

Sample Filtration



Cut costs, not quality!

Syringe Filters with Luer Lock Inlet

- Luer lock inlet offers leak-tight syringe connection.
- Variety of filter types, porosities, and diameters.
- Color coded for easy identification.
- Rugged polypropylene housing.
- Autoclavable to 121 °C for 15 minutes.
- Quantity break pricing for greater savings.



Size	Porosity	Color	qty.	cat.#
Cellulose Acetate				
4 mm	0.22 µm	green	100-pk.	23972
4 mm	0.45 µm	blue	100-pk.	23973
13 mm	0.22 µm	red	100-pk.	26156
13 mm	0.45 µm	red	100-pk.	26155
25 mm	0.22 µm	red	100-pk.	26158
25 mm	0.45 µm	red	100-pk.	26157
30 mm	0.22 µm	red	100-pk.	23982
30 mm	0.45 µm	red	100-pk.	23983
Nylon				
4 mm	0.22 µm	yellow	100-pk.	23970
4 mm	0.45 µm	pink	100-pk.	23971
13 mm	0.22 µm	pink	100-pk.	26146
13 mm	0.45 µm	pink	100-pk.	26147
25 mm	0.22 µm	pink	100-pk.	26148
25 mm	0.45 µm	pink	100-pk.	26149
30 mm	0.22 µm	pink	100-pk.	23980
30 mm	0.45 µm	pink	100-pk.	23981
PES (polyethersulfone)				
4 mm	0.22 µm	white	100-pk.	23978
4 mm	0.45 µm	blue	100-pk.	23979
13 mm	0.22 µm	green	100-pk.	23966
13 mm	0.45 µm	green	100-pk.	23967
25 mm	0.22 µm	green	100-pk.	23968
25 mm	0.45 µm	green	100-pk.	23969
30 mm	0.22 µm	green	100-pk.	23988
30 mm	0.45 µm	green	100-pk.	23989
PTFE (polytetrafluoroethylene)				
4 mm	0.22 µm	purple	100-pk.	23974
4 mm	0.45 µm	orange	100-pk.	23975
13 mm	0.22 µm	white	100-pk.	26142
13 mm	0.45 µm	white	100-pk.	26143
25 mm	0.22 µm	white	100-pk.	26144
25 mm	0.45 µm	white	100-pk.	26145
30 mm	0.22 µm	white	100-pk.	23984
30 mm	0.45 µm	white	100-pk.	23985
PVDF (polyvinylidene difluoride)				
4 mm	0.22 µm	brown	100-pk.	23976
4 mm	0.45 µm	red	100-pk.	23977
13 mm	0.22 µm	blue	100-pk.	26150
13 mm	0.45 µm	blue	100-pk.	26151
25 mm	0.22 µm	blue	100-pk.	26152
25 mm	0.45 µm	blue	100-pk.	26153
30 mm	0.22 µm	blue	100-pk.	23986
30 mm	0.45 µm	blue	100-pk.	23987

Syringe filters are for laboratory use only.

Membrane selection guide

Membrane	Properties	Applications	Incompatible with
Cellulose Acetate	hydrophilic	aqueous solutions	organic solvents
Nylon	hydrophilic, low protein binding	bases, HPLC solvents, alcohols, aromatic hydrocarbons	acids, aggressive halogenated hydrocarbons, proteins
PES	hydrophilic, low protein binding, fast flow rates	filtration of buffers & culture media	—
PTFE	hydrophobic	organic solvents, acids, alcohols, bases, aromatics	aqueous samples without pre-wetting (to avoid high backpressure)
PVDF	hydrophilic, low protein binding	alcohols, biomolecules	bases, esters, ethers, ketones
Cellulose Acetate, Nylon, PES, PVDF—hydrophilic applications			
PTFE—hydrophobic applications			

Syringe Filters Compatibility Chart

Group of Substance & Chemical Reagents	Cellulose Acetate	Nylon	PES	PTFE	PVDF
ACIDS					
Acetic, 5%	L	R	R	R	R
Acetic, 10%	L	R	R	R	R
Acetic, 25%	N	L	R	R	R
Acetic, Glacial	N	N	R	R	R
Boric	-	L	-	R	-
Formic 25%	L	N	-	R	-
Hydrochloric 15%	L	L	R	R	L
Hydrochloric 25%	N	N	R	R	-
Hydrochloric concentrated	N	N	L	R	N
Hydrofluoric 10%	N	N	-	-	-
Hydrofluoric 35%	N	N	-	R	-
Nitric 25%	N	N	R	R	-
Nitric 6N, 38%	N	N	L	R	R
Nitric concentrated	N	N	N	R	N
Phosphoric 25%	L	N	R	R	-
Sulfuric 25%	N	N	N	R	-
Sulfuric 6N, 29%	N	N	N	R	-
Sulfuric concentrated	N	N	N	R	N
Trichloroacetic 10%	N	N	-	R	R
ALKALINES					
Ammonium Hydroxide 25%	N	R	R	R	L
Formalin 30%	L	L	R	-	-
Sodium Hydroxide 3N, 12%	N	R	R	R	R
ALCOHOLS					
Amyl Alcohol	L	R	N	R	R
Benzyl Alcohol	L	L	L	L	L
Butyl Alcohol	L	R	L	R	R
Butyl Cellosolve	N	L	-	L	-
Ethanol 70%	L	R	L	R	R
Ethanol 98%	N	R	N	R	R
Ethylene glycol	L	R	R	R	R
Glycerol	L	R	R	R	R
Isobutyl Alcohol	L	L	L	L	L
Isopropanol, <i>n</i> -Propanol	L	R	R	R	R
Methanol 98%	N	R	L	R	R
Methyl Cellosolve	L	L	-	L	-
Propylene glycol	L	-	R	R	R
Phenol, Aqueous 10%	-	R	-	R	R

- R = Recommended. No significant change observed in flow rate or bubble point of the membrane, nor visible indication of chemical attack.
- L = Limited Recommended Use. Moderate changes in physical properties. The filter may be suitable for short term, non-critical use.
- N = Not Recommended. The membrane may be unstable.
- = Insufficient Data. Information is not available. Trial testing is recommended.

Group of Substance & Chemical Reagents	Cellulose Acetate	Nylon	PES	PTFE	PVDF
HYDROCARBONS					
Hexane	L	R	L	R	R
Xylene	L	R	N	R	R
Kerosene, Gasoline	L	R	R	R	R
Tetralin, Decalin	N	R	-	R	R
Toluene, benzene	L	R	N	R	R
HALOGENATED HYDROCARBONS					
Carbon Tetrachloride	N	N	N	N	N
Chloroform	N	N	N	R	R
Methylene Chloride	N	L	N	R	N
Monochlorobenzene	N	N	-	R	-
Trichloethylene	N	N	N	R	R
KETONES					
Acetone	N	R	N	R	N
Cyclohexanone	N	L	N	R	N
Isopropylacetone	-	R	-	R	N
Methyl Ethyl Ketone	N	R	N	R	N
Methyl Isobutyl Ketone	N	R	-	R	N
ESTERS					
Amyl Acetate	N	R	L	R	-
Amyl Propyl & Butyl Acetate	L	-	-	R	-
Benzyl Benzoate	-	-	-	R	-
Butyl Acetate	N	-	N	-	-
Ethyl Acetate & Methyl Acetate	N	R	N	R	R/L
Isopropyl Myristate	-	-	-	R	-
Methyl Cellosolve Acetate	N	-	-	R	-
Propylene Glycol Acetate	-	-	-	R	-
Tricresyl Phosphate	-	-	-	R	-
Isopropyl Acetate	L	R	-	-	R
OXIDES - ETHERS					
Dimethylsulfoxide (DMSO)	N	R	N	R	N
Dioxane & Tetrahydrofuran	N	R	L	R	L
Ethyl Ether	L	R	R	R	R
Isopropyl Ether	-	-	-	R	R
SOLVENTS WITH NITROGEN					
Acetonitrile	N	R	N	R	N
Aniline	N	-	-	R	-
Diethylacetamide	N	L	N	R	N
Dimethyl Formamide	N	R	N	R	N
Pyridine	N	R	N	R	-
Triethanolamine	-	R	-	R	N
MISCELLANEOUS					
Formaldehyde Solution 30%	L	R	R	R	R
Hydrogen Peroxide 30%	N	L	N	R	R
Pyridine	N	R	N	R	R
Silicone Oil & Mineral Oil	R	R	R	R	R



Sample Filtration



Simply squeeze particulates and contaminants out of your sample!

Thomson SINGLE StEP® Filter Vials

- Easy-to-use vials offer fast sample filtration and require only a squeeze of your fingers.
- Color-coded caps allow easy identification of 0.2 µm or 0.45 µm membranes in PVDF, PTFE, PES, or nylon.
- Pre-slit PTFE/silicone caps help eliminate broken autosampler needles and cored septa.
- Low dead volume units feature rugged polypropylene vial and insert with 450 µL loading capacity.
- Fit most standard 12 x 32 mm autosamplers, including UHPLC instruments.



Now available in convenient 100-pks.



Porosity	Color	qty.	cat.#
Nylon			
0.2 µm	black cap	100-pk.	25891
0.45 µm	pink cap	100-pk.	25892
PES (polyethersulfone)			
0.2 µm	grey cap	100-pk.	25897
0.45 µm	orange cap	100-pk.	25898
PTFE (polytetrafluoroethylene)			
0.2 µm	green cap	100-pk.	25893
0.45 µm	blue cap	100-pk.	25894
PVDF (polyvinylidene fluoride)			
0.2 µm	red cap	100-pk.	25895
0.45 µm	yellow cap	100-pk.	25896

Patent No. 7,790,117

Filter Vials Compatibility Chart

Most solvents and mobile phases used in liquid chromatography are also compatible with SINGLE StEP® filter vials.

Solvent / Mobile Phase	HOUSINGS				
	PP (polypropylene)	PTFE (polytetrafluoroethylene)	PVDF (polyvinylidene fluoride)	PES (polyether sulfone)	NYL (nylon)
Acetic Acid (glacial) <i>acid, organic</i>	L	R	R	R	N
Acetone <i>ketone</i>	R	R	N	N	R
Acetonitrile (ACN) <i>nitrile</i>	R	R	L	N	R
Alconox, 1% <i>surfactant/detergent</i>	L	L	L	L	L
Ammonium Hydroxide <i>caustic</i>	L	R	R	N	L
Ammonium Sulfate (saturated) <i>salt, aqueous solution</i>	R	R	N	L	R
Amyl Acetate <i>ester</i>	L	R	R	R	L
Amyl Alcohol <i>alcohol</i>	R	R	R	R	L
Benzene <i>HC, aromatic</i>	N	R	R	N	R
Benzyl Alcohol <i>HC aromatic/alcohol</i>	N	R	R	L	L
Boric Acid (aqueous solution) <i>acid, inorganic</i>	R	R	L	R	R
Butyl Acetate <i>ester</i>	L	R	L	N	R

Solvent / Mobile Phase	HOUSINGS				
	PP (polypropylene)	PTFE (polytetrafluoroethylene)	PVDF (polyvinylidene fluoride)	PES (polyether sulfone)	NYL (nylon)
Butyl Alcohol <i>alcohol</i>	R	R	R	R	R
Carbon Tetrachloride <i>HC, halogenated</i>	N	R	R	N	L
Cellosolve (ethyl) <i>glycol ether</i>	R	R	L	R	R
CHAPS (aqueous solution) <i>surfactant/detergent</i>	L	L	L	L	L
Chloroform <i>HC, halogenated</i>	N	R	R	N	N
Cyclohexanone <i>ketone</i>	N	R	N	N	R
Diethyl Pyrocarbonate, 0.2% <i>carboxylic anhydride</i>	L	L	L	L	L
Dimethyl Sulfoxide (DMSO) <i>sulfoxide</i>	R	R	N	N	R
Dimethylacetamide <i>amide</i>	R	R	N	N	N
Dimethylformamide <i>amide</i>	R	R	N	L	R
Dioxane <i>ether</i>	R	R	R	L	R
Ethers <i>ether</i>	N	R	R	L	R

Continued on next page

Filter Vials Compatibility Chart

Continued from previous page

Solvent / Mobile Phase	HOUSINGS	FILTERS			
	PP (polypropylene)	PTFE (polytetrafluoroethylene)	PVDF (polyvinylidene fluoride)	PES (polyether sulfone)	NYL (nylon)
Ethyl Acetate <i>ester</i>	L	R	R	N	R
Ethyl Alcohol <i>alcohol</i>	R	R	R	R	L
Ethylene Glycol <i>glycol</i>	R	R	R	R	R
Formaldehyde <i>aldehyde</i>	R	R	R	L	R
Formic Acid, 50% <i>acid, organic</i>	R	R	R	L	N
Freon® (TF or PCA) <i>HC, halogenated</i>	R	R	R	L	R
Gasoline <i>HC</i>	N	R	R	R	R
Glycerine (Glycerol) <i>glycol</i>	R	R	R	R	R
Guanidine Hydrochloride, 6M <i>salt, aqueous solution</i>	L	R	L	L	L
Guanidine Thiocyanate, 5M <i>salt, aqueous solution</i>	L	R	L	L	L
Helium <i>gas</i>	R	R	L	L	R
Hexane <i>HC, aliphatic</i>	N	R	R	R	R
Hydrochloric Acid, 1N (HCL) <i>acid, inorganic</i>	R	R	R	R	R
Hydrochloric Acid, 6N (HCL) <i>acid, inorganic</i>	L	R	L	R	L
Hydrochloric Acid, conc. (HCL) <i>acid, inorganic</i>	N	R	N	L	N
Hydrofluoric Acid <i>acid, inorganic</i>	N	R	N	N	N
Hydrogen <i>gas</i>	R	R	R	L	R
Hydrogen Peroxide, 3% <i>peroxide</i>	R	R	R	L	R
Hydrogen Peroxide, 30% <i>peroxide</i>	L	R	R	L	L
Hydrogen Peroxide, 90% <i>peroxide</i>	R	R	R	L	N
HYPO (aqueous solution) <i>salt, aqueous solution</i>	R	R	R	L	R
Isobutyl Alcohol <i>alcohol</i>	R	R	R	R	L
Isopropyl Acetate <i>ester</i>	L	R	R	N	R
Isopropyl Alcohol <i>alcohol</i>	R	R	R	R	L
Kerosene <i>HC</i>	L	L	R	R	R
Lactic Acid, 50% <i>acid, organic/alcohol</i>	R	R	L	L	L
Lubrol PX (aqueous solution) <i>surfactant/detergent</i>	L	L	L	L	L
Methyl Ethyl Ketone (MEK) <i>ketone</i>	R	R	N	N	R
Mercaptoethanol, 0.1M <i>alcohol/mercaptan</i>	L	L	L	L	L
Methyl Acetate <i>ester</i>	L	R	N	N	R
Methyl Alcohol <i>alcohol</i>	R	R	R	R	L
Methylene Chloride <i>HC, halogenated</i>	N	R	N	N	L

Solvent / Mobile Phase	HOUSINGS	FILTERS			
	PP (polypropylene)	PTFE (polytetrafluoroethylene)	PVDF (polyvinylidene fluoride)	PES (polyether sulfone)	NYL (nylon)
Methyl Isobutyl Ketone (MIBK) <i>ketone</i>	N	R	N	N	R
Mineral Spirits <i>HC</i>	N	R	R	R	R
Nitric Acid, 6N <i>acid, inorganic</i>	L	R	R	R	N
Nitric Acid (concentrated) <i>acid, inorganic</i>	N	L	N	L	N
Nitrobenzene <i>HC, aromatic</i>	N	R	R	L	R
Nitrogen <i>gas</i>	L	R	R	L	R
Nonidet-P40 (aqueous solution) <i>surfactant/detergent</i>	L	L	L	L	L
Ozone <i>gas</i>	N	R	R	L	N
Paraldehyde <i>aldehyde</i>	L	R	L	L	R
Pentane <i>HC, aliphatic</i>	N	R	R	R	R
Petroleum Ether <i>ether</i>	L	R	R	L	R
Phenol (aqueous solution) <i>phenol</i>	N	R	R	L	N
Potassium Hydroxide, 3N <i>caustic</i>	R	R	R	L	R
Pyridine <i>amine</i>	R	R	N	N	L
Silicone Oils <i>silicone</i>	R	R	R	L	R
Sodium Carbonate (aqueous solution) <i>salt, aqueous solution</i>	R	R	R	L	L
Sodium Chloride (aqueous solution) <i>salt, aqueous solution</i>	R	R	R	L	R
Sodium Dodecyl Sulfate <i>surfactant/detergent</i>	L	L	L	L	L
Sodium Hydroxide, 3N <i>caustic</i>	R	R	R	R	R
Sodium Hydroxide (concentrated) <i>caustic</i>	R	R	R	R	N
Sulfuric Acid (concentrated) <i>acid, inorganic</i>	N	R	L	N	N
TCA (aqueous solution) <i>acid, organic</i>	R	R	R	L	L
Tetrahydrofuran (THF) <i>ether</i>	N	R	N	L	R
Toluene <i>HC, aromatic</i>	N	R	R	R	R
Trichloroethane <i>HC, halogenated</i>	N	R	L	N	L
Trichloroethylene <i>HC, halogenated</i>	N	R	R	N	L
Tween 20 (aqueous solution) <i>surfactant/detergent</i>	L	R	L	L	L
Urea, 8M <i>salt, aqueous solution</i>	R	R	R	L	R
Water (Brine) <i>salt, aqueous solution</i>	R	R	R	L	R
Xylene <i>HC, aromatic</i>	N	R	R	L	R



R = Recommended. No significant change observed in flow rate or bubble point of the membrane, nor visible indication of chemical attack.

L = Limited Recommended Use. Moderate changes in physical properties. The filter may be suitable for short term, non-critical use.

N = Not Recommended. The membrane may be unstable.

- = Insufficient Data. Information is not available. Trial testing is recommended.