**SepraPor®**

*0.2 μm Hollow Fiber Tangential Flow Filter Capsule*

**Description**

SepraPor® XFCM20 is a tangential flow filtration (TFF) capsule containing microporous hollow fiber membranes. It is ideal for use in a variety of biopharmaceutical applications including cell concentration, high productivity harvest, and continuous cell culture perfusion. This TFF capsule is available in a range of sizes from bench through production scale for ease of scalability. The SepraPor® filter capsule is 100% integrity tested during manufacture and meets the critical demands of the pharmaceutical, biotechnology, and related industries.

**Materials of Construction**

All components of the filter are animal component free (ACF). These materials are listed for food contact use in the Code of Federal Regulations (CFR), Title 21, as below:

- **Hollow fibers:** Polysulfone, CFR Title 21, 177.1655
- **Fiber bundle netting:** Polypropylene, CFR Title 21, 177.1520
- **Capsule housing:** Polysulfone, CFR Title 21, 177.1655
- **Permeate ports:** Polysulfone, CFR Title 21, 177.1655
- **Retentate ports:** Polysulfone, CFR Title 21, 177.1655
- **Fiber encapsulation:** Epoxy, CFR Title 21, 175.300

**Retention Rating**

0.2 μm

**Typical Fiber Lumen**

1.0 mm

**Typical Fiber Outer Diameter**

1.5 mm

**Fluid Path Length (Nominal)**

12 in (30 cm)

24 in (60 cm)

**Bubble Point Range**

18 – 25 psi (1.2 – 1.7 bar) in 60% IPA/40% water

**Minimum Permeate Flux**

3,300 LMH/bar (Liters/m²/h/bar) @ 25 °C*

**Operating Characteristics**

- **Operating temperature range:** 32 °F to 100 °F (0 °C to 38 °C)
- **Maximum operating temperature:** 122 °F (50 °C) for short-term operations such as cleaning*
- **Maximum feed pressure:** 25 psi @ 75 °F (1.72 bar @ 25 °C)
- **Maximum transmembrane pressure:** 15 psi @ 75 °F (1.03 bar @ 25 °C)

**Sterilization**

Autoclave sterilization: 121 °C (15 psi), minimum 30 minutes.

Apply a validated autoclave sterilization cycle that increases and decreases temperature gradually.

Consult autoclave sterilization instructions for further guidance.*

SepraPor® capsules are designed for irradiation and can be included as part of a One-Touch® single-use assembly.

**Biological Safety**

SepraPor® filters meet the requirements as specified in the USP Biological Reactivity Tests, in vitro <87> (cytotoxicity) and in vivo <88> (Class VI Plastics).

**Quality Assurance**

SepraPor® filters comply with the Food and Drug Administration Code of Federal Regulations, Title 21, Parts 210 and 211. Product is manufactured and packaged in a cleanroom facility that, through voluntary compliance, meets or exceeds FDA Good Manufacturing Practice Standards. To ensure product reliability, Meissner’s Quality Assurance staff continually audits the manufacturing process for conformance to its Quality Management System. Each SepraPor® filter is clearly marked with filter type, lot number, and serial number.
Ordering Guide

<table>
<thead>
<tr>
<th>XF</th>
<th>C</th>
<th>M20</th>
<th>C</th>
<th>0</th>
<th>12</th>
<th>-</th>
<th>77</th>
<th>11</th>
</tr>
</thead>
</table>

**Capsule Options**
- C: Standard capsule filter
- G: Sterile capsule filter

**Permeate Ports**
- 11: ¼" hose barb
- 22: 3/8" hose barb
- CC: ½" hose barb
- 00: 1" sanitary flange
- FF: 1½" sanitary flange

**Retentate Ports**
- 77: ¾" sanitary flange
- 00: 1" sanitary flange
- FF: 1½" sanitary flange
- HH: 2" sanitary flange

**Product**
- XF: SepraPor® polysulfone hollow fiber filter

**Fluid Path Length (Nominal)**
- 12: 12" (30 cm)
- 24: 24" (60 cm)

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Capsule Diameter</th>
<th>Effective Filtration Area for 12&quot; Length</th>
<th>Effective Filtration Area for 24&quot; Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.375&quot; (0.95 cm)</td>
<td>0.12 ft² (0.011 m²)</td>
<td>0.25 ft² (0.023 m²)</td>
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<tr>
<td>1</td>
<td>0.75&quot; (1.9 cm)</td>
<td>0.45 ft² (0.042 m²)</td>
<td>0.91 ft² (0.085 m²)</td>
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<tr>
<td>2</td>
<td>1.0&quot; (2.5 cm)</td>
<td>0.81 ft² (0.075 m²)</td>
<td>1.6 ft² (0.15 m²)</td>
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<tr>
<td>3</td>
<td>1.25&quot; (3.2 cm)</td>
<td>1.3 ft² (0.12 m²)</td>
<td>2.5 ft² (0.23 m²)</td>
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<tr>
<td>4</td>
<td>2.0&quot; (5.1 cm)</td>
<td>3.9 ft² (0.36 m²)</td>
<td>9.0 ft² (0.84 m²)</td>
</tr>
<tr>
<td>5</td>
<td>3.0&quot; (7.6 cm)</td>
<td>9.9 ft² (0.92 m²)</td>
<td>23 ft² (2.1 m²)</td>
</tr>
<tr>
<td>7</td>
<td>4.25&quot; (10.8 cm)</td>
<td>27 ft² (2.5 m²)</td>
<td>47 ft² (4.4 m²)</td>
</tr>
</tbody>
</table>

*Additional information about this filter product is available in the SepraPor® Green Docs document at www.meissner.com/green-docs.

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