

Nalgene Rapid-Flow PES Filter Units and Bottle Tops

Superior flow rates reduce downtime for cell culture applications

Introduction new membrane “aPES” !

“a” stands for asymmetric. Instead of uniformly size pore structure, larger pore size positioned at top membrane and gradually smaller to the bottom. Larger particulate will remain higher in pore matrix, preventing finer pore from clogging (Fig. 1).

Proprietary multi column filter support

Uniform support structures with consistent spacing across the membrane enable constant flow rates and prevent protein foaming (Fig. 2).

Low protein binding

Asymmetric Hydrophilic PES membrane does not need prewetting and has low protein binding. It will not change the protein contain of filtrated media. The aPES membrane does not diminish important growth factor LIF in the media as showed in Fig. 3.

Nalgene Rapid Flow does it quickly.

Rapid flow design speeds up the filtration by 20% - 25% compared other brands (Fig. 4).

Available in different sizes and volume

The Nalgene Rapid Flow is ready in different volumes (150, 250, 500, 1000 mL) depending the needs (Fig. 5).

Leak proof screw cap

Extend Shelf life of filtered medium by minimizing pH shift in the storage bottle (Fig. 6).

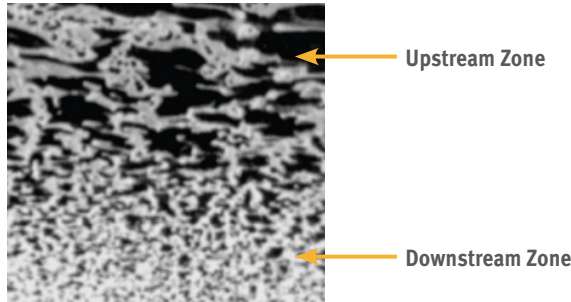


Figure 1. aPES provide dual zone which upstream zone acts as prefilter and downstream zone provide retention of pore size rating

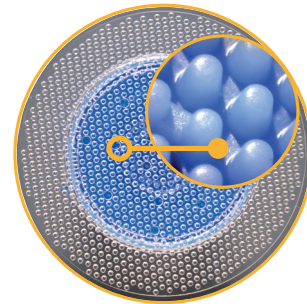


Figure 2. Build with constant spacing give superior flow rates

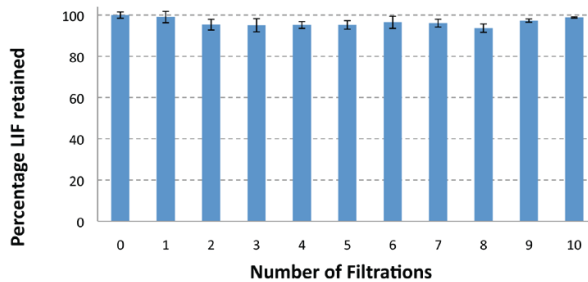


Figure 3. Filtration using Nalgene Rapid Flow Filter units didn't significantly affect Leukemia Inhibitor factor (LIF) concentration

Flow Rate using DMEM + 10% FBS

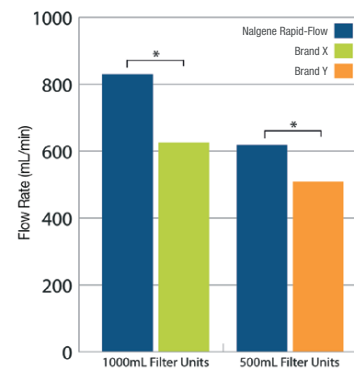


Figure 4. Filtration of DMEM with 10% FBS faster with Nalgene Rapid Flow Filter units (P<0.05)



Figure 5. Different volume and sizes of Nalgene Rapid Flow aPES filter unit.



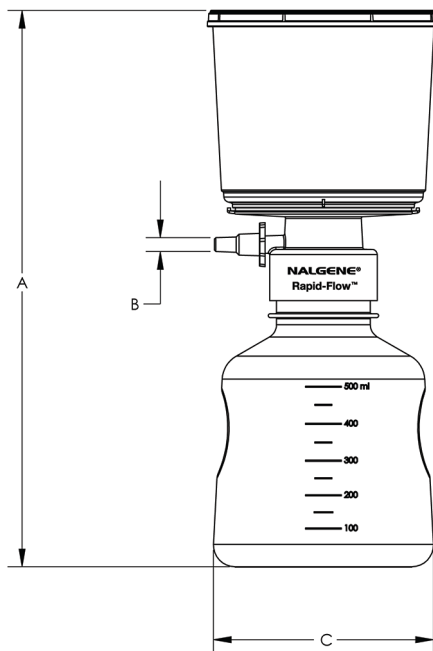
Figure 6. Leak proof screw cap

| Ordering information | | | | | | |
|---|---|--------------|----------------------------------|----------------------------------|----------------------------------|----------------|
| Nalgene Filters with PES Membrane | | | | | | |
| Description | Pore Size μm | Capacity mL | Membr. Diam. mm | Fits Bottle Neck Size | No. per pack / case | Catalog Number |
| The complete Nalgene Filter Unit system combines the Rapid Flow bottle top filter with built-in vacuum adapter and dust cover, attached to a receiver bottle featuring a wide-base for improved stability on the benchtop, and a leak proof cap which maintains pH of stored media better than the competition. | 0.1 <i>used for sterile filtration and mycoplasma removal</i> | 150 | 50 | 45 mm thread | Individually packed; 12 per case | 565-0010 |
| | | 250 | 50 | 45 mm thread | Individually packed; 12 per case | 568-0010 |
| | | 500 | 75 | 45 mm thread | Individually packed; 12 per case | 566-0010 |
| | | 1000 | 90 | 45 mm thread | Individually packed; 12 per case | 567-0010 |
| | 0.2 <i>used for sterile filtration *Stem Cell Tested</i> | 50 | 50 | conical tube | Individually packed; 12 per case | 564-0020 |
| | | 150 | 50 | 45 mm thread | Individually packed; 12 per case | 565-0020 |
| | | 250 | 50 | 45 mm thread | Individually packed; 12 per case | 568-0020 |
| | | 500 | 75 | 45 mm thread | Individually packed; 12 per case | 566-0020 |
| | | 90 | 45 mm thread | Individually packed; 12 per case | 569-0020 | |
| | | 1000 | 90 | 45 mm thread | Individually packed; 12 per case | 567-0020 |
| The Nalgene PES Bottle Top Filters, with built-in vacuum adapter and dust cover can be used with narrow or wide mouth receiver bottles; 33 mm to 45 mm thread. | 0.45 <i>used for clarification</i> | 150 | 50 | 45 mm thread | Individually packed; 12 per case | 165-0045 |
| | | 250 | 50 | 45 mm thread | Individually packed; 12 per case | 168-0045 |
| | | 500 | 75 | 45 mm thread | Individually packed; 12 per case | 166-0045 |
| | | 90 | 45 mm thread | Individually packed; 12 per case | 169-0045 | |
| | 0.2 <i>used for sterile filtration *Stem Cell Tested</i> | 1000 | 90 | 45 mm thread | Individually packed; 12 per case | 167-0045 |
| | | 150 | 50 | 33 mm thread | Individually packed; 12 per case | 596-3320 |
| | | 50 | 45 mm thread | Individually packed; 12 per case | 596-4520 | |
| | | 500 | 75 | 33 mm thread | Individually packed; 12 per case | 595-3320 |
| | | 75 | 45 mm thread | Individually packed; 12 per case | 595-4520 | |
| | | 1000 | 90 | 33 mm thread | Individually packed; 12 per case | 597-3320 |
| 0.45 <i>used for clarification</i> | 90 | 45 mm thread | Individually packed; 12 per case | 597-4520 | | |
| | 150 | 50 | 33 mm thread | Individually packed; 12 per case | 296-3345 | |
| | 50 | 45 mm thread | Individually packed; 12 per case | 296-4545 | | |
| | 500 | 75 | 33 mm thread | Individually packed; 12 per case | 295-3345 | |
| | | 75 | 45 mm thread | Individually packed; 12 per case | 295-4545 | |

PESFU-0220

*Filtered media retains LIF growth factor, passes MEA testing and maintains normal growth and pluripotency of mouse embryonic stem cells

| Filter Component | Materials of Construction |
|-----------------------|--|
| Membrane Material | Asymmetric Hydrophilic PES |
| Multi-Column Support | Virgin Polystyrene |
| Filter Bottle and Lid | Virgin Polystyrene |
| Screw Cap | Virgin HDPE (High Density Polyethylene) |
| Dust Cover | Virgin Polystyrene |
| Operating Information | Specification |
| Retention Ratings | 0.1, 0.2, 0.45 μm |
| Shelf Life | 5 year shelf life for all products EXCEPT 565-0010, 568-0010, 566-0010, and 567-0010 which currently are 2 years from Manufacturing Date |
| Sterilization | Gamma Irradiation to per ISO 11137 |
| Product Testing | Certificate of Quality |



| Filter Unit Dimensions | | | | |
|---------------------------------|-----------------------------|------------|------------|------------|
| Capacity (mL) | 150 | 250 | 500 | 1000 |
| Membrane Dia. (mm) | 50 | 50 | 75/90 | 90 |
| A (Overall height mm) | 156 | 200 | 249 | 327 |
| B (Quick connect diameter mm) | 6.4/9.5 ID | 6.4/9.5 ID | 6.4/9.5 ID | 6.4/9.5 ID |
| C (Receiver bottle diameter mm) | 89 | 89 | 98 | 114 |
| Pore Size (μm) | available in 0.1; 0.2; 0.45 | | | |

Nalgene Filter Unit

Shown: 500 mL Nalgene Rapid Flow Filter Unit



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