**KrosFlo® mPES Hollow Fiber Filters**

**Faster Processing + Higher Yields**

**Modified Polyethersulfone (mPES)** is an advanced hydrophilic membrane filtration chemistry that provides higher flux rates for faster processing times, excellent selectivity for separation applications, and low protein binding for higher product yields than other membrane chemistries. The void-free structure of mPES hollow fiber, shown in the SEMs, increases the membrane’s tensile strength, resulting in increased durability during processing.

Spectrum’s new modified Polyethersulfone hollow fiber filters provide all the benefits of modified PES chemistry in fully encapsulated filter modules. mPES Hollow Fiber Filters for Tangential Flow Filtration have significant advantages over other filter configurations, such as cassettes and dead-end filters. Tangential Flow Filtration (TFF) involves the recirculation of the retentate across the surface of the Hollow Fiber membrane. This gentle cross-flow feed acts to minimize membrane fouling, maintain a high filtration rate, and provide higher product recovery.
**Benefits of mPES Hollow Fiber Filters**

- Linear scalability from R&D to Production
- Hydrophilic for high flux rates and faster processing
- Lower total development and production costs due to faster processing
- Increased yields due to low protein binding
- Large range of pore sizes - 1kD to 0.65µm
  - 0.5mm, 0.75mm, 1.0mm
- 6 effective filter lengths - 20, 41.5, 50*, 65, 68*, and 108* cm
  - *50, 68 and 108 cm are available in KrosFlo MAX only
- Large range of surface areas - 13 cm² to 12.8 m²

**Applications**

mPES can be used for:

- Cell Concentration, Clarification and Diafiltration
- Lysate Clarification
- VLP and Virus Concentration, Clarification and Diafiltration
- Protein Purification, Concentration and Diafiltration
- Nucleic Acid Diafiltration and Concentration
- NanoParticle and Latex Particle Diafiltration and Fractionation
- In-situ Conjugation and Fractionation
- Bacteria Concentration and Diafiltration
- Liposome, siRNA Concentration and Diafiltration
- Inclusion Body Clarification and Concentration
- Bioreactor Cell Perfusion and Media Exchange

**mPES Filter Specifications**

<table>
<thead>
<tr>
<th>Fiber ID</th>
<th>Pore Sizes</th>
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</thead>
<tbody>
<tr>
<td>0.5mm</td>
<td>3kD, 5kD, 10kD, 30kD, 50kD, 70kD, 100kD,</td>
</tr>
<tr>
<td>0.75mm mPES</td>
<td>300kD, 500kD, 750 kD, 0.2 µm, 0.65µm</td>
</tr>
<tr>
<td>1.0mm</td>
<td>1 kD, 3 kD, 5kD, 10 kD, 30kD, 50kD, 70kD, 100kD, 300kD, 500 kD and 750 kD</td>
</tr>
</tbody>
</table>

**Housing:** Polysulfone

**Potting Material:** Polyurethane

**MiniKros® Sampler**

cut-away with key call-outs
MicroKros® Filters for Small R&D Volumes
- Processing Volumes: 1–100 ml
- Connections: MLL x FLL
- Effective Lengths: 20 cm, 41.5 cm, 65 cm
- Surface Area: 13 cm² – 60 cm²

MidiKros® Filters for Small Starting Batch Volumes
- Processing Volumes: 100 ml – 3 L
- Connections: FLL x FLL
- Effective Lengths: 20, 41.5 and 65 cm
- Surface Area: 75 cm² – 370 cm²

MidiKros® TC Filters for Small Starting Batch Volumes
- Processing Volumes: 100 ml – 3 L
- Connections: ½” TC x FLL
- Effective Lengths: 20, 41.5 and 65 cm
- Surface Area: 75 cm² – 370 cm²

MiniKros® Sampler Filters for Small Batch Volumes
- Processing Volumes: 3 L – 15 L
- Connections: ¾” TC x ¾” TC
- Effective Lengths: 20, 41.5 and 65 cm
- Surface Area: 490 cm² – 2600 cm²

MiniKros® Filters for Pilot Scale Volumes
- Processing Volumes: 5 L - 50 L
- Connections: 1-1/2” TC x ¾” TC
- Effective Lengths: 20, 41.5 and 65 cm
- Surface Area: 1550 cm² – 6500 cm²
**KrosFlo® Filters for Production Scale Volumes**

Processing Volumes: 10-100L  
Connections: 3" TC x 1-1/2" TC  
Effective Lengths: 20, 41.5 and 65 cm  
Surface Area: 7850 cm² – 4.1 m²

**KrosFlo® MAX Filters for Production Scale Volumes**

Processing Volumes: 100L – 1000+L  
Connections: 6" TC x 1-1/2" TC  
Effective Lengths: 41.5, 50, 68 and 108 cm  
Surface Area: 4.3 m² – 12.8 m²