose a collar thread size (38 or 45 mm), that is compatible with your glass or plastic media/buffer bottle. The 45 mm fits Gibco media bottles; 38 mm will fit all other standard commercial media bottles.
- The domed collar has a vent valve permitting airflow during filtration. Due to this feature, a small degree of bubbling will be visible in the delivery bottle during filtration. Bubbling had no impact on media content or performance, as verified by stem cell culture testing (see Stem Cell Testing section).
- Perform binding studies before you filter very dilute biological solutions.
- To ensure safe use, always follow good laboratory practices and review the following warnings.

WARNINGS:

Do not use these systems in direct patient care applications or diagnostic procedures; they were designed for laboratory use only.

- Stericup® E and Steritop® E systems are for single use only; do not reuse.
- Do not autoclave or expose to temperatures greater than 50 °C (122 °F), as this may damage the product.
- To avoid possible injury from implosion during vacuum filtration:
  - ◇ Always use appropriate protective safety equipment and protective eyewear during vacuum filtration.
  - ◇ Use only glass or plastic bottles designed for vacuum applications. For the Steritop® E filter funnel, use a 45 mm threaded glass or plastic media bottle **no larger than** 2 liters.
  - ◇ Do not use a bottle that is chipped, scratched, or cracked.
  - ◇ Do not exceed 700 mm Hg differential vacuum at 25 °C.
- Perforations in the receiver cap bag will not prevent contamination. Once the outer bag is opened, keep the receiver cap bag in a sterile area to ensure sterility.
- When using infectious or hazardous materials, follow the required regulations and procedures for disposal.

Chemical Compatibility

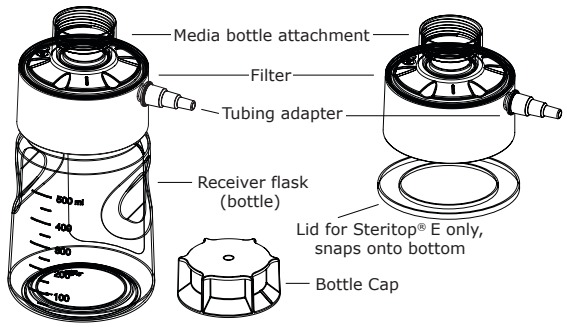
The Steritop® E and Stericup® E systems are compatible with most aqueous solutions. For chemical compatibility information, go to sigmaaldrich.com/milliporecompatibility.

Materials Required

- Vacuum source
- Vacuum tubing
- Vacuum-safe threaded glass or plastic media bottle with 45 mm neck (for Steritop® E systems)

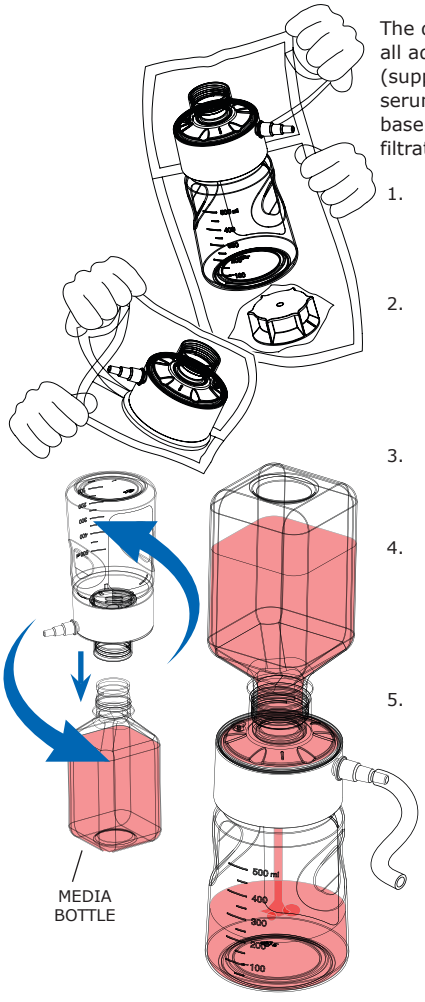
Components

Stericup® E System Steritop® E System



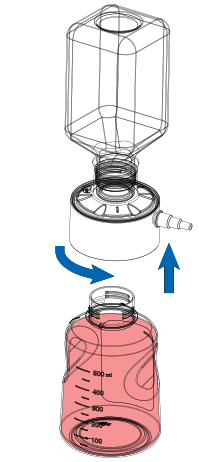
Stericup® E systems come in 2 different sizes to handle different sample capacities; the system components are the same except for capacity.

How to Use the System



The devices are funnel-less; all additional components (supplements, growth factors, serum) must be added to your base media bottle prior to filtration.

1. Open the Stericup® E or Steritop®E bag by pulling on the overhanging portion of Tyvek paper.
2. If using the Steritop® E device, remove lid from the base of the device then screw the filter into the top of a glass or plastic bottle with a 45 mm neck size.
3. Add all additional components to your media bottle.
4. Attach the Stericup® E or Steritop® E to the media bottle using the domed collar coupling. Grasp the collar, not receiver bottle, to tighten the connection.
5. Invert the assembly. Attach one end of the vacuum tubing to the system and other end to vacuum source. Apply vacuum until filtration is complete.



6. Turn off vacuum and remove tubing, then unscrew the filter-delivery bottle assembly from the receiver bottle. For the Stericup® E system, turn collar 1/4 turn so that the collar and bottle indicators are aligned, and lift the collar off. For the Steritop® E system, unscrew the collar from the bottle until it can be lifted off.

7. For the Stericup® E system, screw the cap onto the receiver bottle until it clicks into sealed position (cap and bottle indicators will align). For the Steritop® E system, screw appropriate cap onto bottle.

8. Disassemble delivery bottle-filter coupling. Depending on the nature of the solutions filtered, the delivery bottle may be rinsed and recycled; the filter cannot be recycled.

Attach cap Rinse & recycle Discard

Note: All packaging components (boxes, packing material, device pouches) are recyclable.

Note: Once filtration is complete, a very small amount of fluid may still be present and visible in filter dome area above the membrane.

Note: The Steritop® E system has a lid which can be used to contain residual fluid present in the filter after use. Place the filter on the lid. The Stericup®E system does not have a lid; you may notice a small number of drips after disassembly from the receiver bottle.

Storage Conditions

You can successfully freeze and store many aqueous solutions (such as culture media) in Stericup® E bottles at temperatures to -20 °C (-4 °F). It is strongly recommended that you run a sample stability trial under your actual storage conditions prior to using Stericup® E bottles for frozen storage.

Specifications

Component	Specification
Receiver capacity	500 mL/500 mL, 1,000 mL/1,000 mL
Membrane pore size	0.22 µm
Membrane diameter	73 mm
Sterilization method	Gamma irradiation
Receiver, funnel cover	Polystyrene
Bottle cap, tubing connector	Polyethylene
Filter membrane	Millipore Express® PLUS polyethersulfone (PES)
Vacuum port matrix	Cellulose acetate
Temperature limit	50 °C (122 °F)
Pressure limit	700 mm Hg differential vacuum at 25 °C (77 °F)

Stem Cell Testing

Products have been tested for use in stem cell research applications. To determine their effects on mouse stem cell growth and differentiation, three lots of Stericup® E devices were used to filter media with LIF. Once filtered, this media was used to passage mouse stem cells five times to verify that Stericup® E filtration did not impact pluripotency of mouse stem cells.

Ordering Information

Stericup® E systems are shipped in quantities of 12 per box. Order online at www.sigmaaldrich.com/products.

Stericup® E with Millipore Express® PLUS(PES) 73 mm Diameter, 0.22 µm Pore Size

System	Bottle Coupling	Catalogue No.
500 mL receiver	38 mm	SEGPU0538
500 mL receiver	45 mm	SEGPU0545
1000 mL receiver	38 mm	SEGPU1138
1000 mL receiver	45 mm	SEGPU1145

Steritop® E with Millipore Express® PLUS (PES) 73 mm Diameter, 0.22 µm Pore Size

38 mm coupling	SEGPT0038
45 mm coupling	SEGPT0045

Accessories

Accessory	Size	Qty	Catalogue No.
Stericup® Quick Release receiver flask (bottle)	500 mL	12/pk	S200B05RE
Stericup® Quick Release receiver flask (bottle)	1,000 mL	12/pk	S200B10RE
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
100 V, 50/60 Hz	N/A	1/pk	WP6110060
220 V, 50 Hz	N/A	1/pk	WP6122050

Notice

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