



General Use Inlet Solvent Filters

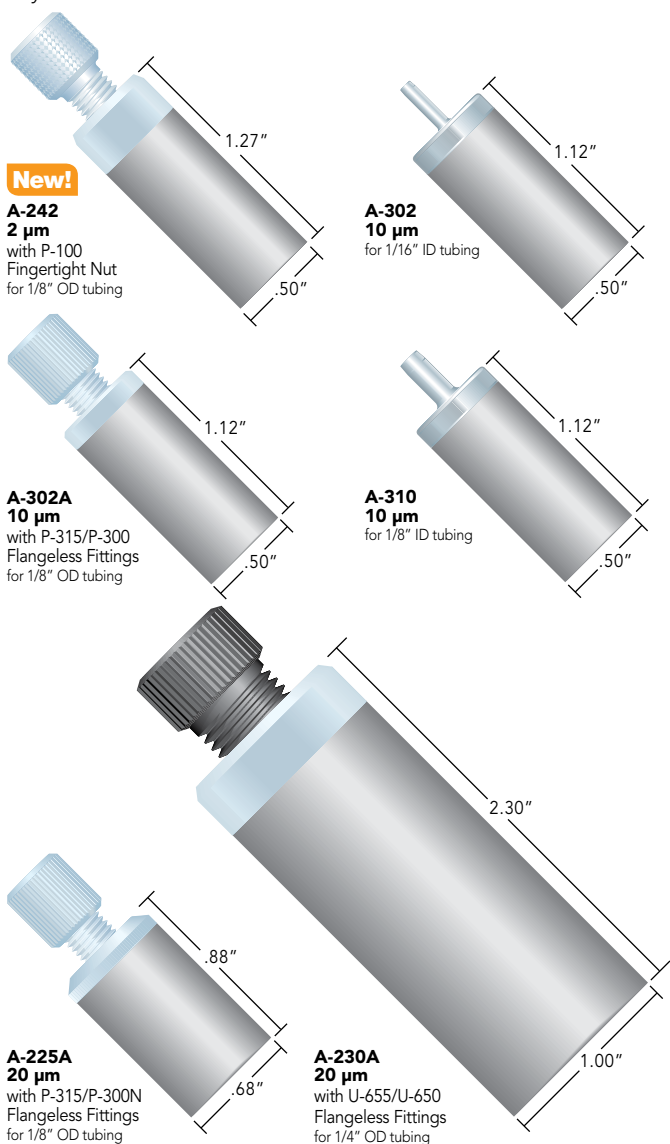
- ▶ Large Surface Areas
- ▶ Disposable
- ▶ 2 µm, 10 µm, and 20 µm Pore Sizes Available
- ▶ General Use and Prep Filters for Higher Flow Applications

It is good practice to filter your solvents to prevent pump damage. Upchurch Scientific® 316 stainless steel filters provide that protection. Their large surface areas mean longer life without pump cavitation.

Because filters should be changed periodically, we make it easy to replace them without tools. For those filters using a plastic nut, thread the nut into the filter and finger tighten. Our other filters have stems, allowing easy insertion directly into your inlet tubing.

The filters with stems are 100% 316 stainless steel. Filters with threaded fittings have threaded Kel-F® (PTFE) caps.

Please Note: The internal design of the A-309 and the A-230A Filters allows solvent to be drawn to within approximately 1/8" of the bottom of your solvent bottle.



MAXIMUM SUGGESTED FLOW RATES:

Flow rates are determined by porosity and surface area.

Filter	Porosity	Max. Flow Rate
A-242	2 µm	10 mL/min
A-240	10 µm	40 mL/min
A-302	10 µm	40 mL/min
A-302A	10 µm	40 mL/min
A-309	10 µm	40 mL/min
A-310	10 µm	40 mL/min
A-228	2 µm	80 mL/min
A-225	20 µm	100 mL/min
A-225A	20 µm	100 mL/min
A-226A	10 µm	100 mL/min
A-227A	10 µm	100 mL/min
A-230A	20 µm	100 mL/min
A-231A	20 µm	100 mL/min
A-311	10 µm	100 mL/min
A-311A	10 µm	100 mL/min

Application Note

- ▶ We recommend using 2 µm filters to disperse sparging gas. For inlet solvent filtering, we recommend 10 µm or 20 µm filters to allow sufficient flow to prevent pump cavitation.
- ▶ Change filters every six months to one year, depending on your mobile phase.

GENERAL USE INLET SOLVENT FILTERS

For Analytical HPLC

- A-240** 10 µm Inlet Solvent Filter, for 1/8" OD tubing¹
- A-241** **A-240, 5-pack**, for 1/8" OD tubing¹
- New!** **A-242** 2 µm Inlet Solvent Filter, for 1/8" OD tubing¹
- A-243** **A-242, 5-pack**, for 1/8" OD tubing¹
- A-228** 2 µm Inlet Solvent Filter with stem, for 1/8" ID tubing
- ★ **A-302** 10 µm Inlet Solvent Filter with stem, for 1/16" ID tubing
- ★ **A-302A** 10 µm Inlet Solvent Filter with Flangeless Fittings, for 1/8" OD tubing²
- A-309** 10 µm Inlet Solvent Filter with stem, for 1/16" ID tubing

For Waters® Analytical HPLC Systems

- A-231A** 20 µm Inlet Solvent Filter, for 3/16" OD tubing³
- ★ **A-310** 10 µm Inlet Solvent Filter with stem, for 1/8" ID tubing

For Preparative HPLC Systems

- A-225** 20 µm Inlet Solvent Filter with stem, for 1/16" ID tubing
- ★ **A-225A** 20 µm Inlet Solvent Filter with Flangeless Fittings, for 1/8" OD tubing⁴
- A-226A** 10 µm Inlet Solvent Filter, for 5/16" OD tubing⁵
- A-227A** 10 µm Inlet Solvent Filter, for 1/4" OD tubing⁶
- A-230A** 20 µm Inlet Solvent Filter, for 1/4" OD tubing⁶
- A-311** 10 µm Inlet Solvent Filter with stem, for 1/16" ID tubing
- A-311A** 10 µm Inlet Solvent Filter with Flangeless Fittings, for 1/8" OD tubing²

INLET SOLVENT FILTER KITS

- A-200** Inlet Solvent Filter Kit – 10 µm
 Contains: One 3' length of FEP Tubing, (1) P-100 Fingertight Fitting, (5) Disposable A-220 10 µm Filters
- A-201** Inlet Solvent Filter Kit – 2 µm
 Contains: One 3' length of FEP Tubing, (1) P-100 Fingertight Fitting, (5) Disposable A-222 2 µm Filters
- A-210** P-100 Fingertight Fitting with FEP Tubing
 1/8" OD x 1/16" ID x 3'

¹ Includes a P-100 PCTFE One-Piece Fitting.

² Includes a P-315 Tefzel® (ETFE) Nut and a P-300 ETFE Ferrule.

³ Includes a P-132 PEEK® Nut and a P-133 ETFE Ferrule.

⁴ Includes a P-315 ETFE Nut and a P-300N ETFE Ferrule.

⁵ Includes a U-622 PEEK Nut and a U-660 ETFE Ferrule.

⁶ Includes a U-655 PEEK Nut and a U-650 ETFE Ferrule.



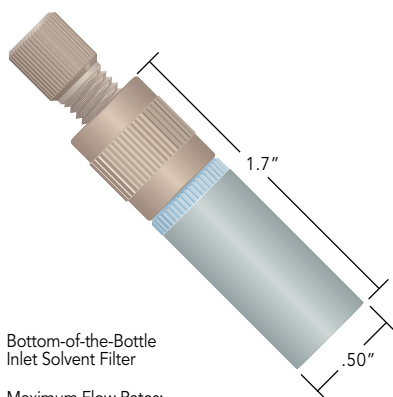
Stainless Steel Bottom-of-the-Bottle™ Solvent Filters

- ▶ Draws Solvent from within 1/8" of the Bottom of the Bottle
- ▶ Replaceable Stainless Steel Filter Cups
- ▶ For 1/8" and 3/16" OD Tubing

Upchurch Scientific® patented Bottom-of-the-Bottle Solvent Filter Assemblies feature a 2 µm or 10 µm replaceable stainless steel filter cup and a design that allows solvent to be drawn from within 1/8" of the bottom of your solvent bottle. The filter cups are inexpensive and easy to replace, making this an economical, trouble-free choice.

To replace the filter cup, loosen the PEEK™ lock nut and pull the filter cup off; replace it with a new cup, and retighten the lock nut. *Please Note: The filter cups are interchangeable. Thus, you can make a 10 µm filter into a 2 µm filter (or visa versa) by simply switching the replacement cups.*

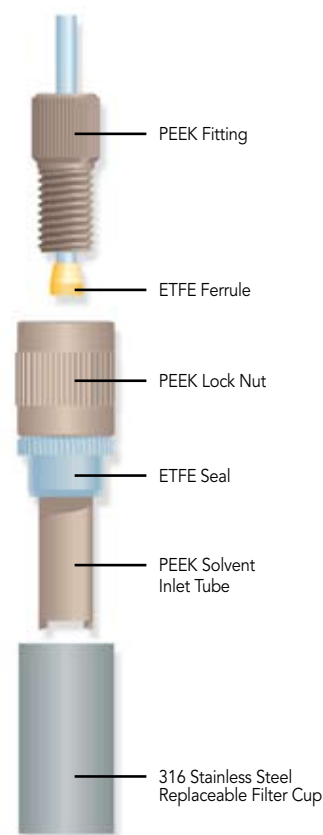
The wetted components of these filters are PEEK, Tefzel® (ETFE) and 316 stainless steel.



Bottom-of-the-Bottle Inlet Solvent Filter

Maximum Flow Rates:
2 µm – up to 10 mL/min.
10 µm – up to 40 mL/min.

BOTTOM-OF-THE-BOTTLE SOLVENT FILTER ASSEMBLY:



Upchurch Scientific Bottom-of-the-Bottle Filters are protected by one or more U.S. patents.

Application Note

Why Use An Inlet Solvent Filter?

- ▶ To filter out particulate matter from the solvent that may otherwise damage expensive hardware.
- ▶ To disperse sparging gas into very fine bubbles for minimal solvent disturbance and maximum sparging efficiency.
- ▶ To prevent particulates originating in the sparging system from entering your mobile phase reservoir.
- ▶ To hold your tubing in place at the bottom of the bottle.



TOP SELLER
see starred products
in price block.

BOTTOM-OF-THE-BOTTLE SOLVENT FILTERS

- ★ **A-550** 10 µm Filter Assembly¹, for 1/8" OD tubing with A-520 filter cup
- A-551** 2 µm Filter Assembly¹, for 1/8" OD tubing with A-522 filter cup
- A-552** 10 µm Filter Assembly², for 3/16" OD tubing³ with A-520 filter cup
- A-553** 2 µm Filter Assembly², for 3/16" OD tubing³ with A-522 filter cup
- A-520x** 10 µm Stainless Steel Replacement Solvent Filter Cups, 10-pk
- A-522x** 2 µm Stainless Steel Replacement Solvent Filter Cups, 10-pk

¹ Includes a P-300 ETFE Ferrule and a P-130 PEEK Nut

² Includes a P-133 ETFE Ferrule and a P-132 PEEK Nut

³ Typically for Waters® systems



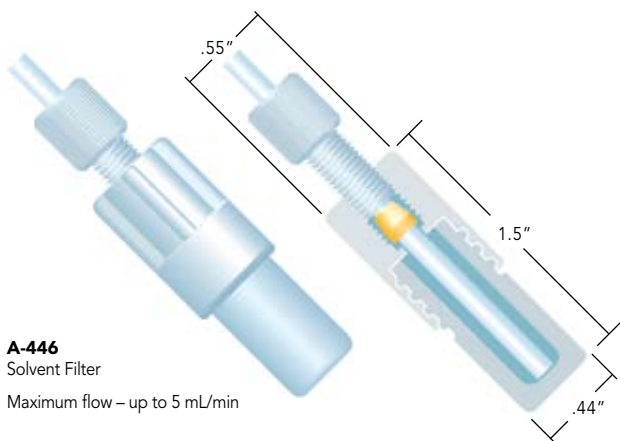
UHMWPE Bottom-of-the-Bottle™ Solvent Filters

- ▶ Replaceable Filter Cup
- ▶ Economical

The design of these Upchurch Scientific® solvent filters allows your tubing to pass through to the bottom of the filter cup. This feature enables the filter to draw solvent from within .10" (2.5 mm) of the bottom of your solvent bottle.

Each of the two biocompatible solvent filter assemblies comes with a disposable 10 µm ultra-high molecular weight polyethylene (UHMWPE) filter cup. These filter cups thread directly into the inert Tefzel® (ETFE) body, creating a good seal that ensures all mobile phase is properly filtered. Choose from versions designed for use with 1/16" and 1/8" OD tubing.

Please Note: UHMWPE is a hydrophobic material. To establish proper surface wetting, you may need to prime the filter with methanol or acetonitrile.



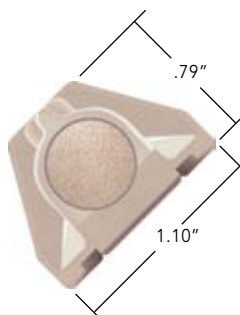
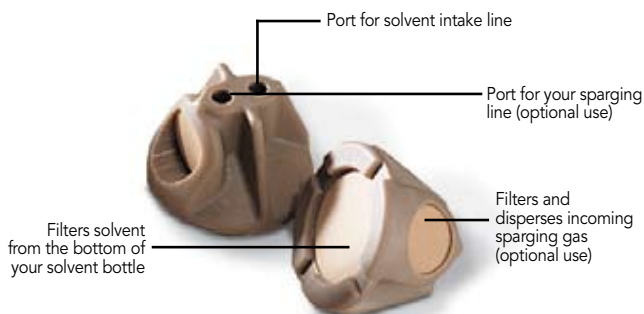
A-446
Solvent Filter
Maximum flow – up to 5 mL/min

PEEK™ Bottom-of-the-Bottle Solvent Filters

- ▶ Our Most Recommended Filtering Unit!
- ▶ 100% PEEK Polymer Construction
- ▶ Easy Operation—No Fittings Required!

These Upchurch Scientific biocompatible filters are made from 100% PEEK polymer. Each has two PEEK frits. The bottom frit (2 µm or 10 µm) will draw solvents from within .08" (2 mm) of the bottom of the solvent bottle. The 2 µm frit on the side may be used for a 1/8" OD helium sparging line.

To use, simply press fit your appropriately sized fluoropolymer tubing firmly into the top holes. That's it!



A-435
Bottom-of-the-Bottle Filter



A-438
Bottom-of-the-Bottle Filter
(for small neck bottles)

Maximum Flow Rate – up to 30 mL/min.

Application Note

We recommend you use our FEP or PFA fluoropolymer with our PEEK Bottom-of-the-Bottle Solvent Filters. Our fluoropolymer tubing is extruded to some of the tightest tolerances in the industry. Tubing from other manufacturers may have OD variances that can cause the tubing to slip out of the filter tubing ports. Please refer to pages 73 and 74 for our complete line of fluoropolymer tubing.

UHMWPE BOTTOM-OF-THE-BOTTLE SOLVENT FILTERS

- A-445** 10 µm UHMWPE Filter Assembly for 1/16" OD tubing¹
- A-446** 10 µm UHMWPE Filter Assembly for 1/8" OD tubing²
- A-427** 10 µm UHMWPE Replacement Solvent Filter Cups, 5-pk

PEEK BOTTOM-OF-THE-BOTTLE SOLVENT FILTERS

- A-435** 2 µm PEEK Filter for 1/8" OD tubing
- A-436** 2 µm PEEK Filter for 3/16" OD tubing³
- A-437** 2 µm PEEK Filter for 1/8" OD tubing, for small-neck (GL-38) bottles
- A-438** 10 µm PEEK Filter for 1/8" OD tubing, for small-neck (GL-38) bottles
- A-440** 10 µm PEEK Filter for 1/8" OD tubing
- A-441** 10 µm PEEK Filter for 3/16" OD tubing³
- A-450** 2 µm PEEK Filter for 1/16" OD tubing
- A-451** 10 µm PEEK Filter for 1/16" OD tubing
- A-452** 2 µm PEEK Filter for 1/16" OD tubing, for small-neck (GL-38) bottles
- A-453** 10 µm PEEK Filter for 1/16" OD tubing, for small-neck (GL-38) bottles

¹ Includes a P-200 ETFE Ferrule and a P-245 PFA Nut

² Includes a P-300 ETFE Ferrule and a P-345 PFA Nut

³ Typically for Waters® systems