

SYRINGE FILTER SELECTION

A GUIDE TO SYRINGE FILTER SELECTION

STEP 1 Determine Your Filtering Needs

To choose the appropriate syringe filter for your application, you need to determine the amount of filtration required or the pore size needed.

- 0.2 µm pore size is used for removing fine particles from solutions and sterile venting
- 0.45 µm pore size is used primarily for sample clarification of chromatography samples
- 1.0 µm/2.5 µm/5.0 µm pore sizes are used for coarse particle removal or viscous samples
- Difficult to filter solutions may require glass pre-filters to prevent the filter membrane from clogging

STEP 2 Determine Your Filtering Needs

To choose the appropriate syringe filter for your application, you need to determine the amount of filtration required or the pore size needed.

Properties	PE	Nylon	PES	PP	PTFE	PVDF	CA	MCE	GF	RC
Hydrophilic	Y	Y	Y	N	N	Y	Y	Y	Y	Y
Autoclavable	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Low Protein Binding	N	N	Y	N	N	Y	Y	Y	N	Y
Sterile Filters Available	N	Y	Y	N	N	Y	Y	N	N	Y
Chemical Compatibility										
Aromatic Hydrocarbons	Y	L	L	L	Y	Y	Y	Y	Y	Y
Chlorinated Hydrocarbons	Y	N	N	N	Y	Y	N	N	Y	Y
Oxygenated Organics (alcohols, ketones)	Y	L	N	L	Y	N	N	N	Y	Y
Nitrogen Containing Solvents (DMF, Amides)	Y	Y	N	L	Y	N	N	N	Y	N
Acids	L	N	N	N	L	N	N	N	Y	N
Bases	L	N	N	N	Y	N	N	N	N	N

For more specific compatibility information, please contact our Technical Support Department at 1-800-267-8103 or tech@chromspec.com.

PE - polyester
PES - polyethersulfone
PP - polypropylene
PTFE - polytetrafluoroethylene
PVDF - polyvinylidene difluoride

CA - cellulose acetate
MCE - mixed cellulose ester
GF - glass fibre
C - regenerated cellulose

Y = yes N = no L = limited

STEP 3 Determine The Syringe Filter Size

The size of the syringe filter that you choose is dependent on the sample volume to be filtered.

- 4 mm syringe filters for sample volumes up to 1 mL
- 13 mm syringe filters for sample volumes from 1-10 mL
- 25 mm syringe filters for sample volumes from 10-100 mL
- For very viscous or highly contaminated solutions, switching to a larger syringe filter size is advisable

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