



Sample preparation

Titan3, Target2 and Choice chromatography syringe filters

Performance filtration solutions
for chromatographic applications



Sample preparation is a key stage in successful chromatography

The high quality Thermo Scientific™ Titan3™, Target2™, and Choice™ Syringe Filters ensure reliable elimination of both particles and microorganisms in the sample preparation process, providing consistent and reliable experimental results for a range of samples and applications. Titan3, Target 2, and Choice syringe filters protect chromatography columns by preventing the accumulation of fine particles in the column, which forms premature blockages.

Reliable elimination in the sample preparation

Titan3, Target 2, and Choice syringe filters provide high-quality filtration solutions

- Sample preparation for HPLC and UHPLC analysis
- Protect columns and extend column lifetimes
- Low sample volume compatibility
- High integrity sample preparation

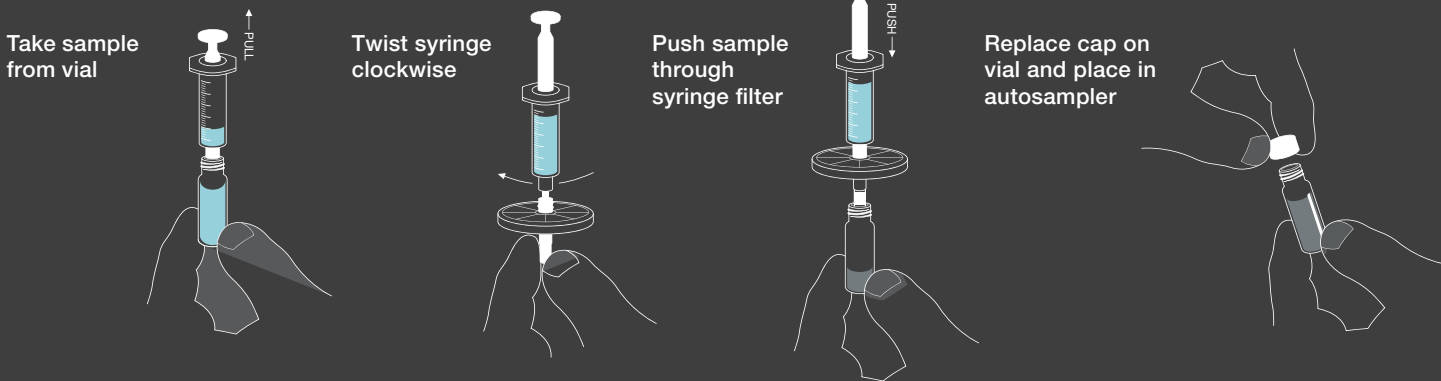
The premium Titan3 syringe filter range provides even higher levels of confidence

- Color coding for easy identification and selection of the correct membrane and pore size
- 30 mm products pressure rated to 120 psi/15 bar
- Integrated prefilter options for enhanced removal of particulates

Table 1. What is the difference between Titan3, Target2, and Choice syringe filters?

	Titan3 premium syringe filters	Target2 routine syringe filters	Choice basic syringe filters
Range of filter sizes	4 mm to 30 mm	4 mm to 30 mm	13 mm to 25 mm
High-quality filtration solutions	✓	✓	✓
Low extractable membranes and housing	✓	✓	✓
Plain polypropylene housing	✓	✓	✓
Enhanced luer lock inlet which provides secure attachment to syringes	✓	✓	
Low hold-up volume allows for the treatment of small sample volumes with minimal sample loss	✓	✓	
Color coded for easy identification and selection of the correct membrane and pore size	✓		
30 mm products pressure rated to 15 bar for enhanced sample safety	✓		
Most 30 mm devices have a 1 mm borosilicate glass pre-filter for increased filtrate volumes	✓		

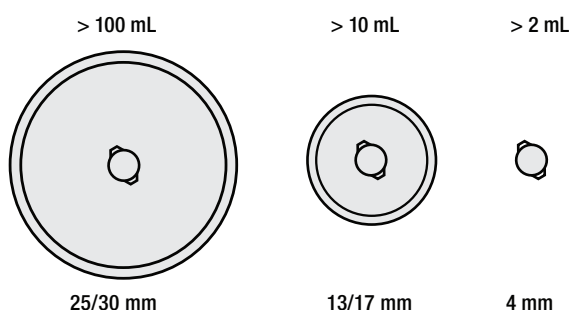
Operating guidance



Syringe filter selection

How to choose the correct filter for your chromatographic application

1 Sample volume



2 Size and amount of particulates in the sample

Description			
Sample particle size	< 0.5 µm	< 2.0 µm	> 5 µm
HPLC column particle size	> 3.0 µm	> 3.0 µm	High particle load
	0.22 µm	0.45 µm	GMF
Filter pore size			

3 Membrane compatibility with sample type and technique

Sample type	Technique
Standard HPLC samples/solvents	Nylon (NY)
	Regenerated cellulose (RC)
	Polyvinylidene fluoride (PVDF)
Standard GC samples/solvents	Polytetrafluoroethylene (PTFE)
UV spectrometry	PVDF
Capillary electrophoresis	Polyethersulfone (PES)
High particle load	Glass microfiber (GMF)
Protein analysis	PVDF
Protein removal	GMF
Trace metals	PES
Aggressive and nonpolar solvent	PTFE
Biological sample preparation	Cellulose acetate (CA)
Protein and peptide samples, general HPLC	Polypropylene (PP)
Highly particulated samples	Glass microfiber (GMF)

4 Syringe filter unit specification

Titan3 syringe filters

Diameter	4 mm	17 mm	30 mm
Housing	Polypropylene with integral color-coded sealing ring	Polypropylene with integral color-coded sealing ring	Polypropylene with integral color-coded sealing ring
Filtration area	0.125 cm ²	1.54 cm ²	4.87 cm ²
Maximum pressure	5.5 bar	8 bar	15 bar
Residual volume	<15 µL with air purge	<35 µL with air purge	< 57 µL with air purge
Dimensions	8.0 mm x 20.7 mm	21.4 mm x 18.83 mm	34.2 mm x 23.5 mm
Flow direction	Inlet-outlet only	Inlet-outlet only	Inlet-outlet only
Inlet	Female luer lock tab	Female luer screw	Female luer screw
Outlet	Male luer slip	Male luer slip	Male luer slip
Pre-filter	N	Selected membranes	Selected membranes

Target2 syringe filters

Diameter	4 mm	17 mm	30 mm
Housing	Polypropylene with integral sealing ring	Polypropylene with integral sealing ring	Polypropylene with integral sealing ring
Filtration area	0.125 cm ²	1.54 cm ²	4.87 cm ²
Maximum pressure	5.5 bar	8 bar	15 bar
Residual volume	<15 µL with air purge	<35 µL with air purge	<157 µL with air purge
Dimensions	8.0 mm x 20.7 mm	21.4 mm x 18.83 mm	34.2 mm x 23.5 mm
Flow direction	Inlet-outlet only	Inlet-outlet only	Inlet-outlet only
Inlet	Female luer screw	Female luer screw	Female luer screw
Outlet	Male luer slip	Male luer slip	Male luer slip
Pre-filter	N	N	Selected membranes

Choice syringe filters

Diameter	17 mm	30 mm
Housing	Polypropylene with integral sealing ring	Polypropylene with integral sealing ring
Filtration area	1.09 cm ²	4.08 cm ²
Maximum pressure	6 bar	6 bar
Residual volume	<20 µL with air purge	<100 µL with air purge
Dimensions	17.75 mm x 17.30 mm	22.00 mm x 29.90 mm
Flow direction	Inlet-outlet only	Inlet-outlet only
Inlet	Female luer screw	Female luer screw
Outlet	Male luer slip	Male luer slip
Pre-filter	N	N

Chemicals	NY	PTFE	PVDF	RC	PES	GMF	PP	CA
Acids								
Acetic, glacial	LC	C	C	C	C	C	C	IC
Acetic, 25%	C	C	C	C	C	C	C	C
Hydrochloric, concentrated	IC	C	C	IC	C	C	C	IC
Hydrochloric, 25%	IC	C	C	IC	C	C	C	IC
Sulfuric, concentrated	IC	C	IC	IC	IC	C	C	IC
Sulfuric, 25%	IC	C	C	LC	C	C	C	IC
Nitric, concentrated	IC	C	C	IC	IC	C	C	IC
Nitric, 25%	IC	C	C	IC	C	LC	C	IC
Phosphoric, 25%	IC	C	C	LC	ND	ND	C	C
Formic, 25%	IC	C	ND	C	ND	C	C	LC
Trichloroacetic, 10%	IC	C	ND	C	ND	ND	C	C
Alcohols								
Methanol, 98%	C	C	C	C	C	C	C	C
Ethanol, 98	C	C	C	C	C	C	C	C
Ethanol, 70%	C	C	C	C	C	C	C	C
Isopropanol	LC	C	C	C	C	C	C	C
n-Propanol	C	C	C	C	C	C	C	C
Amyl alcohol (Butanol)	C	C	C	C	C	C	C	C
Benzyl alcohol	C	C	C	C	ND	IC	C	LC
Ethylene glycol	C	C	C	C	C	C	C	C
Propylene glycol	C	C	C	C	C	C	C	LC
Glycerol	C	C	C	C	C	C	C	C
Amines and amides								
Dimethyl formamide	LC	C	IC	LC	IC	C	C	IC
Diethylacetamide	C	C	ND	C	ND	C	ND	IC
Triethanolamine	C	C	ND	C	ND	ND	ND	C
Aniline	ND	C	ND	C	ND	ND	ND	IC
Pyridine	C	C	IC	C	IC	C	IC	IC
Acetonitrile	C	C	C	C	LC	C	C	IC
Esters								
Ethyl acetate/methyl acetate	C	C	C	C	IC	C	LC	IC
Amyl acetate/butyl acetate	C	C	IC	C	IC	C	LC	LC
Propyl acetate	C	C	IC	C	IC	ND	LC	LC
Propylene glycol acetate	ND	C	ND	C	IC	ND	C	IC
2-Ethoxyethyl acetate	ND	C	ND	C	IC	ND	ND	LC
Methyl cellulosolve	ND	C	ND	C	IC	C	C	IC
Benzyl benzoate	C	C	ND	C	IC	ND	ND	C
Isopropyl myristate	C	C	ND	C	IC	ND	ND	C
Tricresyl phosphate	ND	C	ND	C	IC	ND	ND	C

C—Compatible

LC—Limited compatibility (Membrane may swell and shrink)

IC—Incompatible (Not recommended)

ND—No compatibility data currently available

5 Membrane solvent compatibility (continued)

Chemicals	NY	PTFE	PVDF	RC	PES	GMF	PP	CA
Halogenated hydrocarbons								
Methylene chloride	LC	C	C	C	IC	C	LC	IC
Chloroform	C	C	C	C	IC	C	LC	IC
Trichloroethylene	C	C	C	C	IC	C	C	C
Chlorobenzene	C	C	C	C	LC	C	C	C
Freon	C	C	C	C	LC	C	C	C
Carbon tetrachloride	C	C	C	C	IC	C	LC	LC
Hydrocarbons								
Hexane/xylene	C	C	C	C	IC	C	IC	C
Toluene/benzene	C	C	C	C	IC	C	IC	C
Kerosene/gasoline	C	C	C	C	LC	ND	LC	C
Tetralin/decalin	ND	C	C	C	ND	ND	ND	C
Ketones								
Acetone	C	C	IC	C	IC	C	C	IC
Cyclohexanone	C	C	IC	C	IC	C	C	IC
Methyl ethyl ketone	C	C	LC	C	IC	C	LC	LC
Isopropylacetone	C	C	IC	C	IC	C	ND	C
Methyl isobutyl ketone	ND	C	LC	C	IC	C	LC	ND
Organic oxides								
Ethyl ether	C	C	C	C	C	ND	LC	C
Dioxane	C	C	LC	C	IC	C	C	IC
Tetrahydrofuran	C	C	LC	C	IC	C	C	IC
Triethanolamine	C	C	ND	C	ND	ND	ND	C
Dimethylsulfoxide (DMSO)	C	C	IC	C	IC	C	C	IC
Isopropyl ether	ND	C	C	C	C	ND	C	C
Miscellaneous								
Phenol, aqueous solution, 10%	ND	C	LC	IC	IC	C	C	IC
Formaldehyde aqueous solution, 30%	C	C	C	LC	C	C	C	C
Hydrogen peroxide, 30%	C	C	ND	C	ND	ND	ND	C
Silicone oil/mineral oil	ND	C	C	C	C	C	C	C
Ammonium hydroxide, 25%	C	C	LC	LC	C	C	C	C
Sodium hydroxide, 3N	C	C	C	LC	C	IC	C	IC

C—Compatible

LC—Limited compatibility (Membrane may swell and shrink)

IC—Incompatible (Not recommended)

ND—No compatibility data currently available

Syringe filter membrane specification

PVDF (hydrophobic/hydrophilic) syringe filters

Superior membrane quality for HPLC. Hydrophilic PVDF syringe filters do not require pre-wetting for use with aqueous samples. Hydrophobic PVDF filters require pre-wetting with an alcohol before use with aqueous samples.

- Low non-specific binding with exceptional chemical resistance
- Hydrophilic membrane provides excellent flow rates and low binding coefficients
- Certified for chromatographic performance
- Compatible with a wide range of aqueous and organic-based sample environments
- Recommended for HPLC and UHPLC

PVDF syringe filters have a well defined pore structure, giving effective retention of particles without excessive pore blockage. Compatible with aqueous and most organic solvents. They are excellent general filters for HPLC and organic solvent sample clean up.

Specifications	
Membrane	HPLC certified PVDF
Max. temp	100°C
Housing	Medical grade, virgin polypropylene
Pre-filter	Binder free glass microfiber 1 µm (0.20 µm only)
Porosities	0.20 µm, 0.45 µm
Autoclave	Sterilize by dry heat at 121°C for 15 minutes

Applications

- HPLC and organic solvent sample preparation and clean up
- Protein based samples with high non-specific binding
- Environmental water samples

Chemical incompatibilities

- DMF, DMSO, MEK, acetone and most caustic solutions > 6N

More information

- [Thermo Scientific™ Titan3™ PVDF syringe filters](#)
- [Thermo Scientific™ Target2™ PVDF syringe filters](#)
- [Thermo Scientific™ Choice™ PVDF \(Hydrophobic\) syringe filters](#)
- [Thermo Scientific™ Choice™ PVDF \(Hydrophilic\) syringe filters](#)



Regenerated cellulose syringe filters

Superior chemical resistance, optimized for biological sample recoveries.

- Hydrophilic membrane provides excellent flow rates and extremely low binding coefficients
- Superior choice for biological assays, gel capsule dissolution testing, protein sample matrixes
- Compatible with a wide range of aqueous and organic-based sample environments
- Recommended for reverse phase and normal phase HPLC

Regenerated cellulose syringe filters are ideally suited for almost any laboratory procedure, from HPLC sample preparation to dissolution sample testing. Regenerated cellulose possesses superior chemical resistance in either aqueous or organic-based sample environments. Its extremely low biological-based binding coefficient is ideally suited for maximum sample recoveries of biological-based assays. Regenerated cellulose contains no binders, surfactants or wetting agents to assure minimal extractables in analytical procedures.

Specifications	
Membrane	HPLC certified regenerated
Protein binding	<5 µg/cm ²
Porosities	0.20 µm, 0.45 µm
Autoclave	Sterilize by dry heat at 121°C for 15 minutes
Pre-filter (if fitted)	GMF 1 µm

Applications

- HPLC and organic solvent sample preparation and clean up
- Dissolution sample analysis, especially high-binding tablets or capsules
- Protein-based samples with high nonspecific binding
- Sample analysis which require maximum recoveries
- Analysis requiring low non-specific binding over a wide pH range

Chemical incompatibilities

- Sulfuric acid, hydrochloric acid, phosphoric acid or nitric acid > 25%, DMF, phenol

More information

- [Thermo Scientific™ Titan3™ Regenerated Cellulose syringe filters](#)
- [Thermo Scientific™ Target2™ Regenerated Cellulose syringe filters](#)
- [Thermo Scientific™ Choice™ Regenerated Cellulose syringe filters](#)

Cellulose acetate syringe filters

For filtering of aqueous solutions or biological samples.

- Hydrophilic membrane provides excellent flow rates and extremely low protein-binding coefficients
- Superior choice for biological assays, gel capsule dissolution testing, protein sample matrixes
- Recommended for aqueous HPLC

A physically strong membrane which can be used with heated liquids.

Specifications	
Membrane	HPLC certified cellulose acetate
Max. temp	110°C
Protein binding	<24 µg/cm ²
Porosities	0.20 µm, 0.45 µm
Autoclave	Sterilize by dry heat at 121°C for 15 minutes

Applications

- Protein-based samples with high non-specific binding
- Sample analysis which require maximum recoveries

Chemical incompatibilities

- Acids, NaOH, dichloromethane, chloroform, ketones, DMSO, THF

More information

- [Thermo Scientific™ Titan3™ Cellulose Acetate syringe filters](#)
- [Thermo Scientific™ Target2™ Cellulose Acetate syringe filters](#)
- [Thermo Scientific™ Choice™ Cellulose Acetate \(CA\) syringe filters](#)

Polypropylene syringe filters (Choice only)

Chemically resistant membrane with low protein binding.

- Hydrophilic membrane for aqueous or organic sample matrixes
- Use with protein or peptide-based assays

The hydrophilic polypropylene membrane is easily wetted with water and does not require pre-treatment with alcohols. Compatible with biological samples. Do not use with strong organic solvents, especially aromatic and chlorinated solvents.

Specifications	
Membrane	Hydrophilic polypropylene
Max. temp	110°C
Housing	Medical grade, virgin polypropylene
Porosities	0.20 µm, 0.45 µm

Applications

- Protein or peptide-based assays
- General HPLC analysis

Chemical incompatibilities

- Hexane, toluene, benzene, limited resistance to dichloromethane and chloroform

More information

- [Thermo Scientific™ Choice™ Polypropylene \(PP\) syringe filters](#)



Glass microfiber (GMF) syringe filters

For large particulate removal.

- Increased sample throughput
- Low extraction neutral borosilicate glass
- For use with viscous or particle-laden samples

GMF filters are available in a range of porosities.

Specifications	
Membrane	Binder free glass microfiber
Max. temp	110°C
Housing	Medical grade, virgin polypropylene
Porosities	0.7 µm, 1.2 µm, 3.1 µm
Autoclave	Sterilize by dry heat at 121°C for 15 min

Applications

- Clarification
- Pre-filtering of suspensions

Chemical incompatibilities

- Limited resistance with ammonia, NaOH and KOH solutions

More information

- [Thermo Scientific™ Titan3™ GMF \(glass microfiber\) syringe filters](#)
- [Thermo Scientific™ Target2™ GMF \(glass microfiber\) syringe filters](#)



PTFE (hydrophobic/hydrophilic) syringe filters

Excellent chemical resistance for use with organic matrices.

- Excellent flow rates and high loading capacities
- Exceptional temperature stability
- Organic solvent recommended
- Hydrophilic PTFE can be used for the same application but no pre-wetting of the membrane is required

PTFE syringe filters are applicable for filtration of gaseous or organic solvent-based samples. Both membrane types exhibits broad chemical resistance and unsurpassed temperature stability to address aggressive sample matrixes and extreme temperature situations. The hydrophobic PTFE filter can be utilized as a moisture barrier in venting applications. PTFE hydrophobic membranes require pre-treatment with alcohol before being suitable for aqueous or high aqueous/organic samples. Do not use directly with aqueous solutions.

Specifications	
Membrane	HPLC certified PTFE, w/polypropylene support
Max. temp	110°C
Housing	Medical grade, virgin polypropylene
Porosities	0.20 µm, 0.45 µm, 1 µm
Autoclave	Sterilize by dry heat at 121°C for 15 minutes

Applications

- HPLC and organic solvent sample preparation and clean up
- Dissolution sample analysis
- General sample preparation prior to analytical analysis
- Elevated temperature samples, caustic or acidic solutions

Chemical incompatibilities

- Perchloric acid
- Methylene chloride (limited exposure)
- Dioxane, DMF, formic acid > 50%
- Aqueous-based sample matrix (unless filter is pre-wetted with an alcohol)

More information

- [Thermo Scientific™ Titan3™ PTFE \(hydrophobic\) syringe filters](#)
- [Thermo Scientific™ Titan3™ PTFE \(hydrophilic\) syringe filters](#)
- [Thermo Scientific™ Target2™ PTFE syringe filters](#)
- [Thermo Scientific™ Choice™ PTFE \(hydrophobic\) syringe filters](#)
- [Thermo Scientific™ Choice™ PTFE \(hydrophilic\) syringe filters](#)



Nylon syringe filters

Membrane of choice for analytical applications.

- Naturally hydrophilic with broad chemical resistance
- Excellent flow rates and high-throughput loading
- HPLC recommended

Hydrophilic nylon is extremely well suited for aqueous or organic sample preparation and HPLC, GC, or dissolution sample analysis. Due to its excellent flow characteristics and mechanical stability, nylon offers the best combination of physical parameters to meet the most stringent analytical needs.

Specifications	
Membrane	HPLC certified nylon
Max. temp	100°C
Housing	Medical grade, virgin polypropylene
Porosities	0.20 µm, 0.45 µm, 1.5 µm, 5 µm
Autoclave	Sterilize by dry heat at 121°C for 15 minutes

Applications

- HPLC and organic solvent sample preparation and clean up
- Dissolution sample analysis
- General sample preparation prior to analytical analysis
- Mixed sample matrix of aqueous or organic dissolved analytes

Chemical incompatibilities

- Acids > 1N

Halogenated solvents

- Proteineous samples with high non-specific binding affinities

More information

- [Thermo Scientific™ Titan3™ nylon syringe filters](#)
- [Thermo Scientific™ Target2™ nylon syringe filters](#)
- [Thermo Scientific™ Choice™ nylon syringe filters](#)

PES syringe filters

Precise results in sensitive analysis of ionic analytes.

- Hydrophilic membrane provides excellent flow rates and low binding coefficients
- Low affinity for binding drugs, ideal for dissolution testing procedures
- This hydrophilic polymer has excellent cleanliness and is compatible with a wide range of solvents.

Specifications	
Membrane	Polyethersulfone
Max. temp	100°C
Housing	Medical grade, virgin polypropylene
Pre-filter	Binder-free glass microfiber pre-filter (0.20 µm only)
Porosities	0.20 µm, 0.45 µm
Autoclave	Sterilize by dry heat at 121 °C for 15 minutes

Applications

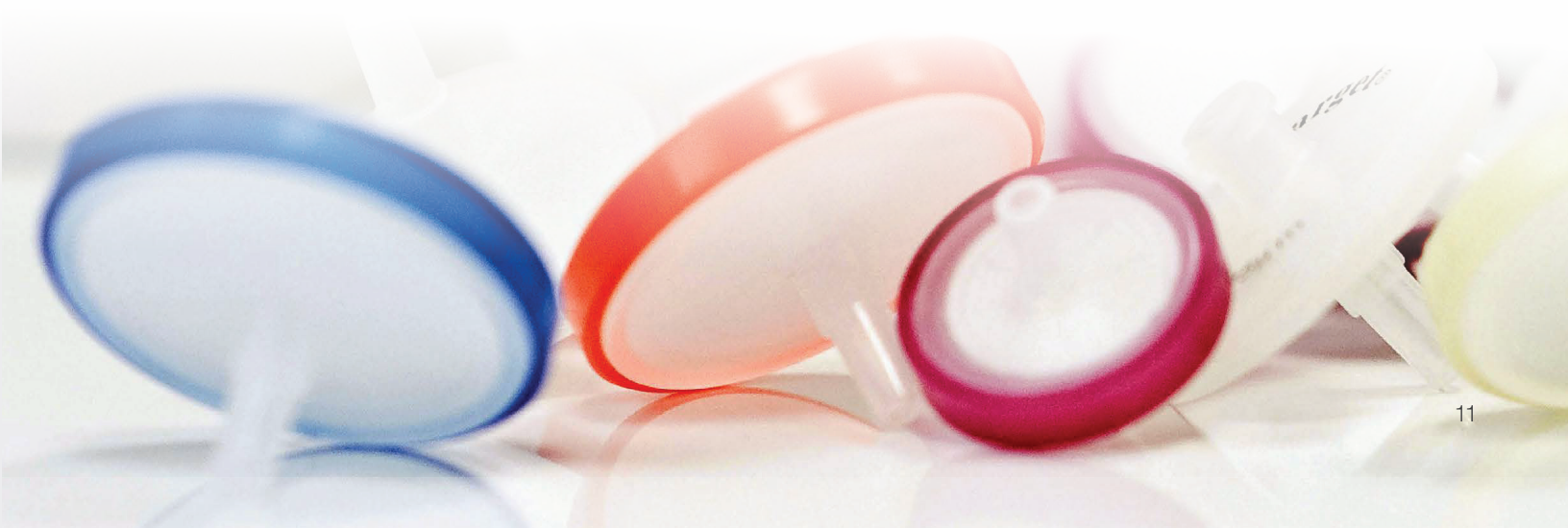
- Dissolution testing

Chemical incompatibilities

- Protein-based samples in aqueous solutions
- Concentrated acids, chloromethane, chloroform, hexane, acetone, MEK, THF, DMSO

More information

- [Thermo Scientific™ Titan3™ PES \(polyethersulfone\) syringe filters](#)
- [Thermo Scientific™ Target2™ PES \(polyethersulfone\) syringe filters](#)
- [Thermo Scientific™ Choice™ PES \(polyethersulfone\) syringe filters](#)



Syringe filter cross reference chart

4 mm syringe filters

Technique	Size		Color	Cat. No. Titan3 syringe filter	Cat. No. Target2 syringe filter	Cat. no Choice syringe filter
PVDF	0.2 µm	●	Black	42204-PV	F2504-6	—
	0.45 µm	●	Red	44504-PV	F2504-5	—
Regenerated cellulose	0.2 µm	●	Granite	52204-RC	F2504-8	—
	0.45 µm	●	Light brown	54504-RC	F2504-7	—
Cellulose acetate	0.2 µm	●	Light green	44502-CA	F2504-16	—
	0.45 µm		—	—	F2504-15	—
PTFE (hydrophobic)	0.2 µm	●	Transparent blue	42204-NP	F2504-4	—
	0.45 µm	●	Transparent yellow	44504-NP	F2504-3	—
Nylon	0.2 µm	●	Opaque medium yellow	42204-NN	F2504-2	—
	0.45 µm	●	Transparent green	44504-NN	F2504-1	—

Syringe filter cross reference chart (continued)

4 mm syringe filters (continued)

Technique	Size	Whatman	Millipore Sigma	Sartorius	Pall	Phenomenex
PVDF	0.2 µm	6777-0402	SLGR004NL	—	—	—
	0.45 µm	6777-0404	SLHR004NL	—	—	—
Regenerated cellulose	0.2 µm	—	SLLGR04NL	17821K 17821Q	—	AF0-3203-12 AF0-3203-52
	0.45 µm	—	SLLHR04NL	17822K 17822Q	—	—
Cellulose acetate	0.2 µm	—	—	—	—	—
	0.45 µm	—	—	—	—	—
PTFE (hydrophobic)	0.2 µm	6783-0402	—	—	—	—
	0.45 µm	—	—	—	—	—
Nylon	0.2 µm	6789-0402 6790-0402	—	—	—	—
	0.45 µm	6783-0404 6789-0404 6790-0404	—	—	4486	—



Syringe filter cross reference chart

13 mm and 17 mm syringe filters

Technique	Size			Color	Cat. No. Titan3 syringe filter	Cat. No. Target2 syringe filter	Cat. No. Choice syringe filter
PVDF (hydrophobic)	17 mm	0.2 µm		Red	42213-PV	F2513-6	CH2213-PV
		0.45 µm		Black	44513-PV	F2513-5	CH4513-PV
PVDF (hydrophilic)	13 mm	0.2 µm	—	—	—	—	CH2213-PVH
		0.45 µm	—	—	—	—	CH4513-PVH
Regenerated cellulose	17 mm	0.2 µm		Granite	52213-RC	F2513-8	CH2213-RC
		0.45 µm		Light brown	54513-RC	F2513-7	CH4513-RC
Cellulose acetate	17 mm	0.2 µm		Light green	42213-CA	F2513-16	CH2213-CA
		0.45 µm		Transparent orange	44513-CA	F2513-15	CH4513-CA
Polypropylene	13 mm	0.2 µm	—	—	—	—	CH2213-PP
		0.45 µm	—	—	—	—	CH4513-PP
PTFE (hydrophobic)	17 mm	0.2 µm		Transparent blue	42213-NP	F2513-4	CH2213-NP
		0.45 µm		Transparent yellow	44513-NP	F2513-3	CH4513-NP
PTFE (hydrophilic)	17 mm	0.2 µm		Green	42213-NPL	—	CH2213-NPL
		0.45 µm		Purple	44513-NPL	—	CH4513-NPL
Nylon	17 mm	0.2 µm		Light purple	42213-NN	F2513-2	CH2213-NN
		0.45 µm		Transparent green	44513-NN	F2513-1	CH4513-NN
PES	17 mm	0.2 µm		Dark gray	42213-PS	F2513-17	CH2213-PES
		0.45 µm		Orange/yellow	44513-PS	F2513-14	CH4513-PES

Syringe filter cross reference chart (continued)

13 mm and 17 mm syringe filters (continued)

Technique	Size		Whatman	Millipore Sigma	Sartorius	Cytiva	Pall	Phenomenex
PVDF (hydrophobic)	17 mm	0.2 µm	6777-1302	SLGV013NL SLGV013NK	—	9909-1302	4455	AF6-5206-12 AF6-5206-52
		0.45 µm	6777-1304	SLHV013NL SLHV013NK	—	9909-1304	4457	AF6-5106-12 AF6-5106-52
PVDF (hydrophilic)	13 mm	0.2 µm	—	—	—	—	—	—
		0.45 µm	—	—	—	—	—	—
Regenerated cellulose	17 mm	0.2 µm	6756-1302	—	17766K 17766S 17766Q	—	—	AF0-2203-12 AF0-2203-52
		0.45 µm	6758-1304	—	17767K 17767Q	—	—	AF0-2103-12 AF0-2103-53
Cellulose acetate	17 mm	0.2 µm	—	—	—	—	—	—
		0.45 µm	6771-1304	—	—	—	—	—
Polypropylene	13 mm	0.2 µm	10463703 6788-1302	—	—	—	4567	—
		0.45 µm	10463713	—	—	—	4563	—
PTFE (hydrophobic)	17 mm	0.2 µm	6775-1302 6783-1302	—	—	9911-1302	4423	AF0-2202-12 AF0-2202-52
		0.45 µm	—	—	—	9911-1304	4422	AF0-2102-12 AF0-2102-52
PTFE (hydrophilic)	17 mm	0.2 µm	6773-1302	SLLGX13NL SLLGX13NK SLLGC13NL SLFGX13NL SLFGX13NK	—	9920-1302 9921-1302	MS-3301	—
		0.45 µm	6774-1304	SLCR013NL SLCR013NB SLCR013NK SLFHX13NL SLFHX13NK	—	9920-1304 9921-1304	—	—
Nylon	17 mm	0.2 µm	6790-1302	SLGN013NL SLGN013NK	17768K 17768Q	9910-1302	4427	AF0-2207-12 AF0-2207-52
		0.45 µm	6790-1304	SLHN013NL SLHN013NK	17769K 17769Q	9910-1304	—	AF0-2107-12 AF0-2107-52
PES	17 mm	0.2 µm	6782-1302 6792-1302	—	—	9912-1302	—	—
		0.45 µm	6781-1304 6792-1304	—	—	9912-1304	—	—

Syringe filter cross reference chart

25 mm and 30 mm syringe filters

Technique	Size			Color	Cat. No. Titan3 syringe filter	Cat. No. Target2 syringe filter	Cat. No. Choice syringe filter
PVDF (hydrophobic)	30 mm	0.2 µm		Black	42225-PV	F2500-6	CH2225-PV
		0.45 µm		Red	44525-PV	F2500-5	CH4525-PV
PVDF (hydrophilic)	25 mm	0.2 µm	—	—	—	—	CH2225-PVH
		0.45 µm	—	—	—	—	CH4525-PVH
Regenerated cellulose	30 mm	0.2 µm		Granite	52225-RC	F2500-8	CH2225-RC
		0.45 µm		Light brown	54525-RC	F2500-7	CH4525-RC
Cellulose acetate	30 mm	0.2 µm		Light green	42225-CA	F2500-16	CH2225-CA
		0.45 µm		Transparent orange	44525-CA	F2500-15	CH4525-CA
Polypropylene	25 mm	0.2 µm	—	—	—	—	CH2225-PP
		0.45 µm	—	—	—	—	CH4525-PP
Glass microfiber	30 mm	0.7 µm		Amber	40725-GM	F2500-18	—
		1.2 µm		Orange	41225-GM	F2500-19	—
		3.1 µm		Dark purple	42725-GM	F2500-20	—
PTFE (hydrophobic)	30 mm	0.2 µm		Transparent blue	42225-NP	F2500-4	CH2225-NP
PTFE with pre-filter (Hydrophobic)	30 mm	0.45 µm		Transparent yellow	44525-NP	F2500-3 F2500-3	CH4525-NP
PTFE (hydrophobic)	30 mm	1.0 µm		Dark blue	41025-NP	F2500-13	—
PTFE (hydrophilic)	30 mm	0.2 µm		Green	42225-NPL	—	CH2225-NPL
		0.45 µm		Purple	44525-NPL	—	CH4525-NPL
30 mm syringe filter nylon with pre-filter	30 mm	0.2 µm		Light purple	42225-NN	F2502-2 F2500-2	CH2225-NN
Nylon	30 mm	0.45 µm		White	44526-NN	F2500-50	CH4525-NN
Nylon with pre-filter	30 mm	0.45 µm		Transparent green	44525-NN	F2500-1	—
Nylon	30 mm	1.2 µm		Opaque medium yellow	41225-NN	F2500-12	—
		5.0 µm		Pink	45025-NN	F2500-50	—
PES	30 mm	0.2 µm		Dark gray	42225-PS	F2500-17	CH2225-PES
		0.45 µm		Orange/yellow	44525-PS	F2500-14	CH4525-PES

Syringe filter cross reference chart (continued)

25 mm and 30 mm syringe filters (continued)

Technique	Size		Whatman	Millipore Sigma	Sartorius	Cytiva	Pall	Waters	Phenomenex
PVDF (hydrophobic)	30 mm	0.2 µm	6794-2502 6746-2502	SLGV033NS SLGV033NB SLGV033NK	—	9909-2502 9925-3002 9926-3002	SLGV025NB	AP-4792, AP-4793, AP-4794, AP-4795, AP-4796, AP-4797	AF6-6206-12 AF6-6206-52 AF6-6006-12 AF6-6006-52
		0.45 µm	6794-2504 6746-2504	SLHVD25NSK SLHVD25SNZ	—	9926-3002 9909-2504 9925-3004 9926-3004	SLHV033NS	AP-4309, AP-4310 AP-4308, AP-4519 AP-4408, AP-4500	AF6-6106-12 AF6-6106-52
PVDF (hydrophilic)	25 mm	0.2 µm	—	—	—	—	—	—	—
		0.45 µm	—	—	—	—	—	—	—
Regenerated cellulose	30 mm	0.2 µm	6756-2502	—	17764K, 17764S 17764Q	—	—	—	AF0-8203-12 AF0-8203-52
		0.45 µm	6756-2504	—	17765K, 17765S 17765Q	—	—	—	AF0-8103-12 AF0-8103-52
Cellulose acetate	30 mm	0.2 µm	—	—	—	—	—	—	AF0-8204-12 AF0-8204-52
		0.45 µm	—	—	—	—	—	—	AF0-8800-12 AF0-8800-52
Polypropylene	25 mm	0.2 µm	6788-2502 6790-2502	—	—	—	4426	—	—
		0.45 µm	6788-2504 6790-2504	—	—	—	—	—	—
Glass microfiber	30 mm	0.7 µm	6825-2517 6825-2527 6787-2520	—	—	—	—	—	—
		1.2 µm	—	—	—	—	—	AP-4527, AP-4523 AP-4529	AF0-8515-12 AF0-8515-52
		3.1 µm	—	—	—	—	—	—	—
PTFE (hydrophobic)	30 mm	0.2 µm	6785-2502	—	17575K, 17575S 17575Q	9911-2502 9927-3002 9928-3002	SLFG025NS	AP-4789, AP-4790 AP4520, AP4225 AP-4521	AF0-1202-12 AF0-1202-52
PTFE with pre-filter (hydrophobic)	30 mm	0.45 µm	6785-2504	—	17576K, 17576S 17576Q	9911-2504 9927-3004 9928-3004	SLFH025NS	AP-4301, AP-4303 AP-4302, AP-4518 AP-4219, AP-4501	AF0-1102-12 AF0-1102-52
PTFE (hydrophobic)	30 mm	1.0 µm	6783-2510	—	—	—	—	—	—
PTFE (hydrophilic)	30 mm	0.2 µm	—	—	—	9931-3002 9932-3002	SLLHH25NK	AP-4913, AP-4914, AP-4915, AP-4910, AP-4911, AP-4912	—
		0.45 µm	—	SLLCR25SNZ	—	9931-30024 9932-3004	SLLHH25NK	AP-4916, AP-4917, AP-4918	—
30 mm syringe filter nylon with pre-filter	30 mm	0.2 µm	6750-2502 6751-2502 6753-2502	SLLCR025NSK	17845Q 1784CQ	9910-2502 9929-2502 9930-3002	SLGN025NS	AP-4786, AP-4787, AP4788, AP-4437, AP-4436, AP-4522	AF0-1207-12 AF0-1207-52 AF0-1A47-12 AF0-1A47-52
Nylon	30 mm	0.45 µm	6750-2504 6751-2504 6753-2504	SLGN025NSK SLHN033NS SLHN033NB SLHN033NK	17846Q	9910-2504 9918-2504	SLHN025NS	AP-4517 AP-4438 AP-4502	AF0-1107-12 AF0-1107-52
Nylon with pre-filter	30 mm	0.45 µm	—	SLHN025SNZ	1784CQ	9929-3004 9930-3004	—	AP-4548, AP-4549, AP-4528	AF0-1B47-12 AF0-1B47-52
Nylon	30 mm	1.2 µm	6750-2510 6751-2510	—	—	—	—	—	—
		5.0 µm	—	—	—	—	—	—	—
PES	30 mm	0.2 µm	6781-2502	SLGP033NS SLGP033NB SLGP033NK	—	9912-2502 9923-3002 9924-3002	SLGP033NS	AP-4801 AP-4802 AP-4803	AF0-8208-12 AF0-8208-52
		0.45 µm	6781-2504	—	—	9912-2502 9923-3002 9924-3003	SLHP033NS	AP-45885 AP-4785	AF0-8108-12 AF0-8108-53

Syringes and centrifugal filters

All-plastic disposable syringes

- Disposable syringes with polyethylene barrels and polypropylene plungers
- Two-part, all-plastic construction eliminates the need for rubber or synthetic plunger gaskets
- No silicone or oil lubricant is required in the barrel
- Choose luer-slip or luer lock syringes, in capacities ranging from 1 to 20 mL propylene plungers



Description	Capacity	Quantity	Cat. no
Luer-slip syringes	1 mL	100/pack	S7510-1
	3 mL	100/pack	S7510-3
	5 mL	100/pack	S7510-5
	10 mL	100/pack	S7510-10
	20 mL	100/pack	S7510-20
	100 mL	100/pack	S7515-3
Luer lock syringes	5 mL	100/pack	S7515-5
	10 mL	100/pack	S7515-10
	20 mL	100/pack	S7515-20

750 µL micro-centrifugal filters, non-sterile

- Filter volumes as low as 50 µL with low hold-up volume
- Filter volumes as low as 50 µL up to 750 µL with low hold-up volume
- Use with any laboratory microcentrifuge
- Virgin polypropylene filter housing with tapered 2 mL, capped receiver tube
- 10,000 × G maximum centrifugal force



Description	Pore size	Quantity	Cat. no
Cellulose acetate	0.2 µm	100/pack	F2517-1
	0.45 µm	100/pack	F2517-2
Nylon	0.2 µm	100/pack	F2517-3
	0.45 µm	100/pack	F2517-4
PVDF	0.2 µm	100/pack	F2517-5
	0.45 µm	100/pack	F2517-6
Regenerated cellulose	0.2 µm	100/pack	F2517-7
	0.45 µm	100/pack	F2517-8
PTFE	0.2 µm	100/pack	F2517-9
	0.45 µm	100/pack	F2517-10

25 mL centrifugal filters non-sterile

- Filter sample volumes up to 25 mL
- Virgin polypropylene filter housing with conical receiver
- Use with benchtop or floor model centrifuges
- 2,500 × G maximum centrifugal force



Description	Pore size	Quantity	Cat. no
Cellulose acetate	0.2 µm	100/pack	F2519-1
	0.45 µm	100/pack	F2519-2
Nylon	0.2 µm	100/pack	F2519-3
	0.45 µm	100/pack	F2519-4
PVDF	0.2 µm	100/pack	F2519-5
	0.45 µm	100/pack	F2519-6

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