

**GERSTEL**  
certified **SUPPLIES**



## Filtration





## Automated Filtration using the MPS

Suspended particles and matrix material in a sample can significantly influence analysis results and system stability. Removing particulate matter from a sample or extract prior to analysis is therefore critical for many GC/MS- and LC/MS analysis methods, particularly when large series of samples must be analyzed automatically.

### Glass Fibre (GMF)

Bulk filter for large particle removal. Used as a pre-filter for protection of narrow pore membranes.

### Regenerated Cellulose (RC)

Well established hydrophilic membrane for filtration of aqueous/organic solutions. Not suitable for aggressive acids/bases. Low protein binding. Recommended for Biomolecular and HPLC applications. With pre-filter may be used with tissue cultures. Can be used for HPLC solvent degassing. Good wetting behavior and high wet strength.

### Cellulose Acetate (CA)

Well established for filtration of aqueous solutions. Very low protein binding. Recommended for Biomolecular and HPLC applications. Mixes Cellulose Esters (MCE) Better hydrophilicity, very low protein binding. Great water flux and better cutoff effect. Ideal for aqueous based samples, tissue culture and sensitive biological samples. Has a lower chemical resistance.

### Nylon (PA)

Hydrophilic surface, good solvent resistance and medium (to high) protein binding; Filtration of all aqueous samples and of most organic solvents. Mechanical stability is very strong. Excellent chemical compatibility with esters, bases, phenol and alcohols but one should avoid concentrated acids. Recommended for most HPLC applications.

### PVDF

Hydrophilic membrane. It has a broad chemical compatibility and is low in UV absorbing extractables. It is highly resistant to most solvents with low protein binding. General filtration of biological samples. Filtration of all aqueous and most solvent based (mild organic solutions) samples. Aseptic filtration for protein, tissue culture medium, antibiotic and ethanol.

### PTFE

Hydrophobic membrane. Highest solvent resistance, and high protein binding. Filtration of non-aqueous or solvent based samples. Prewetting with methanol or ethanol prior to aqueous samples filtration. Very broad chemical and thermal compatibility. It is recommended for strong acids and bases. Good for filtering and degassing organic mobile phases. Recommended for GC applications. May also be used as a vent filter.

### Polypropylene (PP)

hydrophobic, high solvent resistant, lower protein binding. Good thermal compatibility. General filtration of biological samples, solvents, deionized water and reducing biological load (bio-molecular clean-up). Filtration of all aqueous and most solvent based samples. Suitable for use in aqueous or organic media.



MPS Filtration Tray with 4 mm syringe Filter



MPS Filtration Tray with 25 mm Syringe Filter



**Transport adapter 1 mL for One way filter**

consists of:

Transport adapter with Luer connection

One way Syringe needle (Sterican 0.60x25mm 23G x1")

**Part No.**

1000 units

**018207-210-00**

**Syringe Filter 4 mm**

Retention Volume <15 µL

Max. operation Pressure: 520 kPa (=5.2 bar / = 75 psi)



Membrane type	Pore size µm	color code	units	Part No.
Polypropylene (PP)	0.2	-	100	<b>017450-100-00</b>
Polypropylene (PP)	0.45	-	100	<b>017450-101-00</b>
PTFE	0.2	-	100	<b>017450-102-00</b>
PTFE	0.45	-	100	<b>017450-103-00</b>
Regenerated Cellulose (RC)	0.2	-	100	<b>017450-104-00</b>
Regenerated Cellulose (RC)	0.45	-	100	<b>017450-105-00</b>
Nylon (PA)	0.2	-	100	<b>017450-106-00</b>
Nylon (PA)	0.45	-	100	<b>017450-107-00</b>
Glass pre filter (PVDF)	0.2	-	100	<b>017450-108-00</b>
Glass pre filter (PVDF)	0.45	-	100	<b>017450-109-00</b>
Cellulose Acetate (CA)	0.2	-	100	<b>017450-110-00</b>
Cellulose Acetate (CA)	0.45	-	100	<b>017450-111-00</b>

**Syringe Filter 17 mm**

Retention Volume <0.29 mL

Max. operating Pressure: 790 kPa (=7.9 bar / = 115 psi)

Effective filter area: 1.33 cm<sup>2</sup>



Membrane type	Pore size µm	color code	units	Part No.
PTFE	0.2	blue	100	<b>017450-302-00</b>
PTFE	0.45	yellow	100	<b>017450-303-00</b>
Regenerated Cellulose (RC)	0.2	grey	100	<b>017450-304-00</b>
Regenerated Cellulose (RC)	0.45	brown	100	<b>017450-305-00</b>
Nylon (PA)	0.2	purple	100	<b>017450-306-00</b>
Nylon (PA)	0.45	green	100	<b>017450-307-00</b>
Glass pre filter (PVDF)	0.2	black	100	<b>017450-308-00</b>
Glass pre filter (PVDF)	0.45	red	100	<b>017450-309-00</b>

**Syringe Filter 25 mm**

Retention Volume <0.1 mL  
 Max. operating Pressure: 500 kPa (=5 bar / = 72 psi)  
 Effective filter area: 3.7 cm<sup>2</sup>

Membrane type	Pore size µm	color code	units	Part No.
PTFE	0.2	green	100	017450-402-00
PTFE	0.45	natural	100	017450-403-00
Regenerated Cellulose (RC)	0.2	blue	100	017450-44-00
Regenerated Cellulose (RC)	0.45	yellow	100	017450-405-00
Nylon (PA)	0.2	bright blue	100	017450-406-00
Nylon (PA)	0.45	bright green	100	017450-407-00



**Syringe Filter 30 mm**

Retention Volume <0.137 mL  
 Max. operating Pressure: 620 kPa (=6.2 bar / = 90 psi)  
 Effective filter area: 4.91 cm<sup>2</sup>

**NOTE: These 30 mm filters require a modification of the MPS injection unit.**

Membrane type	Pore size µm	color code	units	Part No.
Glass pre filter (PTFE)	0.2	blue	100	017450-502-00
Glass pre filter (PTFE)	0.45	yellow	100	017450-503-00
Regenerated Cellulose (RC)	0.2	grey	100	017450-504-00
Regenerated Cellulose (RC)	0.45	brown	100	017450-505-00
Nylon (PA)	0.2	purple	100	017450-506-00
Nylon (PA)	0.45	green	100	017450-507-00
Glass pre filter (PVDF)	0.2	black	100	017450-508-00
Glass pre filter (PVDF)	0.45	red	100	017450-509-00
Glass pre filter	1.2	orange	100	017450-520-00



**Filter inserts 17 µm for 10/20 mL screw cap vials**

without vials and screw caps

For:  
 10 mL screw cap vials 093640-038-00 and  
 20 mL screw cap vials 093640-036-00  
 with screw cap 093640-040-00

50 units	020006-050-00
1000 units	020006-100-00
5000 units	020006-500-00









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