

VacuCap® and VacuCap PF Bottle-top Filter Devices

Innovative bottle-top filters for fast, easy vacuum filtration of 100 mL to 5 liters of aqueous solutions

- Filter faster. Supor® membrane provides high flow rates for viscous solutions.
- Match filter to sample volume by choosing from two available sizes.
- Maximize throughput of hard-to-filter solutions with VacuCap PF devices with a built-in prefilter.
- No need to constantly refill upper fluid reservoir. Draws directly from the mixing reservoir.
- Eliminate the possibility of contamination from transfer steps. Filters directly into the desired container.
- Reduce mycoplasma with 0.1 µm pore size.
- Patented, small design accepts a wide variety of collection vessel sizes and reduces waste and storage space.



- Available with tubing attached to each device (TA version) for maximum convenience.

Applications

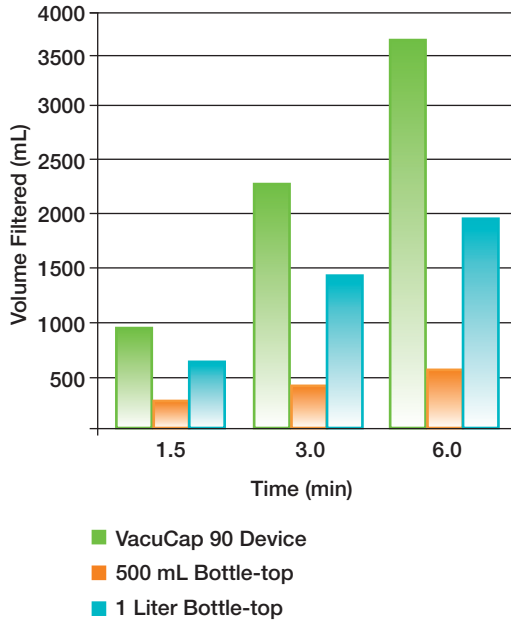
Media preparation for cell culture applications can be a tedious process, depending on the volume and viscosity of the material to be filtered. The sterile VacuCap bottle-top filter was engineered for this purpose. VacuCap PF devices, designed with a built-in prefilter, use the ingenuity of the standard VacuCap device, and increase its throughput performance with serum-containing media or other viscous solutions. Other applications including buffers requiring 0.2 µm filtration will also see the speed and throughput benefits of VacuCap PF devices when encountering high particle load in a solution.



Performance

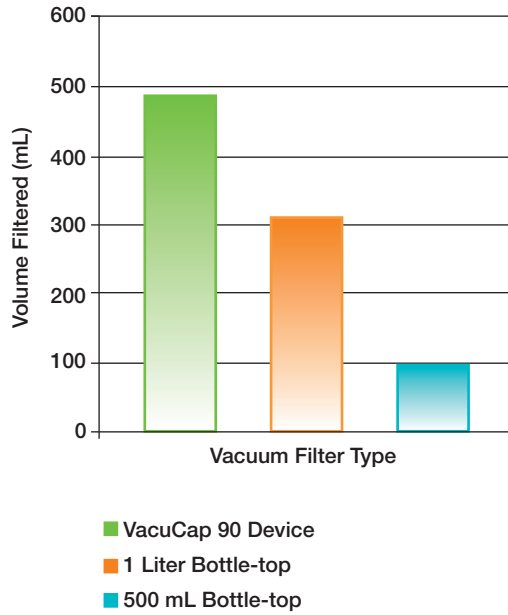
VacuCap® 90 Device Filtration Efficiency

(RPMI 1640 + 10% Newborn Calf Serum)



VacuCap 90 Device Filtration Capacity

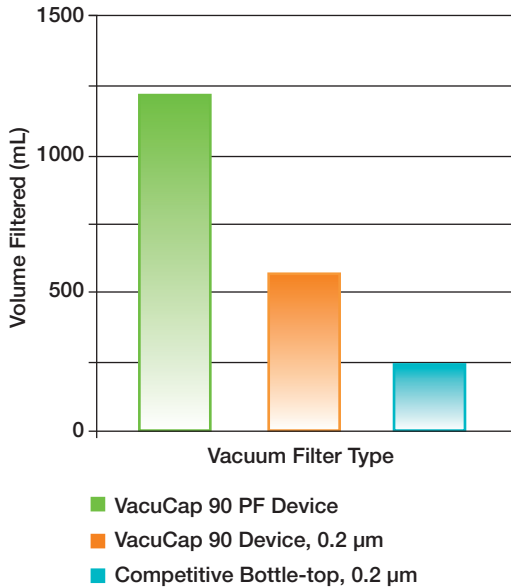
(100% Newborn Calf Serum)



VacuCap 90 (0.2 µm) filter device performance as compared to that of competitive vacuum filter units with 0.2 µm Cellulose Acetate membrane. Filtration conducted at 21 °C (70 °F) and 38 cm Hg (15 in. Hg) vacuum. Volumes reflect a filtration time of five minutes.

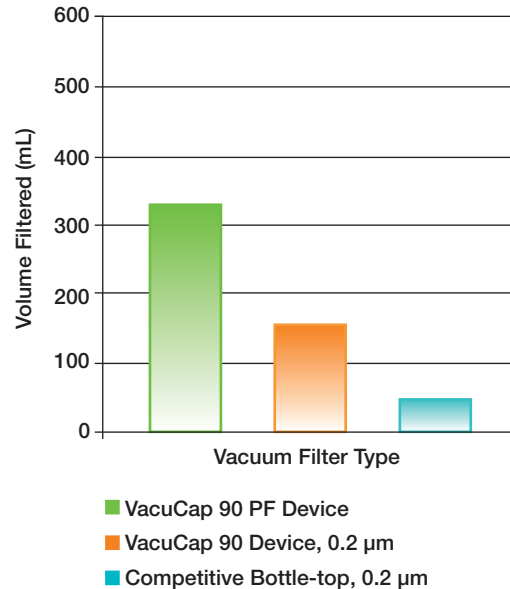
VacuCap 90 PF Device Filtration Efficiency

(RPMI + 10% Calf Serum)



VacuCap 90 PF Device Filtration Capacity

(100% Calf Serum)



Filtration conducted at 21 °C (70 °F), 50 cm Hg (20 in. Hg) vacuum, five minute filtration time. Actual results may vary depending upon type and concentration of serum, liquid temperature, and applied vacuum.

Instructions



1. Connect the feed tubing to the port marked "INLET" on the VacuCap® device. Place the opposite end of the tubing in the unfiltered fluid to be drawn.



2. Connect the vacuum tubing to the port marked "VACUUM" on the VacuCap device. Refer to product insert for safety precautions.



3. While holding the VacuCap device securely onto the filtrate container, start the vacuum. The VacuCap device will seal securely to the container top and fluid will be drawn.



4. When filtration is complete, switch off the vacuum pump allowing the vacuum inside the receiving container to dissipate. Refer to the product insert for complete instructions.

Receiving Bottle

VacuCap 60 Devices: Can be used on receptacles with openings ranging from 2-5 cm (0.8-1.9 in.).

VacuCap 90 Devices: Can be used on receptacles with openings ranging from 2-6.5 cm (0.8-2.5 in.).

Always use sterile bottles that are designed to be used with a vacuum. We strongly recommend a safety shield during vacuum procedures.

Specifications

Materials of Construction

Filter Media: Supor® membrane
(hydrophilic polyethersulfone)

Housing: Modified acrylic

Membrane Support Material: Polyester

Sinker Material: Glass-filled
polyurethane elastomer

Inlet Tubing: Polyvinyl chloride (PVC)
medical-grade tubing

Gasket Seal Material: Polyethylene

Effective Filtration Area

VacuCap 60 Devices: 30 cm²

VacuCap 90 Devices: 60 cm²

Typical Throughput

(RPMI + 10% newborn calf serum)

VacuCap 60 Devices, 0.2 µm: 1 L

VacuCap 90 Devices, 0.2 µm: 5 L

(RPMI + 10% calf serum)

VacuCap 60 PF Devices: 500 mL

VacuCap 90 PF Devices: 1 L

Typical Water Flow Rate

mL/min at 25.4 cm (10 in.) Hg

VacuCap 60

Devices

0.1 µm: 50

0.2 µm: 200

0.45 µm: 280

PF: 200

VacuCap 90

Devices

0.1 µm: 100

0.2 µm: 400

0.45 µm: 560

PF: 400

Typical Hold-up Volume

3.4 mL

Maximum Operating Temperature

55° C (131 °F)

Maximum Vacuum

63.5 cm (25 in.) Hg

Endotoxin

< 0.25 EU/mL using Limulus
Amoebocyte Lysate (LAL) test

Biological Safety

Passes USP Biological Reactivity
Test, *In Vivo* <88>

Sterilization

Sterilized by gamma irradiation and
individually bagged

Ordering Information

VacuCap® 60 Bottle-top Filter Devices

Part Number	Pore Size	Diameter	Packaging
4631	0.1 µm	60 mm	10/pkg
4632	0.2 µm	60 mm	10/pkg
4634	0.45 µm	60 mm	10/pkg
TA4632*	0.2 µm	60 mm	10/pkg
4638	PF (0.8/0.2 µm)	60 mm	10/pkg

VacuCap 90 Bottle-top Filter Devices

Part Number	Pore Size	Diameter	Packaging
4621	0.1 µm	90 mm	10/pkg
4622	0.2 µm	90 mm	10/pkg
TA4622*	0.2 µm	90 mm	10/pkg
4624	0.45 µm	90 mm	10/pkg
TA4624*	0.45 µm	90 mm	10/pkg
4628	PF (0.8/0.2 µm)	90 mm	10/pkg

Accessories

Part Number	Description	Packaging
4623	Feedline accessory kit	1/pkg

*"TA" products come with individual attached tubing for each filter device. Standard products come with one piece of tubing per 10 filter devices.

Complementary Products

AcroPak™ 200 Capsule with Supor® Membrane

Part Number	Description	Packaging
12941	0.8/0.2 µm, sterile, with filling bell, 200 cm ² EFA	3/pkg

AcroPak 500 Capsules with Supor Membrane

Part Number	Description	Packaging
12991	0.8/0.2 µm, sterile, 500 cm ² EFA	1/pkg
12993	0.8/0.45 µm, sterile 500 cm ² EFA	1/pkg

Supor membrane is a patented hydrophilic polyether-sulfone membrane that delivers high throughputs and fast filtration, requiring fewer filter changes that saves you time and money. It is low protein binding and has extensive drug compatibility, making it well suited for critical applications.

Supor membrane discs and devices are available in a range of pore sizes and configurations that process from 5 mL to 100 liters. Many of these devices scale up directly to larger-capacity capsules and cartridges.



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