MediaKap® Hollow Fiber Media Filters

FOR STERILE FILTRATION OF MEDIA

Spectrum Product Instruction Manual

SPECTRUM® LABS.COM

advancing the science of separation™

MediaKap® Hollow Fiber Media Filters

MediaKap® filters are designed to dramatically reduce the time required for sterilizing and clarifying tissue culture media and other difficult to filter aqueous solutions.

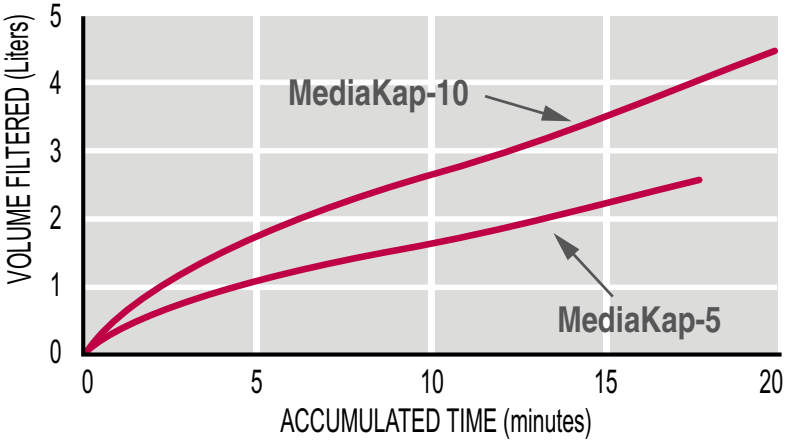

Figure 1 Typical MediaKap® performance

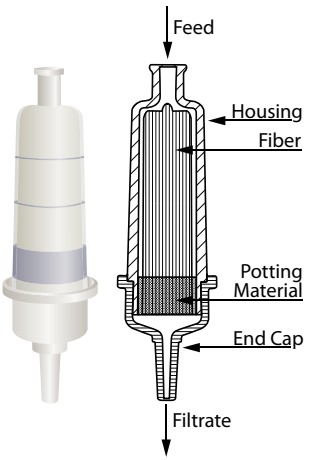

Figure 2 How MediaKap® works

Designed as a pressure filter, MediaKap® can be used with a peristaltic pump or a pressure vessel. MediaKap® filters come in a full range of sizes with capacities from 2 to 50 liters.

All MediaKap® units are manufactured with a naturally hydrophilic, high performance 0.2 µm hollow fiber membrane (Figure 1). The use of these cellulosic membranes results in high throughput, high flow rates, low extractables and excellent biocompatibility. Each unit contains a unique autovent feature which prevents airlock and allows operation of the filter in any orientation (Figure 2).

General Instructions for Use

This is a step-by-step guide to ensure successful filtration operation of the MediaKap® filter. If you are using a pressure vessel, refer to Figure 3 as a guide — if you are operating with a peristaltic pump, refer to Figure 4.

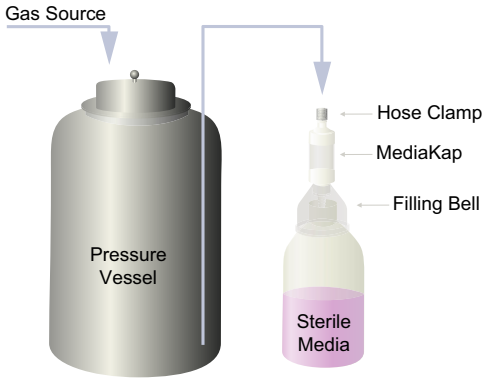

Figure 3 Operation with pressure vessel

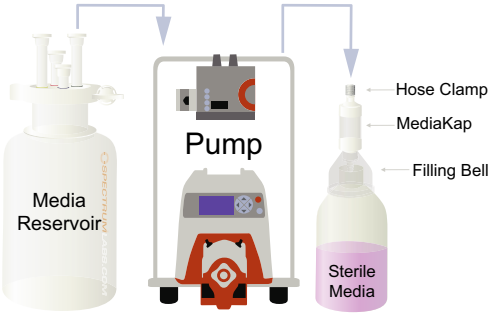

Figure 4 Operation with peristaltic pump

1. Connect the outlet end of the tubing from the pump or pressure vessel to the inlet end of the MediaKap filter. (Note: MediaKap 2 and 5 require the use of a hose barb to male luer adaptor provided with the filters.)

2. Use a hose clamp to secure the tubing on the inlet (pressure) side of the filter to prevent the tubing from leaking or detaching during filtration. After positioning, tighten hose clamp as close as possible to the base of the hose barb. Then, secure the filter with the clamp on the ring stand.

3. Place the bottle on the ring stand. Then remove the cap from the filling bell and carefully lower the bell over the mouth of the bottle without making contact with the inside of the bell.

4. To avoid splashing, slowly increase the pump speed after starting the pump. To avoid foaming, do not exceed 500 ml/min with a peristaltic pump or 10 PSI with a pressure vessel.

Precautions

Since MediaKap filters are pre-irradiated, they are not autoclavable and are intended for single-use only.

To avoid foaming, do not operate peristaltic pump over 500 ml/min or pressure vessel over 10 PSI.

Do not use MediaKap filters at temperatures exceeding 180°F (68°C) or pressures over 50 psig (3.5 bar).

Aseptic technique is required to maintain sterile barrier and proper setup and operation of this product.

MediaKap® is not intended for intravenous or other medical device use.

Integrity Testing

MediaKap® incorporates a polypropylene fiber for air venting. You may wish to integrity test the module after use to verify the integrity of the filter. Because of the hydrophobicity of the vent filter, the MediaKap® must be primed with isopropyl alcohol (IPA) and then flushed with water before an integrity test can be performed. The following instructions explain how to integrity test the filter. Steps 1 and 2 may be performed using a large (50 ml) syringe.

1. Slowly flush the filter with 50 ml IPA. This ensures that the hydrophobic vent fiber is fully wetted.
2. Immediately flush the unit (again slowly) with 50 ml of DI water. Repeat this step twice.
3. Connect a gas line (air or nitrogen) to the inlet (unpotted end) of the module using a hose clamp.
4. Immerse the outlet of the module into a beaker of water or attach a length of tubing to the outlet end and submerse it into water.
5. Slowly increase the gas pressure until reaching 20 PSI. If no bubbles come out of the outlet end of the filter, then the unit is integral.

Specifications

Housing/End Cap	Polycarbonate
Fiber	Mixed Cellulose Ester
Vent Fiber	Polypropylene
Pore Size	0.2 µm
Recommended Continuous Operating Pressure	30 psig (2 bar)
Recommended Continuous Operating Temperature	113°F (45°C)

Initial Pure Water Flow at 10 psig (0.7 bar):

MediaKap-2	400 ml/min
MediaKap-5	750 ml/min
MediaKap-10	1,000 ml/min
MediaKap-25	1,400 ml/min
MediaKap-50	2,000 ml/min

Inlet/outlet:

MediaKap-2	Female Luer/Male Luer
MediaKap-5	Female Luer/Male Luer
MediaKap-10	1/4” Hose Barb / 1/4” Hose Barb
MediaKap-25	Variable 1/4”-3/8” Hose Barb / Variable 1/4”-3/8” Hose Barb
MediaKap-50	Variable 1/4”-3/8” Hose Barb / Variable 1/4”-3/8” Hose Barb

Ordering Information:

Product Number	Description	To Process Volumes up to *	Units/Pkg
ME2M-02B-12S	MediaKap-2	2L	12
ME2M-020-18S	MediaKap-2	2L	18
ME2M-05B-12S	MediaKap-5	5L	12
ME2M-050-18S	MediaKap-5	5L	18
ME2M-10B-12S	MediaKap-10	10L	12
ME2M-100-18S	MediaKap-10	10L	18
ME2M-25B-065	MediaKap-25	25L	6
ME2M-50B-03S	MediaKap-50	50L	3

*Serum Free Media

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