

# Protein Crash and Protein Precipitate Filter Plates

- **Rapid**
- **Ease of automation**
- **High throughput**
- **No acetonitrile leakage or crosstalk during mixing or incubation**

Orochem Technologies' new protein crash and protein precipitate filter plates allow simple, rapid, high throughput sample preparation.

The graded frit design is optimized to efficiently remove precipitated protein without plugging or breakthrough.

Protein precipitation can be accomplished in-situ in the plate wells, minimizing sample handling. Protein precipitate is removed by filtration, eliminating time consuming centrifugation and transfer steps.

Orochem filter plates are compatible with Orochem vacuum accessories and all existing industry liquid handling stations.



2mL Square Well Plate

## Recommended Protocol

1. Acetonitrile/porcine serum is used in the ratio of 3:1 (v/v)
2. The porcine serum is spiked with the standard
3. Acetonitrile is added to the well, quickly followed by the serum sample
4. The plate is then covered with a cap mat and shaken at room temperature on a platform shaker at moderate speed for 30 minutes.
5. The plates may be shaken with collection trays in place so the plate tips do not come in contact with the shaker platform.
6. The samples may be extracted with positive pressure using a 96 positive pressure processor or vacuum manifold

## Protein Crash Plates, No Acetonitrile Leakage

Cat. No.	Description
OC-9270	2mL square well, 0.2µm cutoff
OC-9170	1mL round well, 0.2µm cutoff

## Protein Precipitation Plates

OC-9271	2mL square well, 0.2µm hydrophobic PP filter
OC-92753	2mL square well, 0.2µm glass fiber prefilter

Please call for quantity price breaks on protein crash plates.

## Accessories

278-0031	Cerex System 96 positive pressure processor
ORVMN-FT1	2-in-1 vacuum manifold for 1 and 2mL plates
700-237	Orbis Plus microplate shaker with timer & lid

## Cap Mats for Protein Crash Plates

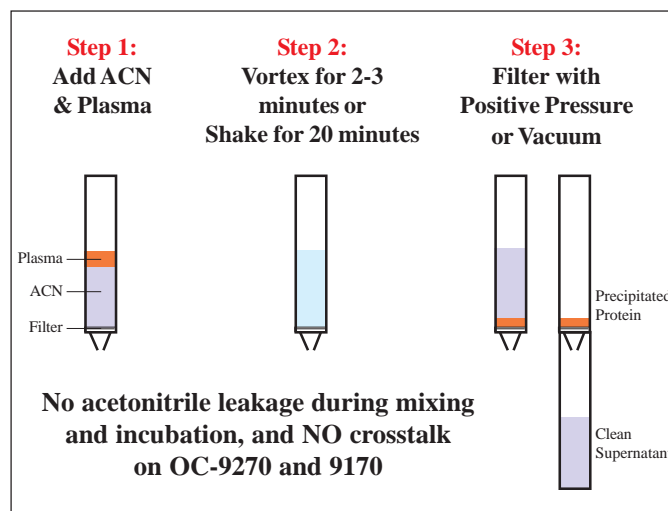
96-0662	Pierceable capmat for 2mL square, 50/pk
96-0566	Pierceable capmats for 1mL round, 50/pk

## 96 Square Well Collection Plates, PP (Accepts cap 96-0662)

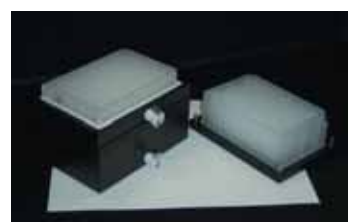
Cat. No.	Well Design	Total Well Volume	Qty.
96-6006	V	350µL	50
96-6008	V	1mL	50
96-6009	V	2mL	50
96-850356	U	2.2mL	50

## 96 Round Well Collection Plates, PP (Accepts cap 96-0566)

96-650201	U	300µL	100
96-651201	V	300µL	100
96-655201	Flat	300µL	100
96-0765	U	650µL	20
96-0564	U	1.2mL	50



Cerex System 96 Positive Pressure Manifold



96 Well Plate Vacuum Manifold



Orbis Plus Microplate Shaker

# 96 Well Filter Plates, 1mL



96 Well Filter Plate, 1mL



System 96 Positive Pressure Manifold



96 Well Plate Vacuum Manifold



96 Round Well Collection Plate and Mat

## Low Biomolecule Binding

### Hydrophobic Filter Plates, 1mL Plate

Cat. No.	Description	Qty.
OC-9172060	Hydrophobic PP, 0.6µm	10
OC-917201	Hydrophobic PP, 1µm	10
OC-917205	Hydrophobic PP, 5µm	10
OC-917210	Hydrophobic PP, 10µm	10
OC-917225	Hydrophobic PP, 25µm	10
OC-9179020	PTFE, 0.2µm	5
OC-9179045	PTFE, 0.45µm	5

### Hydrophilic Filter Plates, 1mL Plate

OC-9171020	Hydrophilic PP, 0.2µm	10
OC-9171045	Hydrophilic PP, 0.45µm	10

### Bioinert Membranes with PreFilters, 1mL Plate

OC-91753	Hydrophilic PVDF with Glass Fiber PreFilter	10
OC-91752	Hydrophilic PVDF with Polycarbonate PreFilter	10
OC-91755	Hydrophilic PVDF with Polyester PreFilter	10
OC-91754	Hydrophilic PVDF with Cotton PreFilter	10

## High Biomolecule Binding

### Glass Fiber Media Filter Plates, 1mL Plate

OC-913721	Glass Fiber Media	10
OC-913751	Glass Fiber Media	10

### Nitrocellulose Filter Plate, 1mL Plate

OC-9178	Nitrocellulose	10
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### Hydrophobic PVDF, 1mL Plate

OC-91372	Hydrophobic PVDF	10
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## Molecular Separations

### Molecular Weight Cut-Off Filter Plates, 1mL Plate

OC-913610K	MWCO 10K w/Polypropylene Prefilter	10
OC-913630K	MWCO 30K w/Polypropylene Prefilter	10

## Filtration Accessories

### Instrumentation

Cat. No.	Description
278-0031	System 96 positive pressure processor
ORVMN-FT1	2-in-1 vacuum manifold for 1 and 2mL plates

### Cap Mats for Filtration Plates

96-0566	Pierceable capmats for 1mL round, 50/pk
96-0566AS <sup>1</sup>	Pierceable capmats for 1mL round, 50/pk <sup>1</sup> Autosampler friendly, can pierce 5 times without coring

### 96 Round Well Collection Plates, PP (Accepts cap 96-0566)

96-650201	U	300µL	100
96-651201	V	300µL	100
96-655201	Flat	300µL	100
96-0765	U	650µL	20
96-0564	U	1.2mL	50

## 96 Well Plate Sample Filters

- 96 Well plate, 2mL
- Plates have prefilters for high performance filtration

### General Biological Sample Filtration, 10/pk

Cat. No.	Description
OC-92771	Cellulose Acetate w/Polypropylene prefilter
OC-9277201	Cellulose Acetate w/Polycarbonate, 1µm prefilter
OC-9277205	Cellulose Acetate w/Polycarbonate, 5µm prefilter
OC-9277208	Cellulose Acetate w/Polycarbonate, 8µm prefilter
OC-92773	Cellulose Acetate w/glass fiber prefilter
OC-92774	Cellulose Acetate w/cotton prefilter
OC-92775	Cellulose Acetate w/Polyester prefilter

### High Protein Retention and DNA and RNA Binding, 10/pk

OC-92781	Nitrocellulose w/Polypropylene prefilter
OC-9278201	Nitrocellulose w/Polycarbonate, 1µm prefilter
OC-9278205	Nitrocellulose w/Polycarbonate, 5µm prefilter
OC-9278208	Nitrocellulose w/Polycarbonate, 8µm prefilter
OC-92783	Nitrocellulose w/glass fiber prefilter
OC-92784	Nitrocellulose w/cotton prefilter
OC-92785	Nitrocellulose w/Polyester prefilter

### Low Protein Binding, 10/pk

OC-92751	PVDF w/Polypropylene prefilter
OC-9275201	PVDF w/Polycarbonate, 1µm prefilter
OC-9275205	PVDF w/Polycarbonate, 5µm prefilter
OC-9275208	PVDF w/Polycarbonate, 8µm prefilter
OC-92753	PVDF w/Glass Fiber prefilter
OC-92754	PVDF w/Cotton prefilter
OC-92755	PVDF w/Polyester prefilter

### Protein Precipitation Plates, Each

OC-9271	2mL square well, 0.2µm hydrophobic PP filter
OC-92753	2mL square well, 0.2µm glass fiber prefilter



2mL Square Well Filter Plate



System 96 Positive Pressure Manifold



96 Well Plate Vacuum Manifold

## Filtration Accessories

### Instrumentation

Cat. No.	Description
278-0031	System 96 positive pressure processor
ORVMN-FT1	2-in-1 vacuum manifold for 1 and 2mL plates

### Cap Mats for Protein Crash Plates

96-0662	Pierceable capmat for 2mL square, 50/pk
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### 96 Square Well Collection Plates, PP (Accepts cap 96-0662)

Cat. No.	Well Design	Total Well	
		Volume	Qty.
96-6006	V	350µL	50
96-6008	V	1mL	50
96-6009	V	2mL	50
96-850356	U	2.2mL	50



# Centrifuge Filter Tubes

## Micro-Spin Filter Tubes

- For up to 850µL sample volumes
- Polypropylene housings

Quickly and easily clarify small sample volumes with Chrom Tech's Micro-Spin® centrifuge filter tubes. These devices fit in any standard microcentrifuge, and allow you to process multiple samples simultaneously.



Less than 5µL hold-up volume provides near quantitative volumetric recovery. Maximum G-Force: 10,000xG. Micro-Spin centrifuge filter tubes now include glass prefilters.

### Micro-Spin Filter Tubes

Membrane	Pore Size	Qty.	Cat. No.
Cellulose Acetate	0.2µm	100	<b>8513-00</b>
Cellulose Acetate	0.45µm	100	<b>8512-00</b>
Nylon	0.2µm	100	<b>8515-00</b>
Nylon	0.45µm	100	<b>8514-00</b>
PVDF	0.2µm	100	<b>8516-00</b>
PVDF	0.45µm	100	<b>8517-00</b>
Regenerated Cellulose	0.2µm	100	<b>8518-00</b>
Regenerated Cellulose	0.45µm	100	<b>8519-00</b>

## Forensic Spin Tubes

- 600µL Capacity
- Extracts fluids from cloth samples
- Polypropylene housing

The 1.4mm mesh acts as a sieve to retain cloth samples and pass fluids to the receiver tube.



### Forensic Spin Tubes

Cat. No.	Description	Qty.
<b>8500A-00</b>	Forensic spin tube	100
<b>8504-10</b>	Forensic spin tube	1,000

## Maxi-Spin Filter Tubes

- For up to 25mL sample volumes
- Polypropylene housings
- Used with fixed angle rotor centrifuge

Maxi-Spin™ centrifuge filter tubes remove particulates from larger sample sizes with any centrifuge that holds 50mL conical tubes. They should only be used with a fixed-angle rotor centrifuge to prevent premature clogging of the membrane. Maximum operating temperature: 50° C. Maximum G-force: 2,500xG.



### Maxi-Spin Filter Tubes

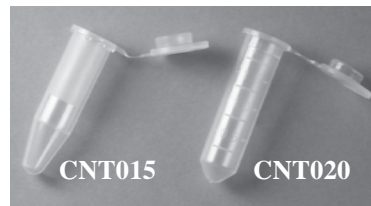
Membrane	Pore Size	Qty.	Cat. No.
Cellulose Acetate	0.2µm	50	<b>1013-06</b>
Cellulose Acetate	0.45µm	50	<b>1012-06</b>
Nylon	0.2µm	50	<b>1015-06</b>
Nylon	0.45µm	50	<b>1014-06</b>
PVDF	0.2µm	50	<b>1016-06</b>
PVDF	0.45µm	50	<b>1017-06</b>

## Empty Centrifuge Tubes

- Micro Tubes: For use with the Mini-Centrifuge™

### Centrifuge Tubes

Cat. No.	Description
<b>CNT015</b>	Micro Centrifuge Tube, 1.5mL, 1,000/pk
<b>CNT020</b>	Micro Centrifuge Tube, 2.0mL, 1,000/pk
<b>CNT50</b>	50mL centrifuge tube w/cap, natural, 500/pk
<b>CNT15</b>	15mL centrifuge tube w/cap, natural, 500/pk



# Filtration Instrumentation: Centrifuges and Shakers



Mini-Centrifuge™



Strip-Fuge™

## Centrifuges

- **Mini-Centrifuge™** – Fits 6 tubes (1.5 or 0.5mL)
- **Strip-Fuge™** – Fits 2 strips of PCR tubes

### Small

At only 6" x 6" and 1.5lb., these centrifuges can easily squeeze onto a crowded countertop.

### Safe and Simple

Turn the centrifuge on and off without opening the lid using an independent switch. A pop-open latch system and transparent lid allows you to monitor the sample while it spins. The polished ABS finish quickly wipes clean. Internal mini-transformer eliminates cumbersome adapters.

### Quiet

The low-durometer footgrip and fiberglass-reinforced carbonate rotor assure sure-footed, noise-free operation.

### Mini-Centrifuge™

Our Mini-Centrifuge™ offers a 6-tube, fixed angle rotor and requires no unlocking, no releasing. Simply pop the tubes in and out. The Mini-Centrifuge™ can use either the CNT015 or the CNT020 micro-centrifuge tubes. The included adapters quickly accommodate 0.5mL tubes.

### Strip-Fuge™

Our Strip-Fuge™ features the revolutionary design ... the BUTTERFLY Rotor.™ Now you can conveniently spin 2 strips of PCR tubes!

#### Specifications:

<b>Operating temp:</b>	Ambient
<b>Weight:</b>	494g
<b>Dimensions:</b>	120mm (H) x 130mm (W) x 137mm (D)
<b>Electrical:</b>	110V – 50/60 Hz, 220V – 50/60 Hz
<b>RPM:</b>	6,000/RCF 2,000g
<b>Capacity:</b>	6 x 1.5mL (Mini) 2 x 8 x 0.2mL (Strip)

Cat. No.	Description
CL-1000	Mini-Centrifuge
CL-1001	Strip-Fuge



## Orbis Plus Microplate and Tube Shakers

The Orbis shaker is a compact choice of microplate shaker for any test environment. With a footprint, marginally larger than that of the microplate it shakes, the Orbis offers the most economical and advanced solution for your shaking applications, as well as being competitively priced. The counterbalanced orbital movement guarantees a stable, quiet and long life operation. The Orbis shaker can be operated as a stand alone unit or alternatively, be easily integrated into a robotic system, with a remote on/off control.

- Minimal footprint
- All styles of microplate accommodated
- Momentary shaking action
- No maintenance required
- Brushless DC motor for quiet and reliable long life operation
- Variable speed control
- Timer function (Orbis Plus only)
- Low voltage supply for added safety
- Ideal for field applications
- Washable, anti-slip mat

### Microtube Shakers

Both Orbis shakers can operate as microtube shakers when used with an accessory tube platform. This 131 x 90mm platform accommodates 40 tubes with diameters 10.5 to 12.7mm.

- Easy tube location
- Most styles of tube accommodated

#### Specifications:

<b>Shaking orbit:</b>	1mm radius (both models)
<b>Capacity:</b>	1x96 well microplate (both models)
<b>Shaking speed range:</b>	rpm 950 to 1300 (both models)
<b>Timer function:</b>	1 to 180 mins and continuous (Plus model only)
<b>Dimensions:</b>	93mm x 133mm x 72mm* (W x H x D)
<b>Electrical:</b>	230V 50/60Hz/110V 50Hz (both models)
<b>Power consumption:</b>	65mA (both models)
<b>Power supply:</b>	15V 100mA DC (both models)
<b>Env. operating temp.:</b>	+10° C to 40° C (both models)
<b>Env. storage temp.:</b>	4° C to 40° C (both models)
<b>Case material:</b>	ABS (both models)
<b>Weight:</b>	715 grams (both models)

\*height without lid

Cat. No.	Description
700-237	Orbis Plus microplate shaker with timer, supplied with clear lid
700-241	Platform for Orbis microplate shaker, holds 5x8 microtubes
700-236	Clear lid for Orbis shaker
700-235	Orbis microplate shaker (no timer, no lid)

# Chrom Tech Syringe Filters - Membrane Selection Guide

Membrane Type	Application
<b>RC</b>	Regenerated Cellulose (RC) is a hydrophilic, solvent resistant, low protein binding membrane. Ideal for removing particulates from HPLC samples prior to injection. Compatible with all HPLC solvents. Use for particle removal and degassing of solvents. RC membranes are also compatible with aqueous solutions in the 3 to 12 pH range. Extractables with water are less than 1%. RC membranes exhibit low, non-specific adsorption – good for biological sample filtration where maximum protein recovery is important. When used with a glass prefilter, RC is ideal for tissue culture media filtration, as well as general biological sample filtration.
<b>Nylon</b>	Commonly used for general laboratory filtration and filtration of HPLC samples prior to injection. Nylon is solvent resistant and exhibits low extractables. Nylon binds protein and should not be used when protein recovery is important.
<b>PTFE</b>	PTFE (polytetrafluoroethylene) is a hydrophobic and chemically resistant to all solvents, acids and bases. Does not impart extractables to the filtrate. PTFE blocks water vapor, making it ideal for transducer protectors. Also ideal for filtering and degassing chromatography solvents.
<b>PVDF</b>	PVDF (polyvinylidene difluoride) is a hydrophilic, solvent resistant membrane that exhibits low levels of UV adsorbing extractables. Use for HPLC sample filtration and general biological filtration. PVDF is a low protein binding membrane.
<b>Polypropylene</b>	Polypropylene is a hydrophobic membrane that exhibits a wide range of chemical compatibility to organic solvents. A good choice for HPLC sample filtration when performing chromatography protein analysis. Highly solvent resistant. Low non-specific adsorbing membrane for maximum protein recovery in critical analysis. Also well suited for biological sample filtration.
<b>Glass Microfiber</b>	Glass Microfiber membranes are commonly used as pre-filters to remove large particulates and extend the load capacity of the membrane.
<b>Cellulose Acetate</b>	Cellulose Acetate is a very low protein binding membrane, ideal for aqueous based samples. CA membranes are an excellent choice when maximum protein recovery in filtrate is critical. Laboratory studies show the CA membranes bind less protein than PVDF. When used with a glass pre-filter, CA is ideal for tissue culture media filtration and sensitive biological samples. The pre-filter increases yield.
<b>PES</b>	PES (Polyethersulfone) is the filter of choice for tissue culture work. It has very low extractables. Low binding of protein and nucleic acids. It has relatively broad chemical resistance except to aggressive solvents and it has good to excellent flow rates.

## Chemical Compatibility Chart for Syringe Filters

Sample Preparation

	NYL	PTFE	PVDF	PP	REG CELL	PES	CA
<b>ACIDS</b>							
Acetic, Glacial	L	C	C	C	C	N	N
Acetic, 25%	C	C	C	C	C	C	C
Formic, 25%	N	C	C	C	C	-	L
Hydrochloric, 25%	N	C	C	C	N	C	N
Nitric, 25%	N	C	C	C	N	-	N
Phosphoric, 25%	N	C	C	C	L	-	C
Sulfuric, 25%	N	C	C	C	N	-	N
Trichloroacetic, 10%	N	C	-	-	C	-	C
<b>ALKALIES</b>							
Ammonium Hydroxide, 25%	C	C	C	C	L	C	C
Sodium Hydroxide 3 Normal	C	C	C	C	L	-	N
<b>ALCOHOLS</b>							
Amyl Alcohol, Butanol	C	C	L	C	C	L	C
Benzyl Alcohol	C	C	C	C	C	N	L
Ethanol, 70%	L	C	C	C	C	C	C
Ethanol, 98%	C	C	C	C	C	C	C
Ethylene Glycol	C	C	C	C	C	C	C
Glycerol	C	C	C	C	C	C	C
Isopropal, n-Propanol	C	C	C	C	C	C	C
Methanol, 98%	C	C	C	C	C	C	C
Propylene Glycol	C	C	C	C	C	C	L
<b>HYDROCARBONS</b>							
Hexane	C	C	C	N	C	L	C
Xylene	C	C	C	N	C	C	C
Toluene, Benzene	C	C	C	N	C	S	C
<b>HALOGENATED HYDROCARBONS</b>							
Carbon Tetrachloride	C	C	C	L	C	C	L
Chloroform	C	C	C	L	C	N	N
Methylene Chloride	L	C	C	L	C	N	N
Monochlorobenzene, Freon	C	C	C	C	C	-	C
Trichloroethylene	C	C	C	C	C	N	C

	NYL	PTFE	PVDF	PP	REG CELL	PES	CA
<b>KEYTONES</b>							
Acetone, Cyclohexanone	C	C	C	C	C	N	N
Methy Ethyl Ketone	C	C	L	L	C	N	L
Methyl Isobutyl Ketone	-	C	N	L	C	-	-
<b>ESTERS</b>							
Amyl Acetate	C	C	L	L	C	-	L
Butyl Acetate	C	C	L	L	C	-	L
Ethyl acetate, Methyl acetate	C	C	L	L	C	N	N
Propyl Acetate	C	C	L	L	C	-	L
<b>OXIDES – ETHERS</b>							
Dimethylsulfoxide (DMSO)	-	E	N	C	C	N	N
Dioxane and Tetrahydrofuran	C	E	N	C	C	-	N
Ethyl Ether	C	E	C	L	C	C	C
<b>SOLVENTS WITH NITROGEN (AMIDES)</b>							
Acetonitrile	C	E	L	C	C	L	N
Aniline	-	-	N	-	C	-	N
Diethylacetamide	C	-	N	-	C	-	N
Dimethyl Formamide	L	N	N	C	L	-	N
Pyridine	C	L	S	N	C	L	N
<b>MISCELLANEOUS</b>							
Formaldehyde Solution, 30%	C	C	C	C	L	C	L
Hydrogen Peroxide, 30%	N	C	C	C	C	C	C
Phenol, Aqueous, 10%	N	C	L	C	N	N	N

N = Not Compatible

C = Compatible

L = Limited Compatibility. May be okay for small volumes and/or short term contact.

# Chrom Tech Syringe Filters



## 30mm Syringe Filters

- Non-Sterile, Polypropylene housing

Membrane	Pore Size	Cat. No.
<b>Nylon</b>	0.45µm	F30-1045
	0.2µm	F30-1020
	1.2µm	F30-1120
	5.0µm	F30-1500
<b>PTFE</b>	0.45µm	F30-2045
	0.2µm	F30-2020
	1.0µm	F30-2100
	5.0µm	F30-2500
<b>PVDF</b>	0.45µm	F30-5045
	0.2µm	F30-5020
<b>Polypropylene</b>	0.45µm	F30-3045
	0.2µm	F30-3020
<b>Cellulose Acetate</b>	0.45µm	F30-4045
	0.2µm	F30-4020
<b>PES</b>	0.45µm	F30-6045
	0.2µm	F30-6020
<b>RC</b>	0.45µm	F30-7045
	0.2µm	F30-7020
<b>GMF</b>	0.7µm	F30-8070
	1.2µm	F30-8120
	3.1µm	F30-8310

### Syringe Filters with Glass PRE-FILTERS

<b>Nylon</b>	0.45µm	FP30-1045
	0.2µm	FP30-1020
<b>PTFE</b>	0.45µm	FP30-2045
<b>Polypropylene</b>	0.45µm	FP30-3045
<b>Cellulose Acetate</b>	0.45µm	FP30-4045
	0.2µm	FP30-4020



## 4mm Syringe Filters

- Non-Sterile, Polypropylene housing

Membrane	Pore Size	Cat. No.
<b>Nylon</b>	0.45µm	F04-1045
	0.2µm	F04-1020
<b>PTFE</b>	0.45µm	F04-2045
	0.2µm	F04-2020
<b>PVDF</b>	0.45µm	F04-5045
	0.2µm	F04-5020
<b>Polypropylene</b>	0.45µm	F04-3045
	0.2µm	F04-3020
<b>Cellulose Acetate</b>	0.45µm	F04-4045
	0.2µm	F04-4020
<b>RC</b>	0.45µm	F04-7045
	0.2µm	F04-7020

## 17mm Syringe Filters

- Non-Sterile, Polypropylene housing

Membrane	Pore Size	Cat. No.
<b>Nylon</b>	0.45 µm	F17-1045
	0.2µm	F17-1020
<b>PTFE</b>	0.45µm	F17-2045
	0.2µm	F17-2020
<b>PVDF</b>	0.45µm	F17-5045
	0.2µm	F17-5020
<b>Polypropylene</b>	0.45µm	F17-3045
	0.2µm	F17-3020
<b>Cellulose Acetate</b>	0.45µm	F17-4045
	0.2µm	F17-4020
<b>PES</b>	0.45µm	F17-6045
	0.2µm	F17-6020
<b>RC</b>	0.45µm	F17-7045
	0.2µm	F17-7020



## 25mm Sterile Syringe Filters

- Sterile: Gamma irradiation
- Individually blister packed
- Acrylic housing

Membrane	Pore Size	Cat. No.
<b>Nylon</b>	0.45µm	SF25-1045
	0.22µm	SF25-1020
	1.2µm	SF25-1120
<b>Cellulose Acetate</b>	0.45µm	SF25-4045
	0.22µm	SF25-4020
<b>PES</b>	0.45µm	SF25-6045
	0.22µm	SF25-6020
<b>GMF</b>	1.0µm	SF25-8120
<b>Syringe Filters with Glass PRE-FILTERS</b>		
<b>Cellulose Acetate</b>	0.45µm	SFP25-4045
	0.22µm	SFP25-4020
<b>PES</b>	0.45µm	SFP25-6045
	0.22µm	SFP25-6020

# Chrom Tech Membrane Filters



- Nylon
- PTFE
- Regenerated Cellulose
- Cellulose Acetate

Membrane	Pore Size	13mm, 100/pk Cat. No.	25mm, 100/pk Cat. No.	47mm, 100/pk Cat. No.	90mm, 25/pk Cat. No.	142mm, 25/pk Cat. No.
Nylon	0.2µm	CT-910	CT-920	CT-930	CT-290	CT-2142
Nylon	0.45µm	CT-940	CT-950	CT-960	CT-590	CT-5142
PTFE	0.2µm	PT2013	PT2025	PT2047	PT2090	PT2142
PTFE	0.45µm	PT5013	PT5025	PT5047	PT5090	PT5142
RC	0.2µm	RC2013	RC2025	RC2047	RC2090	RC2142
RC	0.45µm	RC5013	RC5025	RC5047	RC5090	RC5142
Cellulose Acetate	0.2µm	CA2013	CA2025	CA2047	CA2090	CA2142
Cellulose Acetate	0.45µm	CA5013	CA5025	CA5047	CA5090	CA5142

## Membrane Type Application

**Nylon** Commonly used for general laboratory filtration and filtration of HPLC samples prior to injection. Nylon is solvent resistant and exhibits low extractables. Nylon binds protein and should not be used when protein recovery is important.

**PTFE** PTFE (polytetrafluoroethylene) is a hydrophobic and chemically resistant to all solvents, acids and bases. Does not impart extractables to the filtrate. PTFE blocks water vapor, making it ideal for transducer protectors. Also ideal for filtering and degassing chromatography solvents.

**RC** Regenerated Cellulose (RC) is a hydrophilic, solvent resistant, low protein binding membrane. Ideal for removing particulates from HPLC samples prior to injection. Compatible with all HPLC solvents. Use for particle removal and degassing of solvents. RC membranes are also compatible with aqueous solutions in the 3 to 12 pH range. Extractables with water are less than 1%. RC membranes exhibit low, non-specific adsorption – good for biological sample filtration where maximum protein recovery is important. When used with a glass prefilter, RC is ideal for tissue culture media filtration, as well as general biological sample filtration.

**Cellulose Acetate** Cellulose Acetate is a very low protein binding membrane, ideal for aqueous based samples. CA membranes are an excellent choice when maximum protein recovery in filtrate is critical. Laboratory studies show the CA membranes bind less protein than PVDF. When used with a glass pre-filter, CA is ideal for tissue culture media filtration and sensitive biological samples. The pre-filter increases yield.

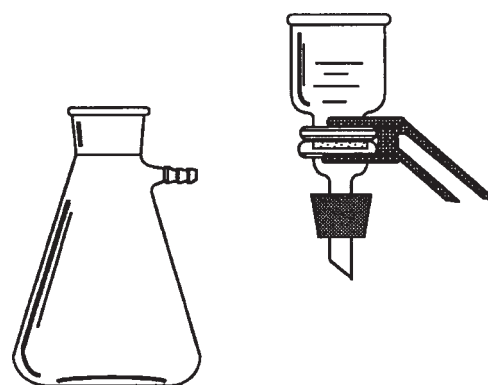
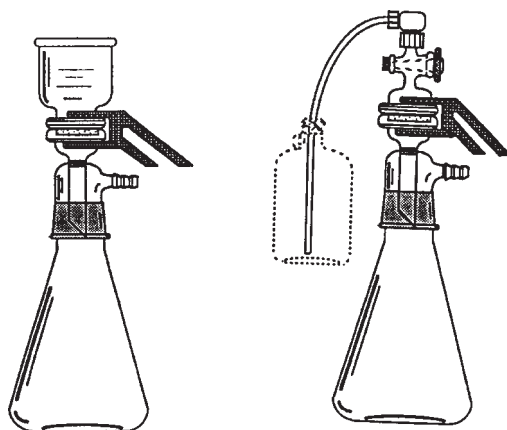
## Stainless Steel Membrane Holders



Use this reusable syringe filter housing with disposable filter membranes to filter samples or small quantities of mobile phases. The stainless steel filter housing holds your choice of membrane. The outlet accepts any standard luer-hub needle.

Cat. No.	Description
FH1300	13mm Filter holder, Stainless Steel
FH2500	25mm Filter holder, Stainless Steel

## Solvent Filtration Apparatus



### All Glass Filtration Apparatus

- All glass filtration apparatus
- Ideal for HPLC solvent clean-up

Liquids come in contact only with borosilicate glass. Base design has integral vacuum connection located above filtrate drip to prevent contamination of vacuum line with droplets.

Units consist of a funnel, coarse porosity fritted glass filter support base with integral vacuum connection and a flask with inner joint. An aluminum clamp connects funnel and support base, joints are 40/35. All components are compatible with Millipore and Kontes all glass filter apparatus.

#### Complete Filtration Apparatus

Cat. No.	Description
F-41064	All-Glass filter apparatus, 47mm, 300mL funnel and 1 liter flask
F-41065	All-Glass filter apparatus, 47mm, 500mL funnel and 2 liter flask
F-41066	All-Glass filter apparatus, 47mm, 1 liter funnel and 4 liter flask

#### Complete with Solvent Pickup Adapter

F-41084	Filter apparatus, 47mm, 1 liter flask, solvent pickup adapter
F-41085	Filter apparatus, 47mm, 2 liter flask, solvent pickup adapter
F-41086	Filter apparatus, 47mm, 4 liter flask, solvent pickup adapter

#### Components

F-226600	Solvent pickup adapter
F-410048	Glass funnel, 300mL
F-410056	Glass funnel, 500mL
F-410666	Glass funnel, 1,000mL
F-410642	Fritted glass support base, 40/35
F-410644	Flask, 1 liter, 40/35
F-410654	Flask, 2 liter, 40/35
F-410664	Flask, 4 liter, 40/35
F-410052	Aluminum clamp, 47mm

### Filtration Assembly

#### Filtration Apparatus

Cat. No.	Description
F-410047	Filter apparatus, 47mm, 300mL funnel
F-410404	Flask, 1 liter, #8 Stopper joint

#### Replacement Components of F-410047

F-410048	Glass funnel, 300mL
F-410050	Support base
F-410052	Aluminum clamp, 47mm



### Nylon-66 Membrane Filters

- Resistant to all common LC solvents
- Filters organics or aqueous

Protect your HPLC columns and solvent delivery system by filtering your mobile phase solvents and samples with Chrom Tech Nylon-66 membrane filters. The filters are compatible with all commonly used HPLC solvents. Furthermore, they are tough, easy to handle, and inexpensive. Available in 0.45 and 0.2 $\mu$ m pore size with diameters of 13 and 25mm for sample filtration and 47mm for solvent or mobile phase filtration.

Cat. No.	Description	Qty.
CT-910	100 Nylon-66, 13mm, 0.2 $\mu$ m	100
CT-920	100 Nylon-66, 25mm, 0.2 $\mu$ m	100
CT-930	100 Nylon-66, 47mm, 0.2 $\mu$ m	100
CT-940	100 Nylon-66, 13mm, 0.45 $\mu$ m	100
CT-950	100 Nylon-66, 25mm, 0.45 $\mu$ m	100
CT-960	100 Nylon-66, 47mm, 0.45 $\mu$ m	100