



Filtration through a specific membrane is an essential step in the preparation of samples to remove a fluid from the solid particles which are in suspension.

It covers various application fields:

- In biology or biochromatography, this technique eliminates viruses, bacteria or even to isolate high molecular weight proteins from a matrix. Filters are commonly used for sterilization.
- In chromatography or in chemistry, whether it is in pharmaceutical, cosmetic or agrochemical, we talk about filtration of insoluble suspended material. The use of filtration limits the early deterioration of consumables (GC-HPLC).

The use of appropriate filters allows the fast treatment of a very large number of samples. Thus, it is possible to carry out between 96 to 384 filtrations simultaneously on the same plate.

Other manufacturers such as Sotax or Zymark offer filtration machines using syringe filters with specific geometry for the filtration of samples coming from the dissolution of pharmaceutical formulations.

Less expensive, manual filtration on syringe filters, paper or membrane filters is still the most common method used in laboratories to treat liquid samples or solvents. These products meet the needs of a large number of users.

The syringe filters or filter vials are the latest innovations in terms of filtration. They considerably reduce the time of sample preparation and can be directly injected with autosamplers coupled to the analysis systems.

### How to choose your filtration ?

The various types of membranes play a very important role in the speed and quality of filtration.

It is fundamental to work with membranes that are chemically compatible with the sample matrix or the solvent used. They must have a very low rate of adsorption with the substances of the sample to be analyzed.

The porosity of the membrane determines the filtration threshold, i.e. It generally varies between 5 and 0.20  $\mu\text{m}$ . The choice of the filter diameter and the porosity of the membrane must always consider the volume of the sample and the type of analysis that will be performed later. A porosity of 0.45  $\mu\text{m}$  is required for all solvents and samples before HPLC analysis. This precaution limits the pressure raise problems of the systems. For the use of columns with a particle diameter less than 3  $\mu\text{m}$ , filtration at 0.2  $\mu\text{m}$  becomes mandatory.

In gas chromatography, the fouling of the injection insert is limited if the sample is properly filtered.

Filtration type	Buffer exchange salt removal	Virus removal	Bacteria removal	HPLC clarification	Dissolution	Prefiltration	
Cut off	30 - 100KD	< 0.1 $\mu\text{m}$	0.2 $\mu\text{m}$	0.45 $\mu\text{m}$	0.45 - 1.2 $\mu\text{m}$	0.8 - 25 $\mu\text{m}$	
Sample volume	0.1 - 50 mL	1 - 2mL	2 - 10mL	10 - 100mL	10 - 250mL	0.2 - 2mL	0.05 - 0.125mL
Filter type	$\mu$ centrifuge filter hold up volume: < 5 $\mu\text{l}$	4mm hold up volume: < 15 $\mu\text{l}$	13mm hold up volume: < 30 $\mu\text{l}$	25mm hold up volume: < 100 $\mu\text{l}$	25mm + GF hold up volume: < 150 $\mu\text{l}$	96-well plates hold up volume: < 5 $\mu\text{l}$	384-well plates hold up volume: < 5 $\mu\text{l}$
Membrane type	Cellulose ester, regenerated cellulose, polyethersulfone, nitrocellulose, glass fiber, polypropylene, polyethylene, nylon, PVDF, PTFE						



### I Selection guide I

#### Regenerated Cellulose - RC:

Hydrophilic membrane that has the same properties as cellulose acetate but stable with most HPLC solvents. This membrane is used for HPLC solvents, degassing and filtration and is compatible with aqueous samples in a pH range from 2 to 12.

With a non-specific low protein binding, this membrane is the right choice for protein filtration when maximum recovery is required.

#### Mix of cellulose esters (MEC)

Ideal hydrophilic membrane for the filtration of aqueous sample with low solvent resistance. A Glass prefilter membrane is used for tissue culture media filtration, biological sample filtration, and clarification and sterilization of aqueous samples. Very low protein binding (binding < PVDF, PS). The Glass prefilter increases filtrate volume yield by 3.

#### Nylon & Nylon Low Extractables (LE)

Commonly used for HPLC sample filtration prior to injection, with good solvent resistance.

Having hydrophilic properties, it gives good results with aqueous samples.

It should not be used when maximum protein recovery is required.

#### PP - polypropylene

High resistance. It may be used with virtually all solvents, acids and bases.

#### PVDF - polyvinylidene difluoride

Hydrophobic membrane with a good solvent resistance.

Ideal for filtration of HPLC mobile phase solvents and for most biological samples. PVDF membrane is also considered to have the lowest protein binding.

#### PVDF-HLC (hydrophilic)

Hydrophilic membrane without extractables. Very good compatibility with 100% aqueous samples.

Very low protein binding for the filtration of biological matrix.

#### PTFE - polytetrafluoroethylene

Hydrophobic membrane chemically resistant to solvents, acids and bases.

This membrane is ideal for filtration of chromatography solvents. It has no extractables thanks to the PTFE membrane.

#### PTFE-HLC (hydrophilic)

Hydrophilic membrane without extractables. Very good compatibility with aqueous and organic mixtures.

High pH and temperature resistance with a low protein binding.

#### Glass Fiber - GMF / GF

Commonly used as a pre-filter for most filtrations devices.

It increases the filtration capacity by 3 times.

Typically used for crude samples and used for the cleaning and purification of DNA.

#### Polyethersulfone (PES)

Hydrophilic membrane with very low protein and nucleic acid binding. High mechanical resistance that allows the fast filtration of high sample volume. Mainly dedicated to the filtration of cell cultures. Good compatibility with alcohols and strong bases.

#### Nitrocellulose (NO2)

Hydrophilic membrane dedicated to clarify and filter aqueous samples as well as MEC membranes can do.

#### Cellulose Acetate - CA

Ideal hydrophilic membrane for the filtration of aqueous samples, with low solvent resistance.

Less chemical resistance versus RC membranes.

A Glass pre-filter membrane is used for tissue culture media filtration, biological sample filtration, and as clarification and sterilization of aqueous samples.

Very low protein binding (binding < PVDF, PS). The Glass prefilter increases filtrate volume yield by 3.

**PTFE:** Polytetrafluoroethylene

**PTFE-HLC:** Polytetrafluoroethylene Hydrophilic

**PVDF:** Polyvinylidene difluoride

**PVDF-HLC:** Polyvinylidene difluoride Hydrophilic

**RC:** Regenerated Cellulose

**MEC:** Mixing of cellulose esters

**PES:** Polyethersulfone

**NO2:** Nitrocellulose

**GF:** Glass Fiber

**GMF:** Glass Microfiber

**NYLON:** Polyamide 6

**NYLON LE:** Nylon Low Extractables

**PP:** Polypropylene

**PP-2:** Hydrophilic Polypropylene

**PE:** Polyethylene

**UH-PE:** High Density Polyethylene

**CA:** Cellulose Acetate





**C:** Compatible  
**LC:** Limited compatibility  
**NC:** Not compatible  
**ND:** No data available

**NYLON:** Polyamide 6-6  
**PTFE:** Polytetrafluoroethylene  
**PVDF:** Polyvinylidene difluoride  
**RC:** Regenerated Cellulose  
**PP:** Polypropylene  
**GF:** Glass Fiber  
**CA:** Cellulose Acetate  
**PES:** Polyethersulfone  
**MEC:** Mixing of cellulose esters

	Nylon	PTFE	PVDF	RC	PP	CA	PES	MEC	GF
<b>Acid</b>									
Acetic, Glacial	LC	C	C	C	C	NC	C	NC	C
Acetic, 25%	C	C	C	C	C	NC	C	C	C
Hydrochloric, Concentrated	NC	C	C	NC	C	NC	C	NC	C
Hydrochloric, 25%	NC	C	C	NC	C	NC	C	NC	C
Sulfuric, Concentrated	NC	C	NC	NC	C	NC	NC	NC	C
Sulfuric, 25%	NC	C	C	LC	C	NC	C	NC	C
Nitric, Concentrated	NC	C	C	NC	C	NC	NC	NC	LC
Nitric, 25%	NC	C	C	NC	C	NC	C	NC	LC
Phosphoric, 25%	NC	C	ND	LC	C	NC	ND	C	ND
Formic, 25%	NC	C	ND	C	C	NC	ND	LC	ND
Trichloroacetic, 10%	NC	C	ND	C	C	NC	ND	C	ND

**Basis**

Ammonium Hydroxide, 25%	C	C	LC	LC	C	LC	C	C	C
Sodium Hydroxide, 3 Normal	C	C	C	LC	C	NC	C	NC	ND

**Alcohol**

Methanol, 98%	C	C	C	C	C	LC	C	C	C
Ethanol, 98%	C	C	C	C	C	LC	C	C	C
Ethanol, 70%	LC	C	C	C	C	LC	C	LC	C
Isopropanol, n-Propanol	C	C	C	C	C	LC	C	C	C
Amyl alcohol, Butanol	C	C	C	C	C	LC	C	C	C
Benzyl Alcohol	C	C	C	C	C	LC	ND	LC	NC
Ethylene glycol	C	C	C	C	C	LC	C	C	C
Propylene glycol	C	C	C	C	C	LC	C	LC	C
Glycerol	C	C	C	C	C	LC	C	C	C

**Hydrocarbons**

Hexane, Xylene	C	C	C	C	NC	LC	C	C	C
Toluene, benzene	C	C	C	C	NC	C	C	C	C
Kerosene, Gasoline	C	C	C	C	LC	LC	C	C	ND
Tetralin, Decalin	ND	C	C	C	ND	C	C	C	ND

**Halogenated hydrocarbons**

Methylene Chloride	LC	C	C	C	LC	NC	NC	NC	C
Chloroform	C	C	C	C	LC	NC	NC	NC	C
Trichloroethylene	C	C	C	C	LC	LC	NC	C	C
Monochlorobenzene, Freon	C	C	C	C	C	LC	LC	C	C
Carbon Tetrachloride	C	C	C	C	LC	LC	NC	LC	C

**Ketone**

Acetone, Cyclohexanone	C	C	C	C	C	NC	NC	NC	C
Methyl Ethyl Ketone	C	C	LC	C	LC	NC	NC	LC	C
Isopropylacetone	C	C	NC	C	ND	NC	NC	C	C
Methyl Isobutyl Ketone	ND	C	LC	C	LC	NC	NC	ND	C



Chemical	Nylon	PTFE	PVDF	RC	PP	CA	PES	MEC	GF
<b>Esters</b>									
Ethyl Acetate, & Methyl Acetate	C	C	C	C	LC	LC	NC	NC	C
Amyl, Propyl & Butyl Acetate	C	C	ND	C	LC	LC	NC	LC	C
Propyl Acetate	C	C	NC	C	LC	LC	NC	LC	ND
Propylene Glycol Acetate	ND	C	ND	C	C	LC	NC	NC	ND
2-Ethoxyethyl Acetate	ND	C	ND	C	ND	LC	NC	LC	ND
Methyl Cellulose Acetate	ND	C	ND	C	ND	LC	NC	LC	C
Benzyl Benzoate	C	C	ND	C	ND	LC	NC	C	ND
Isopropyl Myristate	C	C	ND	C	ND	LC	NC	C	ND
Tricresyl Phosphate	ND	C	ND	C	ND	LC	NC	C	ND
<b>Ethers Oxides</b>									
Ethyl Ether	C	C	C	C	C	LC	C	C	C
Dioxane & Tetrahydrofuran	C	C	LC	C	ND	NC	NC	NC	C
Dimethylsulfoxide (DMSO)	C	C	NC	C	C	NC	NC	NC	C
Isopropyl Ether	ND	C	C	C	C	LC	C	C	ND
<b>Nitrogen solvents</b>									
Dimethyl Formamide	LC	C	NC	LC	C	LC	NC	NC	C
Diethylacetamide	C	C	ND	C	ND	LC	ND	NC	C
Triethanolamine	C	C	ND	C	ND	NC	ND	C	ND
Aniline	ND	C	ND	C	ND	NC	ND	NC	ND
Pyridine	C	C	C	C	LC	NC	NC	NC	C
Acetonitrile	C	C	C	C	LC	NC	LC	NC	C
<b>Others</b>									
Phenol, Aqueous, 10%	ND	C	LC	NC	C	ND	NC	NC	C
Formaldehyde Solution, 30%	C	C	C	LC	C	ND	C	C	C
Hydrogen Peroxide, 30%	C	C	ND	C	ND	ND	ND	C	ND
Silicone Oil & Mineral Oil	ND	C	C	C	C	ND	C	C	C
<b>pH range</b>									
1 - 14	NC	C	NC	NC	C	NC	NC	ND	C
3 - 12	C	C	NC	C	C	NC	C	ND	C
4 - 8	C	C	C	C	C	C	C	ND	C



## 1- Select the membrane

Biological matrix & protein analysis	Aqueous samples	Aq./Organic mixtures	Organic samples
Cellulose acetate (hydrophilic membrane)			
Regenerated cellulose (hydrophilic membrane)			
	Nylon (hydrophilic membrane)		
		PVDF (hydrophobic membrane)	
PVDF-HLC (hydrophilic membrane)			
		PTFE (hydrophobic membrane)	
	PTFE-HLC (hydrophilic membrane)		

## 2- Select the syringe filter size

Sample volume	< 2 mL	2 - 10 mL	10 - 100 mL	up to 120 mL
Syringe filter size	4 mm	13 mm	25 mm	30 mm

## 3- Select pore size

0.20  $\mu\text{m}$ 0.45  $\mu\text{m}$ Additional prefilter 1.00  $\mu\text{m}$  GF

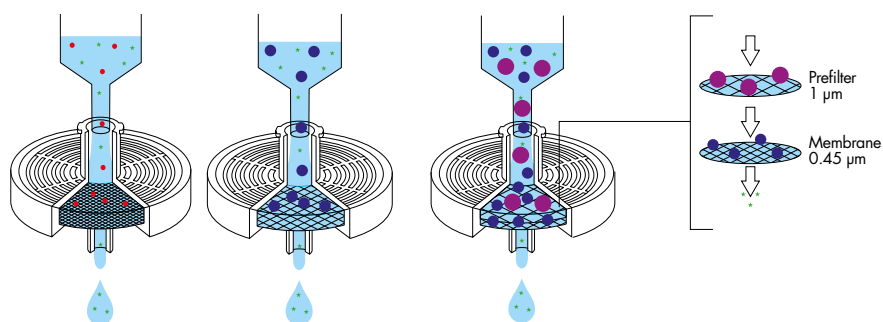
Viscous sample with high suspended solids

Technology UptiDisc™  
GFX multi-layered

● Particle size 0.20  $\mu\text{m}$   
★ Analyte

● Particle size 0.45  $\mu\text{m}$   
★ Analyte

● Particle 1  $\mu\text{m}$   
● Particle 0.45  $\mu\text{m}$   
★ Compound of interest



Filtration of highly charged solutions  
● Biological fluids  
● Dissolution tests



### Syringe filters UptiDisc™

UptiDisc™ syringe filters are the highest quality. They allow fast and efficient filtration thanks to optimized sample diffusion hardware.

The retention volumes have been drastically reduced. The maximum operating pressure is about 7 bar for the 13 and 25 mm filters. They allow the safe filtration of aqueous, organic and biological samples.

All 13, 25 and 30 mm filters are easily identifiable thanks to their color code specific to each membrane.

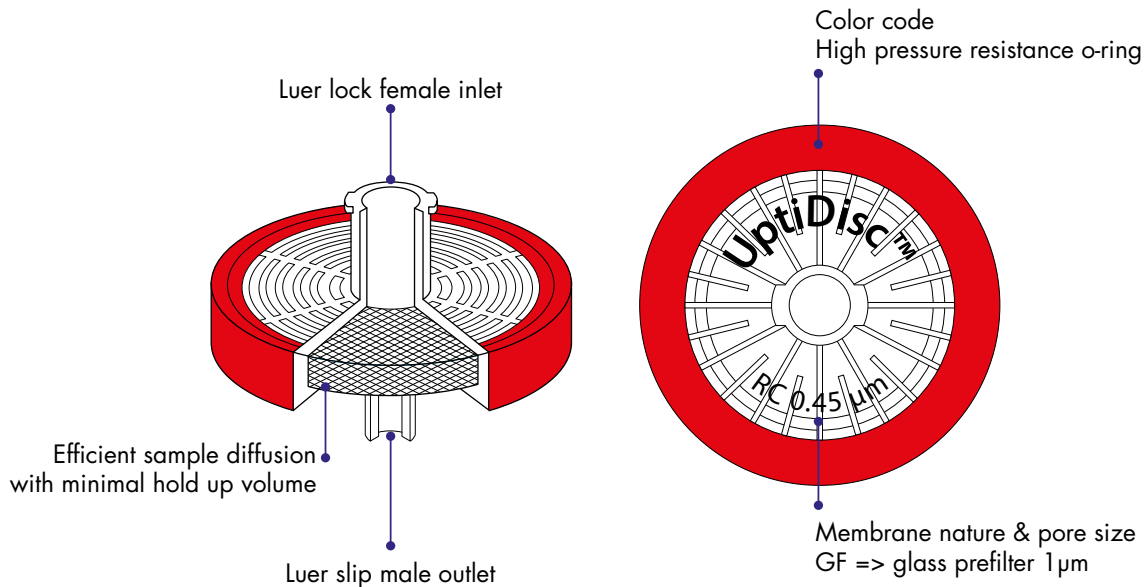
All 25 and 30 mm filters are available with a 1.0 µm glass fiber pre-filter. They reduce membrane clogging problems and avoid multiple replacements during filtration.

### TECHNICAL TIP

Syringe volume	Pressure
1 mL	~ 10 bar
3 mL	~ 7 bar
5 mL	~ 5 bar
10 mL	~ 3 bar
20 mL	~ 2 bar

#### Features:

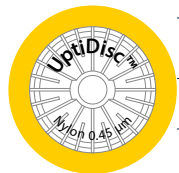
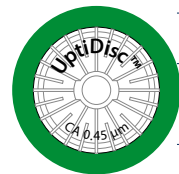
- Filter type: non-sterile
- Housing: PP
- Inlet: Female Luer-Lock
- Outlet: male Luer
- Diameters: 13 - 25 - 30 mm
- Porosities: 0.20 - 0.45 µm
- Membranes: CA, Nylon, PP, PTFE, PVDF, RC
- Packaging: 100 or 500 units
- Samples for testing on request



## Filtration - Syringe filters UptiDisc™ 13/25/30 mm

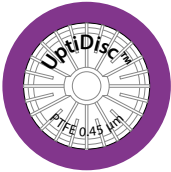
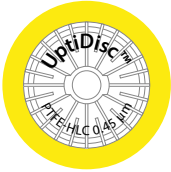
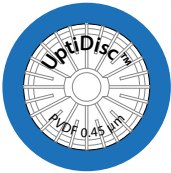


Membrane	Ø (mm)	Porosity (µm)	Prefilter	Inlet	Outlet	Housing	Filtration area (cm <sup>2</sup> )	Hold up (µL)	Max. sample volume (mL)	Max. pressure (psi)	P/N	Qty	
Cellulose acetate	13	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	EV3860	100 u	
	13	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	EV3850	100 u	
	25	0.20	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	EV3830	100 u	
	25	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	EV3820	100 u	
	25	0.45	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	EV3810	100 u	
	25	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	EV3840	100 u	
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCD20	100 u	
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCD21	500 u	
	30	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCD30	100 u	
	30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCD40	100 u	
	30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCD41	500 u	
	30	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCD50	100 u	
	Nylon	13	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	P00500	100 u
		13	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	P00510	100 u
25		0.20	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11410	100 u	
25		0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11411	500 u	
25		0.45	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11720	100 u	
25		0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11721	500 u	
25		0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	U54670	100 u	
30		0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCISO	100 u	
30		0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCIS1	500 u	
30		0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCITO	100 u	
30		0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCIU0	100 u	
30		0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCIU1	500 u	
30		0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCIVO	100 u	
Polypropylene hydrophobic		13	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	P00580	100 u
	13	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	P00590	100 u	
	25	0.20	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11790	100 u	
	25	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11791	500 u	
	25	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	U54690	100 u	
	25	0.45	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11800	100 u	
	25	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11801	500 u	
	25	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	U54700	100 u	
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCU30	100 u	
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCU31	500 u	
	30	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCU40	100 u	
	30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCU50	100 u	
	30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCU51	500 u	
	30	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCU60	100 u	



Filtration - Syringe filters UptiDisc™ 13/25/30 mm



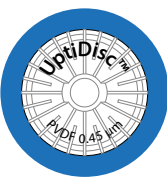

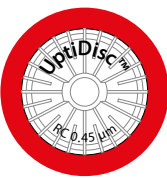
Membrane	Ø (mm)	Porosity (µm)	Prefilter	Inlet	Outlet	Housing	Filtration area (cm²)	Hold up (µL)	Max. sample volume (mL)	Max. pressure (psi)	P/N	Qty
PTFE 	13	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	P00520	100 u
	13	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	P00530	100 u
	25	0.20	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11730	100 u
											N11731	500 u
	25	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	U54710	100 u
	25	0.45	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11740	100 u
											N11741	500 u
	25	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	U54720	100 u
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CU70	100 u
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CU71	500 u
	30	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CU80	100 u
	30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CU90	100 u
	30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CU91	500 u
	30	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CUA0	100 u
	PTFE-HLC 	13	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.92	<10	<10	87	1L3570
13		0.45	no	Luer-Lock	Luer slip	Polypropylene	0.92	<10	<10	87	1L3580	100 u
25		0.20	no	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	1L3590	100 u
											1L3591	500 u
25		0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	1L3600	100 u
25		0.45	no	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	1L3610	100 u
											1L3611	500 u
25		0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	1L3620	100 u
30		0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CUB0	100 u
30		0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CUB1	500 u
30		0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CUC0	100 u
30		0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CUD0	100 u
30		0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CUD1	500 u
30		0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	B0CUE0	100 u
PVDF 		13	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	P00560
	13	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	P00570	100 u
	25	0.20	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11770	100 u
											N11771	500 u
	25	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	U54730	100 u
	25	0.45	no	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	N11780	100 u
											N11781	500 u
	25	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	< 100	< 100	87	U54740	100 u





## Filtration - Syringe filters UptiDisc™ 13/25/30 mm



Membrane	Ø (mm)	Porosity (µm)	Prefilter	Inlet	Outlet	Housing	Filtration area (cm²)	Hold up (µL)	Max. sample volume (mL)	Max. pressure (psi)	P/N	Qty
PVDF 	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUF0	100 u
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUF1	500 u
	30	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUG0	100 u
	30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUH0	100 u
	30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUH1	500 u
	30	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUI0	100 u
PVDF-HLC 	13	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.92	<10	<10	87	1L3630	100 u
	13	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.92	<10	<10	87	1L3640	100 u
	25	0.20	no	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	1L3650	100 u
											1L3651	500 u
	25	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	1L3660	100 u
	25	0.45	no	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	1L3670	100 u
											1L3671	500 u
	25	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	1L3680	100 u
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUK0	100 u
	30	0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUK1	500 u
	30	0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUL0	100 u
	RC 	13	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	T38090
13		0.45	no	Luer-Lock	Luer slip	Polypropylene	0.92	< 10	< 10	87	T38080	100 u
25		0.20	no	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	T38110	100 u
											T38111	500 u
25		0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	U54650	100 u
25		0.45	no	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	T38100	100 u
											T38101	500 u
25		0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	2.98	<100	<100	87	U54660	100 u
30		0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUO0	100 u
30		0.20	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUO1	500 u
30		0.20	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUP0	100 u
30		0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUQ0	100 u
30	0.45	no	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUQ1	500 u	
30	0.45	yes 1.0 µm GF	Luer-Lock	Luer slip	Polypropylene	4.9	<100	<120	87	BOCUI0	100 u	

## Plastic syringes

- Sterile syringes 3 pieces
- Transparent polypropylene
- Elastomeric gasket for watertightness
- Luer or Luer Lock tip

Plastic syringe	Luer P/N	Qty	Luer lock - P/N	Qty
1 mL	AN0660	100 u		
2 mL	839820	100 u		
5 mL	910160	100 u	DT2552	100 u
10 mL	U50760	100 u	DT2560	120 u
20 mL	491970	50 u	R48210	120 u
30 mL	U75440	50 u	I05990	60 u
50 mL	U75450	25 u	AA8170	25 u
100 mL			OO2390	25 u



UptiDisc™ 4mm syringe filters are intended for filtration of small sample volumes generally less than 2 mL.

The very low retention volume minimizes sample loss on the membrane and allows safe filtration of aqueous, organic and biological samples.



**Features:**

- Type: non sterile
- Membranes : RC, CA, Nylon, PTFE, PVDF, PP

Membrane	Ø (mm)	Porosity (µm)	Prefilter	Inlet	Outlet	Housing	Filtration area (cm <sup>2</sup> )	Hold up (µL)	Max. sample volume (mL)	Max. pressure (psi)	P/N	Qty
Cellulose acetate	4	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00600	100 u
	4	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00610	100 u
Nylon	4	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00620	100 u
	4	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00630	100 u
PP hydrophobe	4	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00640	100 u
	4	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00650	100 u
PTFE	4	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00660	100 u
	4	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00670	100 u
PVDF	4	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00680	100 u
	4	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	P00690	100 u
RC	4	0.20	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	T38070	100 u
	4	0.45	no	Luer-Lock	Luer slip	Polypropylene	0.125	< 1	< 5	75	T38060	100 u



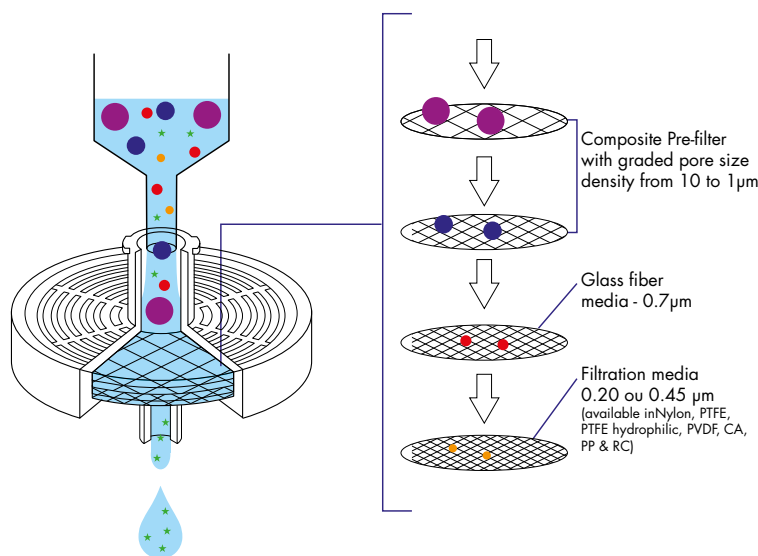


## Syringe filter UptiDisc™ GFX

### Multi-Layer technology

Unique filter design dedicated to filtration of very high particulate solutions (Biological, Dissolution testing, Environmental samples, Food analysis, Biofuel analysis...).

Our special membrane materials allow you to filter difficult samples with less hand pressure and faster flow rate. They prevent back pressure typically caused by the clogging of an unprotected membrane. Increased volume capacity (sample volume can be three to seven times larger than conventional filters).



Membrane	Ø (mm)	Porosity (µm)	Pre-filter	Inlet	Outlet	Housing	Filtration area (cm <sup>2</sup> )	Hold up (µL)	Max. sample volume (mL)	Max. pressure (psi)	P/N	Qty
GFX Nylon												
	25	0.20	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3060	100 u
	25	0.45	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3070	100 u
GFX PTFE												
	25	0.20	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3080	100 u
	25	0.45	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3090	100 u
GFX PTFE PHILIC												
	25	0.20	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3100	100 u
	25	0.45	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3110	100 u
GFX PVDF												
	25	0.20	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3120	100 u
	25	0.45	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3130	100 u
GFX CA												
	25	0.20	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3140	100 u
	25	0.45	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3150	100 u
GFX PP												
	25	0.20	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3670	100 u
	25	0.45	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3680	100 u
GFX RC												
	25	0.20	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3690	100 u
	25	0.45	yes, multi-layers	Luer-Lock	Luer slip	Polypropylene	4.08	< 400	< 100	75	1A3700	100 u


















Specially designed for automated filtration of samples from dissolution tests, UptiDisc™ Robotic syringe filters are compatible with Sotax filtration machines.

All filters are easily identifiable by their specific color code for each membrane.

### Features:

- Filter type: non-sterile
- Housing: PP
- Inlet: Female Luer Lock
- Outlet: Luer slip male
- Diameter: 25 mm
- Porosities: 0.20 - 0.45  $\mu\text{m}$
- Membranes: MEC, Nylon, PP, PVDF, PTFE, CA, RC, GMF
- Maximum pressure: 5.5 bar
- Packaging: 1,000 units

$\varnothing$	Porosity	Housing		P/N	Qty
<b>Regenerated cellulose (RC)</b>					
25 mm	0.20 $\mu\text{m}$	PP		BH7120	1 000 u
25 mm	0.45 $\mu\text{m}$	PP		BH7130	1 000 u
<b>Cellulose ester (MEC)</b>					
25 mm	0.20 $\mu\text{m}$	PP		BH7040	1 000 u
25 mm	0.45 $\mu\text{m}$	PP		BH7050	1 000 u
<b>Cellulose acetate (CA)</b>					
25 mm	0.20 $\mu\text{m}$	PP		EV3980	1 000 u
25 mm	0.45 $\mu\text{m}$	PP		EV3990	1 000 u
<b>Nylon</b>					
25 mm	0.20 $\mu\text{m}$	PP		BH7000	1 000 u
25 mm	0.45 $\mu\text{m}$	PP		BH7010	1 000 u
<b>Polytetrafluoroethylene (PTFE)</b>					
25 mm	0.20 $\mu\text{m}$	PP		BH7020	1000 u
25 mm	0.45 $\mu\text{m}$	PP		BH7030	1000 u

$\varnothing$	Porosity	Housing		P/N	Qty
<b>PVDF</b>					
25 mm	0.20 $\mu\text{m}$	PP		BH7060	1 000 u
25 mm	0.45 $\mu\text{m}$	PP		BH7070	1 000 u
<b>PP</b>					
25 mm	0.20 $\mu\text{m}$	PP		BH7080	1 000 u
25 mm	0.45 $\mu\text{m}$	PP		BH7100	1 000 u
<b>Glass micro-fiber (GMF)</b>					
25 mm	1,0 $\mu\text{m}$	PP		BH7180	1 000 u