

Syringe Filters

Phenex™

For sample and solvent filtration prior to chromatography

- Rapid filtration of HPLC and GC samples prior to analysis
- Particulate, PVC, and extractable-free filters
- Less system downtime
- More consistent, reproducible results
- Increased column lifetime

best seller



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

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

2. Choose a pore size based on the nature of your sample and chromatographic method

Sample Description	Recommended Filter Pore Size
General aqueous or mixed organic samples prior to HPLC analysis with columns packed with > 3 µm particles. General clarification of GC, SFC, CE, and GPC samples.	0.45 µm
Viscous samples or samples containing high levels of particulate matter.	
General aqueous or mixed organic samples prior to HPLC analysis with columns packed with ≤ 3 µm particles. Removal of fine particulate matter prior to GC, SFC, CE, and GPC samples.	0.20 µm
Gas samples prior to GC. Liquid samples prior to UHPLC or LC/MS. Other particulate-sensitive methods.	
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. Choose a filter membrane according to the characteristics of your sample and filtering objective

Membrane Type	Recommended Uses
RC (Regenerated Cellulose)	Hydrophilic Regenerated Cellulose filter membranes are compatible with a very broad range of aqueous and mixed-organic solutions, making them one of the most universal filter materials used prior to chromatography. Phenex-RC filters also exhibit fast-flow and ultra-low protein and non-specific binding characteristics. Due to the beneficial material characteristics, Phenex-RC membranes are broadly recommended as an excellent general purpose/high-performance sample filter for most applications.
PTFE, Teflon® (Polytetrafluoroethylene)	PTFE is an inherently hydrophobic membrane excellent for filtration of organic-based, highly acidic or basic samples and solvents. Widely used in chromatography, it is especially well suited for the clarification of non-aqueous samples. Although this membrane is hydrophobic, it can be made hydrophilic by wetting the membrane with alcohol and then flushing with deionized water.
PES (Polyethersulfone)	Polyethersulfone membranes exhibit very fast-flow and ultra-low protein binding characteristics and are ideally suited for use in many life science clarification applications. Phenex-PES membranes typically offer better chemical resistance than cellulose acetate and are broadly recommended for filtering critical biological samples, tissue culture media, additives and buffers.
NY (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. For applications that require low protein or non-specific binding characteristics, Phenomenex recommends Phenex-RC (Regenerated Cellulose) filters.
CA (Cellulose Acetate)	Cellulose Acetate 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.
GF (Glass Fiber)	Phenex-GF (Glass Fiber) 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 that contain high concentrations of particulate matter (e.g., food analysis, biological samples, soil samples, fermentation broth samples, removal of yeasts, molds, etc.). Glass Fiber filters can be used alone or in series with other Phenex filter membranes such as the 0.45 µm pore Phenex-RC filter to reduce clogging of the membrane and optimize flow.

Syringe Filters (cont'd)

Syringe Filter Applications and Recommended Membranes

Application / Sample	Recommended Filter	First Alternative	Second Alternative
HPLC 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 / 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



Tip: Try a Sample Pack!
Request yours today by phone or visit
www.phenomenex.com/sample

Ordering Information ¹ 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	Price	Part No.	Unit	Price	Part No.	Unit	Price
0.20 µm									
Phenex-RC (Regenerated Cellulose)	AF0-3203-12	100/pk		AF0-2203-12	100/pk		AF0-8203-12 ⁵	100/pk	
	AF0-3203-52	500/pk		AF0-2203-52	500/pk		AF0-8203-52 ⁵	500/pk	
Phenex-PES ³ (Polyethersulfone)	—	—	—	—	—	—	AF0-8208-12 ⁷	100/pk	
	—	—	—	—	—	—	AF0-8208-52 ⁷	500/pk	
Phenex-PTFE ⁶ (Polytetrafluoroethylene)	AF0-3202-12	100/pk		AF0-2202-12	100/pk		AF0-1202-12	100/pk	
	AF0-3202-52	500/pk		AF0-2202-52	500/pk		AF0-1202-52	500/pk	
Phenex-NY (Nylon)	AF3-3207-12	100/pk		AF0-2207-12	100/pk		AF0-1207-12	100/pk	
	AF3-3207-52	500/pk		AF0-2207-52	500/pk		AF0-1207-52	500/pk	
Phenex-GF/NY ² (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.						AF0-1A47-12 ⁷	100/pk	
							AF0-1A47-52 ⁷	500/pk	
Phenex-GF/CA ^{2,3,4} (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.						AF0-8A09-12 ⁷	100/pk	
							AF0-8A09-52 ⁷	500/pk	
0.45 µm									
Phenex-RC (Regenerated Cellulose)	AF0-3103-12	100/pk		AF0-2103-12	100/pk		AF0-8103-12 ⁵	100/pk	
	AF0-3103-52	500/pk		AF0-2103-52	500/pk		AF0-8103-52 ⁵	500/pk	
Phenex-PES ³ (Polyethersulfone)	—	—	—	—	—	—	AF0-8108-12 ⁷	100/pk	
	—	—	—	—	—	—	AF0-8108-52 ⁷	500/pk	
Phenex-PTFE ⁶ (Polytetrafluoroethylene)	AF0-3102-12	100/pk		AF0-2102-12	100/pk		AF0-1102-12	100/pk	
	AF0-3102-52	500/pk		AF0-2102-52	500/pk		AF0-1102-52	500/pk	
Phenex-NY (Nylon)	AF3-3107-12	100/pk		AF0-2107-12	100/pk		AF0-1107-12	100/pk	
	AF3-3107-52	500/pk		AF0-2107-52	500/pk		AF0-1107-52	500/pk	
Phenex-GF/NY ² (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.						AF0-1B47-12 ⁷	100/pk	
							AF0-1B47-52 ⁷	500/pk	
Phenex-GF/CA ^{2,3,4} (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.						AF0-8B09-12 ⁷	100/pk	
							AF0-8B09-52 ⁷	500/pk	
1.20 µm									
Phenex-GF ^{2,3} (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.						AF0-8515-12 ⁷	100/pk	
							AF0-8515-52 ⁷	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.
- 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.



For high load and particulate-laden samples you may consider placing a Glass Fiber (GF) pre-filter, 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.

Filtration

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	Price
AF0-8455	0.2	28	CA Luer/Slip	50/pk	
AF0-8456	0.45	28	CA Luer/Slip	50/pk	
AF0-8457	0.2	28	PES Luer/Slip	50/pk	
AF0-8458	0.45	28	PES Luer/Slip	50/pk	
AF0-8459	0.2	25	RC Luer/Slip	50/pk	
AF0-8460	0.45	25	RC Luer/Slip	50/pk	
AF0-8461	0.2	25	PTFE Luer/Slip	50/pk	

All-Plastic Disposable Syringes

- Use for all syringe filter applications*
- Luer-lock outlet makes connection easy
- Capacities ranging from 3 to 20 mL
- Made of ultra-clean, high-purity plastics



Ordering Information

All-Plastic Disposable Syringes

Part No.	Description	Capacity (mL)*	Unit	Price
AS0-8408	Plastic Disposable Syringes, Luer-lock	3	100/pk	
AS0-8409	Plastic Disposable Syringes, Luer-lock	5	100/pk	
AS0-8410	Plastic Disposable Syringes, Luer-lock	10	100/pk	
AS0-8411	Plastic Disposable Syringes, Luer-lock	20	100/pk	

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

Centrifugal Filters

Phenex™

Disposable Centrifugal Filter

- Convenient filtration of multiple HPLC and GC samples
- High recovery for small samples
- Nylon, PTFE (Teflon®) and Cellulose Acetate membrane materials



Phenex disposable centrifugal filter units provide a convenient means of filtering multiple HPLC and GC samples without the necessity of manually forcing each sample through the filter with a syringe.

All you need is a laboratory centrifuge with sufficient capacity for the number of samples to be filtered at one time. Centrifugal force drives the sample through the filter quickly without effort on the part of the chemist. No cleaning of syringes is required between samples.

Samples contact only the Phenex filter unit itself and the polypropylene receiver tube. After filtration the upper portion of the tube containing the membrane filter can be discarded. The receiver tube serves as a container for the filtered sample and can be retained as long as desired. Separate caps are supplied for the sample chamber and the receiver tube.

Filter membrane materials available are Nylon, PTFE (Teflon) and Cellulose Acetate (CA). Nylon Phenex filter units are recommended for most HPLC and GC sample filtration work. They are chemically resistant, compatible with all commonly used solvents, and virtually free of extractable materials that could contaminate samples. PTFE (Teflon) Phenex filters are designed to handle more aggressive organic solvents, whereas Cellulose Acetate (CA) is especially well-suited for the filtration of proteinaceous samples in aqueous solvents.

Ordering Information

Centrifugal Filter Units

Part No.	Pore Size (µm)	Volumes (mL) Sample/Receiver	Membrane Non-Sterile	Unit	Price
AF0-0438	0.2	2.0 / 5.0	Nylon	25/pk	
AF0-0439	0.45	2.0 / 5.0	Nylon	25/pk	
AF0-0440	0.2	2.0 / 5.0	PTFE	25/pk	
AF0-0441	0.45	2.0 / 5.0	PTFE	25/pk	
AF0-8353	0.2	2.0 / 5.0	CA	25/pk	
AF0-8354	0.45	2.0 / 5.0	CA	25/pk	



Above centrifugal filter units are non-sterile.