



### Filtration Products

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“ We have found your syringe filters to be **competitively priced** and well made compared with our usual brand. They don't seem to clog as quickly and there is no loss of performance for our sample prep, usually 2mL vials of Pharmaceutical active ingredients.

” **Wes Herridge**  
**Laleham Healthcare, UK**

The opinions stated herein are solely those of the speaker and not necessarily those of any company or organization.

## Phenex LC/GC Approved Syringe Filters

For sample and solvent filtration prior to LC or GC analysis

- Particulate, PVC, and extractable-free filters
- Less system downtime
- More consistent, reproducible results
- Increased column lifetime

### Phenex Offers:

- Broad chemical compatibility
- Minimized extractables
- Excellent flow rate
- High total throughput
- Certified quality
- 100 % integrity tested
- Low hold-up volume
- Low protein adsorption
- Bi-directional use



## Syringe Filter Selection Guide

### 1. Choose filter diameter based on sample volume

≤ 2mL Sample Volume	2 - 10mL Sample Volume	10 - 100mL Sample Volume
4 mm Diameter	15 mm Diameter	25 - 28 mm Diameter

### 2. Choose a pore size based on your sample

Sample Description	Recommended Filter Pore Size
General aqueous or mixed organic samples prior to LC analysis with columns packed with > 3 μm particles. General clarification of GC, SFC, CE, and GPC samples. Viscous samples or samples containing high levels of particulate matter.	0.45 μm
General aqueous or mixed organic samples prior to LC analysis with columns packed with ≤ 3 μm particles. Removal of fine particulate matter prior to GC, SFC, CE, and GPC samples.	0.20 μm
Viscous samples such as serum, plasma or other biological matrices. Solutions with high particulate load such as some environmental, biofuels or food and beverage applications.	Glass Fiber Filter with 0.45 μm filter membrane

### 3. Suggested syringe filter membranes

Membrane Type	Recommended Uses
<b>RC</b> (Regenerated Cellulose)	<b>For Aqueous and Mixed Organic Solutions</b> A broad range of aqueous and mixed-organic solutions. Fast-flow and ultra-low protein and non-specific binding characteristics. Broadly recommended as an excellent general purpose/high-performance sample filter for most applications.
<b>PTFE, Teflon®</b> (Polytetrafluoroethylene)	<b>For 100% Organic Solutions</b> Well-suited for the clarification of non-aqueous samples. Hydrophobic membrane, excellent for filtration of organic-based, highly acidic or basic samples and solvents. A hydrophobic membrane, that can be made hydrophilic by wetting with alcohol and then flushing with deionized water.

### Additional syringe filter membranes

Membrane Type	Recommended Uses
<b>PES</b> (Polyethersulfone)	Polyethersulfone membranes exhibit very fast-flow and ultra-low protein binding characteristics. Phenex-PES membranes are typically broadly recommended for filtering critical biological samples, tissue culture media, additives and buffers.
<b>NY</b> (Nylon)	Nylon has inherent hydrophilic characteristics and works well for filtration of many aqueous and mixed-organic samples. In combination with a glass pre-filter (Phenex-GF/NY), this membrane is excellent for the filtration of particle-laden samples, such as foods and beverages, environmental, biofuels, and dissolution samples.
<b>CA</b> (Cellulose Acetate)	Cellulose Acetate (CA) membranes exhibit ultra-low protein binding and are broadly used in the filtration of biological samples. In combination with a glass pre-filter (Phenex-GF/CA), this membrane is excellent for filtration of tissue culture media, general biological sample filtration and clarification.
<b>GF</b> (Glass Fiber)	Glass Fiber (GF) filters are made of inert borosilicate glass and have a nominal 1.2 μm pore size. They are commonly used with highly viscous samples or samples containing high concentrations of particulate matter (e.g., food analysis, biological samples, soil samples, fermentation broth samples, removal of yeasts, molds, etc.).
<b>PVDF</b> (Polyvinylidene Fluoride)	Hydrophilic PVDF membrane provides high flow rates and throughput, low extractables, and broad chemical compatibility. This membrane binds less protein than nylon or PTFE membranes.

# Filtration Syringe Filters

## Phenex™ Syringe Filters (cont'd)

**Tip: Try a Sample Pack!**

Request yours today by phone or visit [www.phenomenex.com/sample](http://www.phenomenex.com/sample)



Ordering Information <sup>1</sup> Phenex Syringe Filters		4 mm Diameter for ≤ 2 mL sample volumes		15 mm Diameter for 2 – 10 mL sample volumes		25 - 28 mm Diameter for 10 – 100 mL sample volumes	
Membrane Type/Size	Part No.	Unit	Part No.	Unit	Part No.	Unit	
RC (Regenerated Cellulose)	<a href="#">AF0-3203-12</a>	100/pk	<a href="#">AF0-2203-12</a>	100/pk	<a href="#">AF0-8203-12</a> <sup>5</sup>	100/pk	
	<a href="#">AF0-3203-52</a>	500/pk	<a href="#">AF0-2203-52</a>	500/pk	<a href="#">AF0-8203-52</a> <sup>5</sup>	500/pk	
PES <sup>3</sup> (Polyethersulfone)	—	—	—	—	<a href="#">AF0-8208-12</a> <sup>7</sup>	100/pk	
	—	—	—	—	<a href="#">AF0-8208-52</a> <sup>7</sup>	500/pk	
PTFE <sup>6</sup> (Polytetrafluoroethylene)	<a href="#">AF0-3202-12</a>	100/pk	<a href="#">AF0-2202-12</a>	100/pk	<a href="#">AF0-1202-12</a>	100/pk	
	<a href="#">AF0-3202-52</a>	500/pk	<a href="#">AF0-2202-52</a>	500/pk	<a href="#">AF0-1202-52</a>	500/pk	
NY (Nylon)	<a href="#">AF3-3207-12</a>	100/pk	<a href="#">AF0-2207-12</a>	100/pk	<a href="#">AF0-1207-12</a>	100/pk	
	<a href="#">AF3-3207-52</a>	500/pk	<a href="#">AF0-2207-52</a>	500/pk	<a href="#">AF0-1207-52</a>	500/pk	
0.20 µm GF/NY <sup>2</sup> (Glass Fiber/Nylon)	An integrated syringe filter unit containing an inert borosilicate glass fiber prefilter and a Nylon (NY) membrane. Excellent for filtration of particle-laden samples, such as foods and beverages, environmental, biofuels, and dissolution samples. Use less hand pressure to filter even the most difficult samples. Outlet connection is luer lock.				<a href="#">AF0-1A47-12</a> <sup>7</sup>	100/pk	
					<a href="#">AF0-1A47-52</a> <sup>7</sup>	500/pk	
PVDF (Polyvinylidene Fluoride)	—	—	<a href="#">AF6-5206-12</a> <sup>8</sup>	100/pk	<a href="#">AF6-6206-12</a>	100/pk	
	—	—	<a href="#">AF6-5206-52</a> <sup>8</sup>	500/pk	<a href="#">AF6-6206-52</a>	500/pk	
GF/PVDF (Glass Fiber/Polyvinylidene Fluoride)	An integrated syringe filter unit containing an inert borosilicate glass fiber prefilter and a PVDF membrane. The hydrophilic PVDF membrane provides high flow rates and throughput, low extractables and broad chemical compatibility. This membrane binds less protein than nylon or PTFE membranes.				<a href="#">AF6-6C06-12</a>	100/pk	
					<a href="#">AF6-6C06-52</a>	500/pk	
CA <sup>4</sup> (Cellulose Acetate)	—	—	—	—	<a href="#">AF0-8204-12</a> <sup>7</sup>	100/pk	
	—	—	—	—	<a href="#">AF0-8204-52</a> <sup>7</sup>	500/pk	
GF/CA <sup>2,3,4</sup> (Glass Fiber/Cellulose Acetate)	An integrated syringe filter unit containing an inert borosilicate glass fiber prefilter and a CA membrane. Excellent for filtration of tissue culture media, general biological sample filtration and clarification. Outlet connection is luer lock.				<a href="#">AF0-8A09-12</a> <sup>7</sup>	100/pk	
					<a href="#">AF0-8A09-52</a> <sup>7</sup>	500/pk	
RC (Regenerated Cellulose)	<a href="#">AF0-3103-12</a>	100/pk	<a href="#">AF0-2103-12</a>	100/pk	<a href="#">AF0-8103-12</a> <sup>5</sup>	100/pk	
	<a href="#">AF0-3103-52</a>	500/pk	<a href="#">AF0-2103-52</a>	500/pk	<a href="#">AF0-8103-52</a> <sup>5</sup>	500/pk	
PES <sup>3</sup> (Polyethersulfone)	—	—	—	—	<a href="#">AF0-8108-12</a> <sup>7</sup>	100/pk	
	—	—	—	—	<a href="#">AF0-8108-52</a> <sup>7</sup>	500/pk	
PTFE <sup>6</sup> (Polytetrafluoroethylene)	<a href="#">AF0-3102-12</a>	100/pk	<a href="#">AF0-2102-12</a>	100/pk	<a href="#">AF0-1102-12</a>	100/pk	
	<a href="#">AF0-3102-52</a>	500/pk	<a href="#">AF0-2102-52</a>	500/pk	<a href="#">AF0-1102-52</a>	500/pk	
NY (Nylon)	<a href="#">AF3-3107-12</a>	100/pk	<a href="#">AF0-2107-12</a>	100/pk	<a href="#">AF0-1107-12</a>	100/pk	
	<a href="#">AF3-3107-52</a>	500/pk	<a href="#">AF0-2107-52</a>	500/pk	<a href="#">AF0-1107-52</a>	500/pk	
0.45 µm GF/NY <sup>2</sup> (Glass Fiber/Nylon)	An integrated syringe filter unit containing an inert borosilicate glass fiber prefilter and a Nylon (NY) membrane. Excellent for filtration of particle-laden samples, such as foods and beverages, environmental, biofuels, and dissolution samples. Use less hand pressure to filter even the most difficult samples. Outlet connection is luer lock.				<a href="#">AF0-1B47-12</a> <sup>7</sup>	100/pk	
					<a href="#">AF0-1B47-52</a> <sup>7</sup>	500/pk	
PVDF (Polyvinylidene Fluoride)	—	—	<a href="#">AF6-5106-128</a>	100/pk	<a href="#">AF6-6106-12</a>	100/pk	
	—	—	<a href="#">AF6-5106-528</a>	500/pk	<a href="#">AF6-6106-52</a>	500/pk	
GF/PVDF (Glass Fiber/Polyvinylidene Fluoride)	An integrated syringe filter unit containing an inert borosilicate glass fiber prefilter and a PVDF membrane. The hydrophilic PVDF membrane provides high flow rates and throughput, low extractables and broad chemical compatibility. This membrane binds less protein than nylon or PTFE membranes.				<a href="#">AF6-6D06-12</a>	100/pk	
					<a href="#">AF6-6D06-52</a>	500/pk	
GF/CA <sup>2,3,4</sup> (Glass Fiber/Cellulose Acetate)	An integrated syringe filter unit containing an inert borosilicate glass fiber prefilter and a CA membrane. Excellent for filtration of tissue culture media, general biological sample filtration and clarification. Outlet connection is luer lock.				<a href="#">AF0-8B09-12</a> <sup>7</sup>	100/pk	
					<a href="#">AF0-8B09-52</a> <sup>7</sup>	500/pk	
1.20 µm GF <sup>2,3</sup> (Glass Fiber)	Prefiltration of heavily contaminated or highly viscous samples. When used in-series preceding a membrane filter, clogging of the membrane filter is prevented and sample clean up is optimized. Outlet connection is luer lock.				<a href="#">AF0-8515-12</a> <sup>7</sup>	100/pk	
					<a href="#">AF0-8515-52</a> <sup>7</sup>	500/pk	



- Larger quantity purchases at significant savings are available.
- Glass fiber filters are 28 mm diameter and made of borosilicate. They will remove 90 % of all particles >1.2 µm.
- Housing material is methacrylate butadiene styrene (MBS) polymerisate. Also known as Cyrolite®.

- Cellulose acetate is surfactant-free.
- 26 mm diameter.
- Hydrophobic membrane. Can be made hydrophilic by pre-wetting with IPA.

- 28 mm diameter.
- 17 mm diameter.
- Additional dimensions and membrane types are available. Please contact your local Phenomenex technical consultant or distributor for availability or assistance.



Above syringe filters are non-sterile. Housing is made of medical-grade polypropylene (PP), and offer luer lock inlet/slip outlet connections, unless otherwise indicated.

# Filtration Syringe Filters and Disposable Syringes

## Phenex™ Syringe Filters (cont'd)

### Syringe Filter Applications and Recommended Membranes

Application / Sample	Recommended Filter	First Alternative	Second Alternative
LC and GC Sample Prep	RC	PTFE	PES
Aggressive or Pure Organic Solvents	PTFE	RC	NY
Protein Analysis / Biological Samples	PES	RC	GF/CA
High Particulate Loads	GF/NY	GF + RC	PTFE
Environmental Methods	GF/NY	RC	PTFE
Food and Beverage	GF/NY	RC	PTFE
Clinical Research / Toxicology	RC	PES	NY
Dissolution Testing	GF/NY	RC	PTFE
Ion Chromatography	RC	PES	PTFE
Trace Metals (ICP-MS, AAS)	RC	PES	NY
Capillary Electrophoresis (CE)	RC	PES	NY
Tissue Cultures, Media, Buffers	GF/CA	PES	RC



For high load and particulate-laden samples you may consider placing a Glass Fiber (GF) prefilter, either integrated with the membrane as one unit (Phenex-GF/NY or -GF/CA) or in series with the membrane syringe filter of your choice.

**Syringe Filter Finder**  
3-step tool designed to help you find the appropriate syringe filter to help you successfully remove particulates from your sample matrix.  
[www.phenomenex.com/SFfinder](http://www.phenomenex.com/SFfinder)

## Sterile Syringe Filters

Sterile syringe filters from Phenomenex are ready-to-use, individually blister packaged units, offering high flow rates at low inlet pressures, for rapid sterile filtration.



### Ordering Information

#### Sterile Syringe Filters

Part No.	Pore Size (µm)	Disc Diameter (mm)	Membrane Material	Unit
<a href="#">AF0-8455</a>	0.2	28	CA Luer/Slip	50/pk
<a href="#">AF0-8456</a>	0.45	28	CA Luer/Slip	50/pk
<a href="#">AF0-8457</a>	0.2	28	PES Luer/Slip	50/pk
<a href="#">AF0-8458</a>	0.45	28	PES Luer/Slip	50/pk
<a href="#">AF0-8459</a>	0.2	25	RC Luer/Slip	50/pk
<a href="#">AF0-8461</a>	0.2	25	PTFE Luer/Slip	50/pk

## All-Plastic Disposable Syringes

- Use for all syringe filter applications\*
- Luer-lock outlet makes connection easy
- Made of ultra-clean, high-purity plastics



### Ordering Information

#### All-Plastic Disposable Syringes

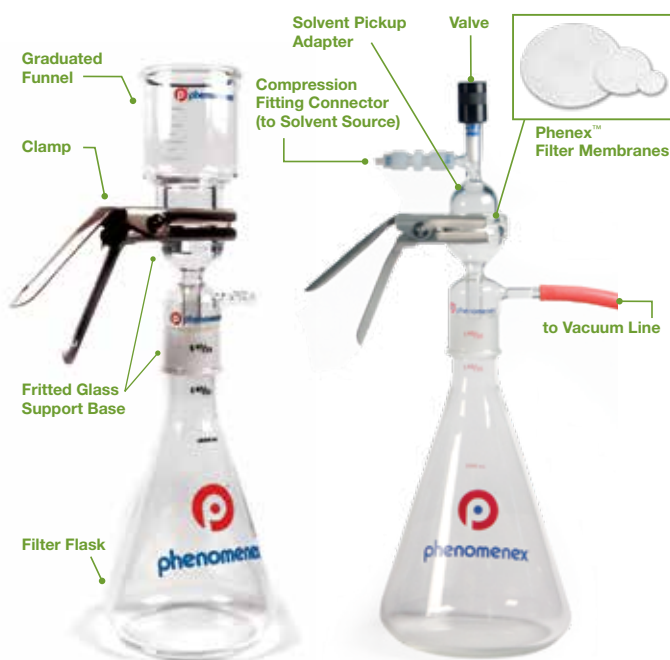
Part No.	Description	Capacity (mL)*	Unit
<a href="#">AS0-8408</a>	Plastic Disposable Syringes, Luer-lock	3	100/pk
<a href="#">AS0-8409</a>	Plastic Disposable Syringes, Luer-lock	5	100/pk
<a href="#">AS0-8410</a>	Plastic Disposable Syringes, Luer-lock	10	100/pk
<a href="#">AS0-8411</a>	Plastic Disposable Syringes, Luer-lock	20	100/pk

\* Choose larger volume syringe to reduce force on syringe filter membrane. 10 mL syringe is recommended.

## All-Glass Vacuum Mobile Phase Filtration System

FilterSys™

- Prevents pump and system component damage
- Rapid filtration of buffers, organics and corrosive liquids
- Removes damaging microparticulates and bacterial contaminants
- HPLC and GC solvent and sample filtration



**WARNING:** The apparatus should be used with a water aspiration line, not a true vacuum line, unless secured behind an appropriate safety shield.

Designed for rapid filtration of particulate matter from HPLC solvents, this unit is an excellent value. Protect your instrument and column from costly damage by clarifying all your HPLC solvents and buffer solutions before use. This vacuum filter assembly comes with a sample reservoir and receiving flask. A 47 mm diameter membrane filter is placed between the fritted-glass support base and the sample reservoir, secured in place by an aluminum clamp. The support base itself is connected to the receiving flask by a vacuum-tight ground-glass joint. Only low-extractable borosilicate glass and the membrane filter come into contact with the mobile phase. The vacuum hose connection is made above the filtration drip tip to prevent contamination from the vacuum line.

Recommended filter membranes: Nylon is a highly resistant material and can be used with almost all laboratory solvents. Since Nylon is hydrophilic, no prewetting of the filter is required. PTFE (Teflon®) membrane filters are excellent for organic or other aggressive solvent systems. Extremely low levels of extractables (plasticizers, contaminants, etc.) make this an excellent filter for trace analysis work. PTFE is hydrophobic, so it is not recommended for the filtration of aqueous solutions.

### Ordering Information

#### Mobile Phase Filtration System

Part No.	Description	Unit
<b>Complete Assembly</b>		
<a href="#">AH0-1566</a>	FilterSys, 47 mm, 300 mL funnel with 1 L vacuum flask	ea
<a href="#">AH0-3314</a>	FilterSys, 47 mm, 500 mL funnel with 2 L vacuum flask	ea
<a href="#">AH0-3315</a>	FilterSys, 47 mm, 1000 mL funnel with 4 L vacuum flask	ea
<b>Component Parts</b>		
<a href="#">AH0-1567</a>	Fritted support base, 47 mm, 40/35 taper	ea
<a href="#">AH0-1568</a>	Funnel, graduated, 300 mL, 47 mm	ea
<a href="#">AH0-3323</a>	Funnel, graduated, 500 mL, 47 mm	ea
<a href="#">AH0-3324</a>	Funnel, graduated, 1000 mL, 47 mm	ea
<a href="#">AH0-1569</a>	1 liter filter flask, 40/35 taper	ea
<a href="#">AH0-3321</a>	2 liter filter flask, 40/35 taper	ea
<a href="#">AH0-3322</a>	4 liter filter flask, 40/35 taper	ea
<a href="#">AH0-1570</a>	Aluminum clamp, 47 mm	ea
<b>Filter Membranes</b>		
<a href="#">AF0-0503</a>	Nylon, 0.2 µm, 47 mm	100/pk
<a href="#">AF0-0504</a>	Nylon, 0.45 µm, 47 mm	100/pk
<a href="#">AF0-0514</a>	PTFE, 0.5 µm, 47 mm	100/pk



For compatible Solvent Pickup Adapter, see p. 14  
For additional Filter Membranes, see p. 15



Verex™ Certified sample vials, inserts, caps, and seals are guaranteed to ensure problem-free, reproducible performance you can trust – all at competitive prices. See page 30

or Visit:

[www.phenomenex.com/VialFinder](http://www.phenomenex.com/VialFinder)

## Solvent Reservoirs / Bottle Filter Cap

- Eliminates makeshift HPLC reservoir covers, such as aluminum foil, Parafilm®, etc.
- Neatly seals to prevent particulate contamination
- Minimizes solvent evaporation and gas absorption

A disposable filter (any size Luer lock Teflon® or nylon syringe filter) on the pressure equalization port minimizes the reabsorption of dissolved gases and prevents particle contamination. These assemblies fit the standard screw cap bottles with 38 mm cap size. The 1/8 in. OD Teflon feed line from the cap attaches directly to the HPLC pump. All cap parts are compatible with most common HPLC solvents.



### Ordering Information

Filter Cap			
Part No.	Description	Cap Size	Unit
<a href="#">AH0-1565</a>	Filter Reservoir Cap	38 mm	ea

## Solvent Reservoir and Reagent Bottles

- Popular 1 and 2 liter sizes, equipped with 3-way valve cap
- Low-leaching (low alkali), borosilicate glass
- Chemically inert, internal PTFE seal

These wide-mouth GL45 mobile phase reservoirs come in 1- and 2-liter sizes. The reservoirs have easy-to-read volumetric markings to indicate the amount of solvent remaining. The versatile 3-way valve cap supplied with each reservoir provides a totally-inert PTFE (Teflon) seal against the solvents inside.



### Ordering Information

Reservoir and Valve Cap Assembly*			
Part No.	Mfr. No.	Description	Unit
<a href="#">AH0-4142</a>	3200	HPLC Reservoir, 1000 mL clear glass, GL45 wide-mouth, includes 3-way Valve Cap	ea
<a href="#">AH0-4143</a>	3203	HPLC Reservoir, 2000 mL clear glass, GL45 wide-mouth, includes 3-way Valve Cap	ea

\* Fittings not included. See p. 397 [AQ0-2950](#)

## Increase Lab Safety with HPLC/UHPLC Solvent Protection SecurityCAP™

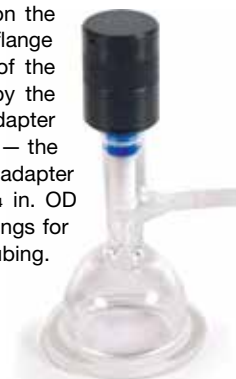
### HPLC/UHPLC Solvent (Eluent) and Waste Protection

- **Safer Laboratory Work Environment**  
Solvent vapors and gasses are restricted to the containers
- **Confidence During Quality and Safety Audits**  
Eliminate aluminum foil or parafilm covering solvent bottles
- **Easy to Use**  
No more twisting tubes during bottle exchange



## Solvent Pickup Adapter

This glass adapter enables direct pickup of mobile phase solvent for filtration using the Phenomenex FilterSys™ (see previous page). Safe in-line filtration with the pickup adapter replaces the tedious and dangerous pour-and-wait funnel filtration method. Eliminate the possibilities of spilling solvents and breathing toxic vapors. Replacing the funnel adapter on the FilterSys unit, the 47 mm pickup adapter with flange holds the membrane filter in place on top of the fritted support base, which in turn is held by the aluminum clamp (not included). The pickup adapter draws solvent directly from the reagent bottle — the safest way to transfer and filter solvents. The adapter includes a 4 mm PTFE (Teflon) valve with 1/4 in. OD outlet, PTFE 90° elbow with compression fittings for 1/4 in. OD tubing, and 3 feet of 1/4 in. OD PTFE tubing.



### Ordering Information

Solvent Pickup Adapter		
Part No.	Description	Unit
<a href="#">AH0-2947</a>	Mobile Phase Pickup Adapter, 47 mm	ea



For Ordering and Additional SecurityCAP Information, see pp. 391-392

## Additional Filtration Products

### Regular sample filtration means:

- Less system downtime
- Fewer troubleshooting problems
- Improved results

Removal of particulate matter to sub-micron levels is critical before any drug, tox, or dirty environmental sample is injected into an HPLC, GC or mass spectrometer. Also, products that remove matrix components, interferents, and chemical garbage will improve your results. Check out the following useful products:

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## Filter Membranes

### Phenex™

- RC, Nylon, PTFE (Teflon®), and other membranes available
- Wide selection of membrane sizes

Phenex PTFE (Teflon®) and Regenerated Cellulose (RC) membrane filters offer excellent chemical resistance to almost all laboratory solvents and samples. They do not introduce unwanted plasticizers or extractables into the sample or mobile phase. Since Regenerated Cellulose (RC) is hydrophilic, filtering of aqueous solvents is simple. No prewetting is required. PTFE is hydrophobic and so is not recommended for the filtration of aqueous solutions.



### Ordering Information

Filter Membranes				
Part No.	Pore Size (µm)	Disc Diameter (mm)	Membrane Material	Unit
<b>Nylon</b>				
<a href="#">AF0-0500</a>	0.45	13	Nylon	100/pk
<a href="#">AF0-0501</a>	0.2	25	Nylon	100/pk
<a href="#">AF0-0502</a>	0.45	25	Nylon	100/pk
<a href="#">AF0-0503</a>	0.2	47	Nylon	100/pk
<a href="#">AF0-0504</a>	0.45	47	Nylon	100/pk
<b>PTFE</b>				
<a href="#">AF0-0512</a>	0.45	25	PTFE	100/pk
<a href="#">AF0-0514</a>	0.45	47	PTFE	100/pk
<b>Cellulose Acetate (CA)</b>				
<a href="#">AF0-8436</a>	0.45	25	CA	100/pk
<a href="#">AF0-8437</a>	0.2	25	CA	100/pk
<a href="#">AF0-8438</a>	0.45	47	CA	100/pk
<a href="#">AF0-8439</a>	0.2	47	CA	100/pk
<b>Regenerated Cellulose (RC)</b>				
<a href="#">AF0-8440</a>	0.45	13	RC	100/pk
<a href="#">AF0-8441</a>	0.2	13	RC	100/pk
<a href="#">AF0-8442</a>	0.2	25	RC	100/pk
<a href="#">AF0-8443</a>	0.45	47	RC	100/pk
<a href="#">AF0-8444</a>	0.2	47	RC	100/pk
<b>Polyethersulfone (PES)</b>				
<a href="#">AF0-8445</a>	0.2	25	PES	100/pk
<a href="#">AF0-8446</a>	0.45	25	PES	100/pk
<a href="#">AF0-8447</a>	0.2	47	PES	100/pk
<a href="#">AF0-8448</a>	0.45	47	PES	100/pk
<b>Cellulose Nitrate Ester (MCE)*</b>				
<a href="#">AF0-8454</a>	0.45	47	MCE	100/pk



\*MCE = Mixed Cellulose Esters  
Above filter membranes are non-sterile.  
Phenex is a trademark of Phenomenex.



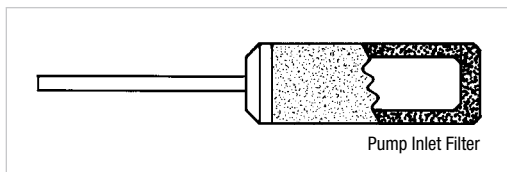
For a useful Membrane Selection Guide, see p. 10

## Inlet Filters

### Stainless Steel

- Protects pumps and check valves
- Easy to replace
- Low cost

HPLC solvent inlet filters are used at the low pressure inlet side of the pump to help protect the check valves, injector and column from damaging particulate contamination. Solvent filters are constructed of Hastelloy Steel and are available for 1/16 in. ID and 1/8 in. ID tubing. Due to the large surface area of the cylindrical frit, virtually no backpressure or cavitation is developed. The filter is easily cleaned by backflushing or sonicating.



### Ordering Information

#### Solvent Inlet Filters - Stainless Steel

Part No.	Description	Unit
<a href="#">AF0-0356</a>	Solvent Inlet Filter, 2 µm, for 1/16 in. ID tubing	ea
<a href="#">AF0-0359</a>	Solvent Inlet Filter, 2 µm, for 1/8 in. ID tubing	ea
<a href="#">ATO-2955</a>	Teflon Tubing, 5 ft. L x 1/8 in. OD x 1/16 in. (0.062 in.) ID	ea
<a href="#">ATO-2956</a>	Teflon Tubing, 10 ft. L x 1/8 in. OD x 1/16 in. (0.062 in.) ID	ea
<a href="#">ATO-8609</a>	Teflon Tubing, 5 ft. L x 1/4 in. OD x 1/8 in. (0.125 in.) ID	ea
<a href="#">ATO-8610</a>	Teflon Tubing, 10 ft. L x 1/4 in. OD x 1/8 in. (0.125 in.) ID	ea



Important: Depending on the mobile phase, we recommend that you change your inlet filter every one to six months.



For disposable Syringe Filters offering convenient and economical sample and solvent filtration, see pp. 10 - 12

### Metal-Free/Biocompatible

- Biocompatible
- Flat bottom design uses all available mobile phase
- High surface area for long filter life

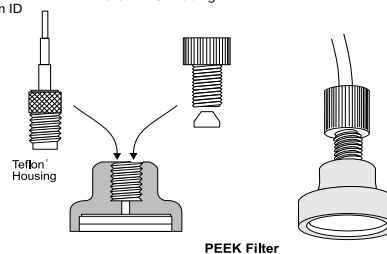
The Solvent Saver™ Inlet Filter Unit utilizes a flat filter element that sits parallel to the bottom of the HPLC reservoir. The design allows the filter to draw all but the last 2 % of the mobile phase from the reservoir without drawing air into the system.

The Solvent Saver Inlet Filter is manufactured by pressing a PEEK filter element into an inert Teflon® housing. The top of the housing has female 1/4 in.-28 threads to accept 1/8 or 1/16 in. OD tubing via PEEK flangeless fittings and Tefzel® ferrule (sold separately) or direct connect various size tubing using the Unifit adapter (sold separately). The Unifit adapter slip-fits onto 1.5, 2.2 or 3.0 mm ID tubing. This filter is excellent for sensitive biochromatography and ion chromatography applications where metal surfaces may corrode or interact with samples.



Unifit adapter (sold separately AQ0-8339) slip-fits onto 1.5, 2.2 or 3.0 mm ID tubing

1/4 in.-28 flangeless fitting (included) attaches to 1/8 in. OD tubing



### Ordering Information

#### Solvent Saver Inlet Filter - Metal-Free

Part No.	Description	Unit
<a href="#">AH0-1562</a>	Solvent Saver Inlet Filter with 10 µm PEEK filter with Flangeless fitting for 1/8 in. OD tubing	ea
<a href="#">AQ0-8339</a>	Solvent Saver Unifit Adapter, Tri-Step Tubing Connector, PEEK	ea
<a href="#">AQ0-2949</a>	Flangeless Nut and Ferrule for 1/8 in. OD tubing, 1/4 in.-28 threads, red Delrin	10/pk
<a href="#">AQ0-2950</a>	Flangeless Nut and Ferrule for 1/8 in. OD tubing, 1/4 in.-28 threads, green Delrin	10/pk
<a href="#">ATO-2953</a>	Teflon Tubing, 5 ft. L x 1/16 in. OD x 1/32 in. (0.031 in.) ID	ea
<a href="#">ATO-2955</a>	Teflon Tubing, 5 ft. L x 1/8 in. OD x 1/16 in. (0.062 in.) ID	ea
<a href="#">ATO-2956</a>	Teflon Tubing, 10 ft. L x 1/8 in. OD x 1/16 in. (0.062 in.) ID	ea
<a href="#">ATO-8610</a>	Teflon Tubing, 10 ft. L x 1/4 in. OD x 1/8 in. (0.125 in.) ID	ea



## In-Line Filters

### Stainless Steel (Analytical)

- Removes particulates from flow path
- Minimizes sample peak dispersion

In-line Filters are available to protect expensive HPLC columns from damaging microparticulates. Using one of these filters between the injection valve and the column is recommended for all HPLC systems. The 3 mm diameter filter element is recommended for use with conventional 4.6 mm diameter columns. Column In-line Filters are supplied with two 6 cm L x 0.007 in. ID connecting tubes. Pressure rating is 5000 psi (345 bar).



#### Ordering Information

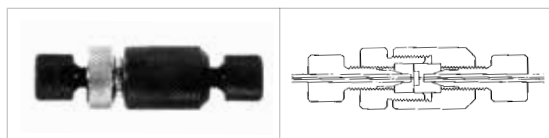
##### Stainless Steel In-Line Filters (Analytical)

Part No.	Description	Unit
<a href="#">AF0-0377</a>	In-line Filter with 0.5 µm Porosity x 3 mm dia. filter	ea
<a href="#">AF0-0378</a>	Replacement Filter Disks: 0.5 µm x 3 mm	5/pk

### Metal-Free/Biocompatible (Analytical)

- Biocompatible
- Virtually no band broadening or peak distortion
- Easy fingertight connection


This in-line filter assembly removes fine particles from the solvent stream without adding band broadening or peak distortion to your separation. Microparticulates down to 0.5 µm are effectively removed before they have a chance to plug your column and degrade your separation. The Polyglas™ frit with fluoropolymer frit assembly design is fully biocompatible and easily installed using fingertight connections. Pressure-rated to 5000 psi (345 bar).




#### Ordering Information

##### Metal-Free/Biocompatible In-Line Filter (Analytical)

Part No.	Description	Unit
<a href="#">AF0-1736</a>	In-line Filter, 0.5 µm Frit	ea

 For UHPLC system connections, see SecurityLINK™ UHPLC fingertight fitting system on pp. 317-318

 For SecurityGuard™, the universal guard cartridge system, see p. 311

### KrudKatcher™

- Universal fit to virtually all manufacturers' analytical columns
- Saves expensive columns and equipment from damaging microparticulates
- Convenient, disposable in-line filter

There are two types of KrudKatchers depending on system backpressure and dead volume demands: the KrudKatcher Classic and the KrudKatcher Ultra.

Whereas conventional in-line filters typically cost much more and often require replacement parts and tools, the KrudKatcher is a simple, low-cost unit that is easily replaced and discarded when the backpressure indicates clogging or excessive particle build up. The universal connection is compatible with all standard 1/16 in. 10-32 internal threaded end-fittings used in columns, guard columns, injector valves, and other LC equipment.

#### The KrudKatcher Classic:

- Pressure-rated to **5000 psi (345 bar)**
- Hand-tightened connection



The PEEK filter body of the KrudKatcher Classic houses an integrated 316 stainless steel depth filter that efficiently removes microparticulates from the flow stream with minimal contributions to system dead volume (2 µL).

#### Ordering Information

##### KrudKatcher Classic Disposable In-Line Filter (Analytical)

Part No.	Description	Unit
<a href="#">AF0-5727</a>	KrudKatcher Disposable Pre-Column Filter, 2.0 µm	10/pk

#### The KrudKatcher Ultra:

- Fits virtually all UHPLC / HPLC columns 1.0 to 4.6 mm ID
- Pressure rated to **20000 psi (1375 bar)**
- Extremely low dead volume minimizes sample peak dispersion

The KrudKatcher Ultra filter body houses an integrated 2.0 µm 316 stainless steel depth filter that efficiently removes microparticulates from the flow stream without contributing to system backpressure or dead volume (<0.2 µL).



#### Ordering Information

##### KrudKatcher Ultra In-Line Filter (Analytical)

Part No.	Description	Unit
<a href="#">AF0-8497</a>	HPLC KrudKatcher Ultra Column In-Line Filter, 2.0 µm Depth Filter x 0.004 in. ID	3/pk

KrudKatcher Ultra requires 3/16 in. wrench. Wrench not provided. See p. 401

## In-Line Filters (cont'd)

### Metal-Free/Biocompatible (SemiPrep)

- For columns 8 to 18 mm ID
- Effective pre-column filtration
- Replaceable filter element



Phenomenex's Biocompatible SemiPrep in-line filter holder with replaceable filter element (2 µm PEEK frit) will help protect your column investment by safely removing particulate matter and insoluble material from the mobile phase and sample matrix. The filter consists of a stainless steel body, two PEEK end-fittings, and a separate PEEK frit. When you need to replace the filter, simply unscrew the assembly, remove the frit and replace it. This filter unit can be placed in the flow path before or after the column with little or no effect on peak shape. Pressure rated to 6000 psi (414 bar).

#### Ordering Information

##### Metal-Free/Biocompatible In-Line Filter (SemiPrep)

Part No.	Description	Unit
<a href="#">AF0-8420</a>	HPLC SemiPrep Column In-Line Filter 2.0 µm Porosity x 10 mm dia. filter, Biocompatible	ea
<a href="#">AF0-8428</a>	Replacement In-Line Filter Disk, PEEK, 2.0 µm Porosity x 10 mm dia.	5/pk

### Stainless Steel (PREP)

- Economical protection for preparative HPLC columns and injectors
- For columns 19 to 30 mm ID
- Replaceable filter element

Preparative columns and the HPLC systems on which they are used are costly and must be protected against fouling. Phenomenex's PREP In-line Filter holder with replaceable filter element (2 µm stainless steel frit) will help protect your investment by safely removing particulate matter and insoluble material from the mobile phase and sample matrix. The filter unit can be placed in the flow path before or after the column with little or no effect on peak shape. This versatile filter can also protect check valves, injectors and detectors. Pressure rated to 8000 psi (551 bar).



#### Ordering Information

##### Stainless Steel In-Line Filters (PREP)

Part No.	Description	Unit
<a href="#">AF0-7866</a>	HPLC PREP Column In-line Filter, S.S., 2.0 µm Porosity x 21.2 mm dia.	ea
<a href="#">AF0-7867</a>	Replacement In-Line Filter Disks, S.S., 2.0 µm Porosity x 21.2 mm dia.	5/pk
<a href="#">AQ0-7877</a>	PREP Replacement O-Rings, 1 in. OD x 7/8 in. ID x 1/16 in. CS, Fluorocarbon	2/pk
<a href="#">AT0-0465</a>	Capillary S.S. Tubing, 0.020 in. ID x 0.062 in. (1/16 in.) OD x 10 cm L	5/pk
<a href="#">AT0-0466</a>	Capillary S.S. Tubing, 0.020 in. ID x 0.062 in. (1/16 in.) OD x 20 cm L	5/pk

## Analytical Column Couplers

### Sure-Lok™ Coupler

- Universal and reusable
- Solvent resistant material
- Low dead-volume connection
- Compatible with all 10-32 internal-threaded fittings

#### Applications:

- Filter to column
- Column to column
- Precolumn to column
- Column to detector



Sure-Lok Coupler (PEEK)

Sure-Lok Couplers contain two Sure-Lok male nuts at either end of a 5 cm long 1/16 in. tubing. The PEEK biocompatible coupler has all parts composed of PEEK, including the 0.010 in. ID tubing. Fingertight to 5000 psi (345 bar).

#### Ordering Information

##### Sure-Lok Couplers (Analytical to SemiPrep)

Part No.	Description	Unit
<a href="#">AQ0-1392</a>	PEEK Sure-Lok Coupler	ea
<a href="#">AQ0-1393</a>	PEEK Sure-Lok Coupler	10/pk

## PREP Column Coupler



#### Ordering Information

##### PREP Column Coupler

Part No.	Description	Unit
<a href="#">AQ0-8376</a>	PREP Coupler, Stainless Steel Tube, Nuts, and Ferrules 10-32 Threads, 1/16 in. OD x 0.030 in. ID	ea

#### Protect your column and equipment with Phenex™ Syringe Filters

Filtering your sample helps prevent column and frit blockage, undue wear on detectors, pumps, valves, injector seals, and abnormally high operating pressures. Non-filtered samples can also lead to non-reproducible results and significant instrument downtime. See page 10 or Visit:

[www.phenomenex.com/SFfinder](http://www.phenomenex.com/SFfinder)

For SecurityGuard™, the universal guard cartridge system, see p. 311