



Minimate™ Tangential Flow Filtration Capsule

Introduction

The easy to use Minimate Tangential Flow Filtration (TFF) capsule is a valuable tool for any laboratory requiring tangential flow filtration of small process volumes. Sample batch sizes of up to one liter can be reduced to as low as 5 mL with little user intervention. Sample concentration and diafiltration (desalting) can take place sequentially using the same device and system, saving time and avoiding product loss associated with transfer steps.

The Minimate TFF Capsules contain a robust polyethersulfone ultrafiltration (UF) membrane. The Omega™ UF membrane offers low non-specific adsorption characteristics resulting in high product recovery. The Minimate TFF capsules are available with a wide range of molecular weight cut-offs. They can be used in a variety of biological applications in biotechnology, molecular biology, protein chemistry, microbiology, and immunology.

Features and Benefits

- Plug-n-play – Minimate TFF capsule includes all fittings and tubing to simplify installation into filtration setups. This versatile, self-contained device works with any laboratory pump.
- Cost-effective design – For non-critical applications, the plastic construction of the Minimate TFF capsule and chemical compatibility of the Omega membrane facilitate cleaning and reuse.
- Scalable – Several Minimate TFF capsules may be connected in parallel for increased membrane area. The Minimate TFF capsules have the same path length and materials of construction as larger Centramate™ and Centrasette™ cassette systems used in pilot and production plants. Predictable performance saves time when scaling up a process.
- High Product Recovery – Optimized flow path design coupled with low protein binding Omega membrane minimize non-specific binding.



- Efficient – Concentration and desalting processes can be performed on the same system with minimal user intervention. Achieve high concentration factors in a single processing step due to the low hold-up volume of the device.
- Disposable – This economically priced device can be dedicated to a single batch or process eliminating the time required for cleaning validation.
- Confidence – Each Minimate capsule is 100% integrity tested during manufacture to ensure reliable performance. For critical applications the user can re-test the integrity after initial use. A Certificate of Quality is available for each capsule.

Applications

- Concentrate and desalt proteins, peptides, or nucleic acids (DNA, RNA, oligonucleotides)
- Recover antibodies or recombinant proteins from clarified cell culture media
- Process metal sensitive enzymes and molecules
- Separate (fractionate) large from small biomolecules
- Concentrate viruses or gene therapy vectors
- Prepare samples prior to column chromatography
- Concentrate samples after gel filtration
- Depyrogenate water, buffers, and media solutions

Specifications

Materials of Construction

Filter Media: Omega membrane (m-polyethersulfone)

Housing: Polypropylene, glass reinforced

Screens, Housing, Housing Sealing Ring, Fittings

Polypropylene

Membrane Plate/Filtrate Channels

Polyethylene

Internal Gasket

Ethylene propylene elastomer

Effective Filtration Area

50 cm² (0.05 ft²)

Recommended Crossflow

30 – 40 mL/min (0.6 – 0.8 Liters/min/ft²)

Operating Temperature Range

5 °C (41 °F) to 50 °C (122 °F)

Capsule Maximum Operating Pressure

4 bar (400 kPa, 60 psi)

pH Range

1 – 14

Product Hold Up Volume (feed/retentate)

Approx. 1.6 mL

Forward Flow Air Integrity Value

≤ 7/mL/min @ 0.75 bar (10 psi)

Dimensions (L x W x H nominal)

20 cm x 3.8 cm x 1.8 cm (8 in x 1.5 in x 0.7 in)

Ordering Information

Minimate TFF Capsules; Self Contained Ultrafiltration Tangential Flow Filtration Capsule With Luer Connectors

Product No.	Description
OA001C12	Minimate TFF Capsule w/ 1Kd Omega
OA003C12	Minimate TFF Capsule w/ 3Kd Omega
OA005C12	Minimate TFF Capsule w/ 5Kd Omega
OA010C12	Minimate TFF Capsule w/ 10Kd Omega
OA030C12	Minimate TFF Capsule w/ 30Kd Omega
OA050C12	Minimate TFF Capsule w/ 50Kd Omega
OA070C12	Minimate TFF Capsule w/ 70Kd Omega
OA100C12	Minimate TFF Capsule w/ 100Kd Omega
OA300C12	Minimate TFF Capsule w/ 300Kd Omega
OA500C12	Minimate TFF Capsule w/ 500Kd Omega
OA990C12	Minimate TFF Capsule w/ 1000Kd Omega
88216	Minimate Fittings kit, Contains: Male luer to 3.2 mm (1/8") hose barb, Female luer to 3.2 mm(1/8") hose barb, 3.2 mm (1/8") i.d. tubing, Tubing screw clamp, Tubing clamps, Adhesive strips (loop and hook)

Note: 88216 is included with each capsule. Sold separately if needed.



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