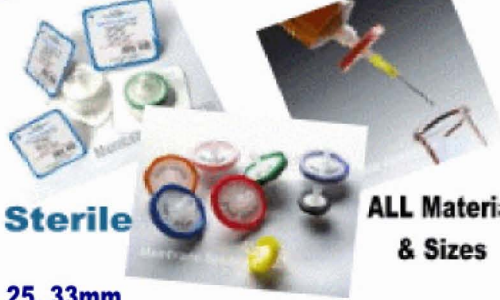


Filtration Equipment

**Solid Phase
Extraction
SPE Tubes**

Syringe Filters



Sterile

**ALL Material
& Sizes**

13, 25, 33mm
New multi-Layer

Nylon, PES, PVDF, PTFE
0.22, 0.45micron



Vacuum Filters



AutoSampler Vials

2ml Crimp & Screw
Headspace Vials

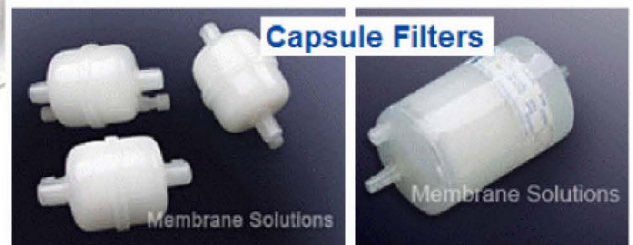


Vac-U-Fill Disposable Plastic Filtration



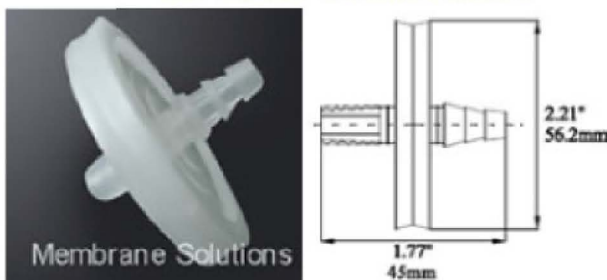
Re-usable SyringeFilter Holders

Syringeless Filter Devices



Capsule Filters

In-Line 50mm Filters



Cartridge Filters

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Lab Filtration

MEMBRANE SOLUTIONS, LLC

Catalog

	Syringe Filter	Page 01
	Membrane Filter	Page 09
	Vaccum Filter	Page 21
	Lab Instrument	Page 27
	Special Paper	Page 39
	Chromatography Accessories	Page 51
	Chemical Compatibility Chart	Page 61

Catalog

2009 Catalog



Syringe Filter

MS® Syringe Filters are simply quality filters, well packaged, and offered at a fair and competitive price. The Classic range is available in all of the major membranes including Nylon, CA, PP, Glass Fiber, PTFE, PES, MCE and PVDF which are supplied in 13mm, 25mm and 33mm formats in virgin polypropylene housings.



Cat. No.	Filter Medium	Pore Size(μm)	Diameter (mm)	Gamma Sterile	Qty/ pack
Sterile Syringe Filter With Prefilter					
SFPES013022SG	PES / GF Prefilter	0.22	13	Yes	100
SFPES013045SG	PES / GF Prefilter	0.45	13	Yes	100
SFPES025022SG	PES / GF Prefilter	0.22	25	Yes	100
SFPES025045SG	PES / GF Prefilter	0.45	25	Yes	100
SFPVDF013022SG	PVDF/ GF Prefilter	0.22	13	Yes	100
SFPVDF013045SG	PVDF/ GF Prefilter	0.45	13	Yes	100
SFPVDF025022SG	PVDF/ GF Prefilter	0.22	25	Yes	100
SFPVDF025045SG	PVDF/ GF Prefilter	0.45	25	Yes	100
SFNY013022SG	Nylon/ GF Prefilter	0.22	13	Yes	100
SFNY013045SG	Nylon/ GF Prefilter	0.45	13	Yes	100
SFNY025022SG	Nylon/ GF Prefilter	0.22	25	Yes	100
SFNY025045SG	Nylon/ GF Prefilter	0.45	25	Yes	100

MS® Nylon Syringe Filter (Polyamide)

- Hydrophilic property
- No need to moist beforehand
- Uniform aperture
- Strong tenacity and adsorbability
- Compatible with aqueous and alcoholic solutions and solvents
- Suitable for HPLC



Cat. No.	Filter Medium	Pore Size(μm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFNY013022N	Nylon	0.22	13	No	100
SFNY013045N	Nylon	0.45	13	No	100
SFNY025022N	Nylon	0.22	25	No	100
SFNY025045N	Nylon	0.45	25	No	100
SFNY033022N	Nylon	0.22	33	No	100
SFNY033045N	Nylon	0.45	33	No	100

■ **Note:** Membrane Solutions offer Customized Pore Sizes: 0.1μm, 0.8μm, 1.0μm, 3.0μm, 5.0μm

MS® MCE Syringe Filter (Mixed Cellulose Ester)

- Uniform aperture
- No fiber migration
- Naturally hydrophilic



Cat. No.	Filter Medium	Pore Size(μm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFMCE013022N	MCE	0.22	13	No	100
SFMCE013045N	MCE	0.45	13	No	100
SFMCE025022N	MCE	0.22	25	No	100
SFMCE025045N	MCE	0.45	25	No	100
SFMCE033022N	MCE	0.22	33	No	100
SFMCE033045N	MCE	0.45	33	No	100

■ **Note:** Membrane Solutions offer Customized Pore Sizes: 0.8μm, 1.0μm, 3.0μm, 5.0μm

MS® Sterile Syringe Filters

- MS® Sterile Syringe Filters are available with Polyethersulphone (PES), Polyesteramide(Nylon), Mixed Cellulose Ester(MCE), Polyfluortetraethylene(PTFE), Polyvinylidene fluoride(PVDF). Each filter is individually packed and sterilized by Gama Radiation. Every Syringe Filter is printed with expiry date for easy QC tracking.



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
Sterile Nylon Syringe Filter					
SFNY013022S	Nylon	0.22	13	Yes	100
SFNY013045S	Nylon	0.45	13	Yes	100
SFNY025022S	Nylon	0.22	25	Yes	100
SFNY025045S	Nylon	0.45	25	Yes	100
SFNY033022S	Nylon	0.22	33	Yes	100
SFNY033045S	Nylon	0.45	33	Yes	100
Sterile MCE Syringe Filter					
SFMCE013022S	MCE	0.22	13	Yes	100
SFMCE013045S	MCE	0.45	13	Yes	100
SFMCE025022S	MCE	0.22	25	Yes	100
SFMCE025045S	MCE	0.45	25	Yes	100
SFMCE033022S	MCE	0.22	33	Yes	100
SFMCE033045S	MCE	0.45	33	Yes	100
Sterile CA Syringe Filter					
SFCA013022S	CA	0.22	13	Yes	100
SFCA013045S	CA	0.45	13	Yes	100
SFCA025022S	CA	0.22	25	Yes	100
SFCA025045S	CA	0.45	25	Yes	100
SFCA033022S	CA	0.22	33	Yes	100
SFCA033045S	CA	0.45	33	Yes	100
Sterile PES Syringe Filter					
SFPES013022S	PES	0.22	13	Yes	100
SFPES013045S	PES	0.45	13	Yes	100
SFPES025022S	PES	0.22	25	Yes	100
SFPES025045S	PES	0.45	25	Yes	100
SFPES033022S	PES	0.22	33	Yes	100
SFPES033045S	PES	0.45	33	Yes	100
Sterile PVDF Syringe Filter					
SFPVDF013022S	PVDF	0.22	13	Yes	100
SFPVDF013045S	PVDF	0.45	13	Yes	100
SFPVDF025022S	PVDF	0.22	25	Yes	100
SFPVDF025045S	PVDF	0.45	25	Yes	100
SFPVDF033022S	PVDF	0.22	33	Yes	100
SFPVDF033045S	PVDF	0.45	33	Yes	100

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MS® PP Syringe Filter (Polypropylene)

- Naturally hydrophilic membrane
- Wide range of chemical compatibility to organic solvents
- Highly solvent resistant



Cat. No.	Filter Medium	Pore Size(μm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFPP013022N	PP	0.22	13	No	100
SFPP013045N	PP	0.45	13	No	100
SFPP025022N	PP	0.22	25	No	100
SFPP025045N	PP	0.45	25	No	100

MS® PTFE Syringe Filter (Polyfluortetraethylene)

- Broad chemical compatibility
- Strong chemical stability and inertia
- Strong hydrophobicity



Note:

Membrane Solutions offer Customized Pore Sizes: 0.1 μm, 1.0 μm, 3.0 μm, 5.0 μm

Cat. No.	Filter Medium	Pore Size(μm)	Diameter (mm)	Gamma Sterile	Qty/ pack
Hydrophobic PTFE Syringe Filter					
SFPTFE013022NB	PTFE	0.22	13	No	100
SFPTFE013045NB	PTFE	0.45	13	No	100
SFPTFE025022NB	PTFE	0.22	25	No	100
SFPTFE025045NB	PTFE	0.45	25	No	100
SFPTFE033022NB	PTFE	0.22	33	No	100
SFPTFE033045NB	PTFE	0.45	33	No	100
Hydrophilic PTFE Syringe Filter					
SFPTFE013022NL	PTFE	0.22	13	No	100
SFPTFE013045NL	PTFE	0.45	13	No	100
SFPTFE025022NL	PTFE	0.22	25	No	100
SFPTFE025045NL	PTFE	0.45	25	No	100
SFPTFE025045SL	PTFE	0.45	25	Yes	100

MS® Glass Fiber Syringe Filter

- Hydrophilic Material Membrane
- Excellent compatibility with organic solvents and strong acids (apart from hydrofluoric acid) and bases.
- High dirt-handling capacity



Cat. No.	Filter Medium	Pore Size(μm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFGF013070N	Glass Fiber	0.7	13	No	100
SFGF013100N	Glass Fiber	1.0	13	No	100
SFGF025070N	Glass Fiber	0.7	25	No	100
SFGF025100N	Glass Fiber	1.0	25	No	100

Lab Filtration

MS® Syringe Filter with Prefilter

- Improve sample volume throughout with prefilter
- High particulate load
- Exceptionally low extractable level with no wetting agents utilized

MS® PTFE Syringe Filter with PP Prefilter



Cat. No.	Filter Medium	Pore Size(µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFPTFE013022NP	PTFE/PP Prefilter	0.22	13	No	100
SFPTFE013045NP	PTFE/PP Prefilter	0.45	13	No	100
SFPTFE025022NP	PTFE/PP Prefilter	0.22	25	No	100
SFPTFE025045NP	PTFE/PP Prefilter	0.45	25	No	100

MS® PES Syringe Filter with PP Prefilter



Cat. No.	Filter Medium	Pore Size(µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFPES013022NP	PES/ PP Prefilter	0.22	13	No	100
SFPES013045NP	PES/ PP Prefilter	0.45	13	No	100
SFPES025022NP	PES/ PP Prefilter	0.22	25	No	100
SFPES025045NP	PES/ PP Prefilter	0.45	25	No	100

MS® PVDF Syringe Filter with PP Prefilter

Cat. No.	Filter Medium	Pore Size(µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFPVDF013022NP	PVDF/PP Prefilter	0.22	13	No	100
SFPVDF013045NP	PVDF/ PP Prefilter	0.45	13	No	100
SFPVDF025022NP	PVDF PP Prefilter	0.22	25	No	100
SFPVDF025045NP	PVDF/ PP Prefilter	0.45	25	No	100

MS® Nylon Syringe Filter with PP Prefilter



Cat. No.	Filter Medium	Pore Size(µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFNY013022NP	Nylon/ PP Prefilter	0.22	13	No	100
SFNY013045NP	Nylon/ PP Prefilter	0.45	13	No	100
SFNY025022NP	Nylon/ PP Prefilter	0.22	25	No	100
SFNY025045NP	Nylon/ PP Prefilter	0.45	25	No	100

MS® PTFE Syringe Filter with Glass Fiber Prefilter



Cat. No.	Filter Medium	Pore Size(µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFPTFE013022NG	PTFE/ GF Prefilter	0.22	13	No	100
SFPTFE013045NG	PTFE/ GF Prefilter	0.45	13	No	100
SFPTFE025022NG	PTFE/ GF Prefilter	0.22	25	No	100
SFPTFE025045NG	PTFE/ GF Prefilter	0.45	25	No	100

MS® PES Syringe Filter with Glass Fiber Prefilter

Cat. No.	Filter Medium	Pore Size(µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFPES013022NG	PES/ GF Prefilter	0.22	13	No	100
SFPES013045NG	PES / GF Prefilter	0.45	13	No	100
SFPES025022NG	PES / GF Prefilter	0.22	25	No	100
SFPES025045NG	PES / GF Prefilter	0.45	25	No	100

MS® PVDF Syringe Filter with Glass Fiber Prefilter

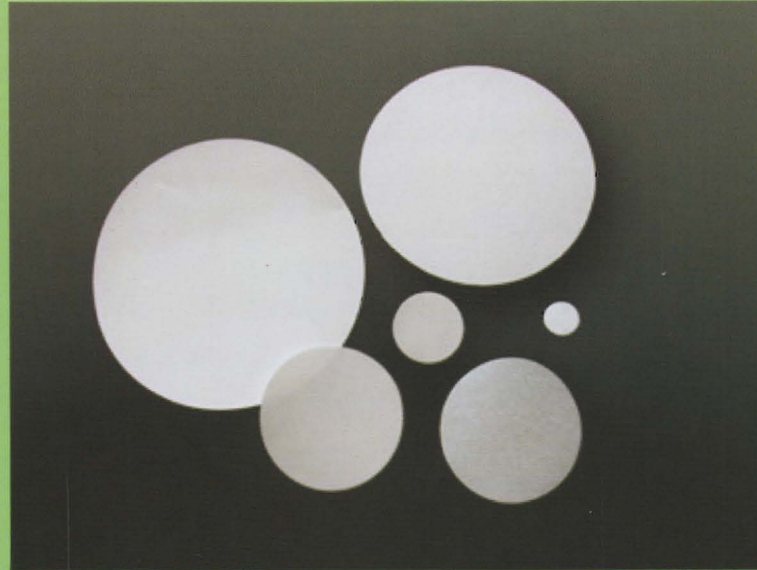


Cat. No.	Filter Medium	Pore Size(µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFPVDF013022NG	PVDF/ GF Prefilter	0.22	13	No	100
SFPVDF013045NG	PVDF/ GF Prefilter	0.45	13	No	100
SFPVDF025022NG	PVDF/ GF Prefilter	0.22	25	No	100
SFPVDF025045NG	PVDF/ GF Prefilter	0.45	25	No	100

MS® Nylon Syringe Filter with Glass Fiber Prefilter

Cat. No.	Filter Medium	Pore Size(µm)	Diameter (mm)	Gamma Sterile	Qty/ pack
SFNYY013022NG	Nylon/ GF Prefilter	0.22	13	No	100
SFNYY013045NG	Nylon/ GF Prefilter	0.45	13	No	100
SFNYY025022NG	Nylon/ GF Prefilter	0.22	25	No	100
SFNYY025045NG	Nylon/ GF Prefilter	0.45	25	No	100

2009 Catalog



Membrane Filter

Membrane filters or "membranes" are microporous films with specific pore size ratings. Membranes retain particles and microorganisms that exceed their pore ratings by acting as a physical barrier and capturing such particles on the surface of the membrane.

Membrane Solutions offers membrane filters in diameters from 13mm to 293mm and materials including PES , MCE, Nylon, PVDF , PTFE and Glass Fiber.

Lab Filtration



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFMCE013045	MCE	0.45	13	200
MFMCE025045	MCE	0.45	25	100
MFMCE037045	MCE	0.45	37	50
MFMCE047045	MCE	0.45	47	50
MFMCE090045	MCE	0.45	90	25
MFMCE142045	MCE	0.45	142	25
MFMCE293045	MCE	0.45	293	25
MFMCE013080	MCE	0.8	13	200
MFMCE025080	MCE	0.8	25	100
MFMCE037080	MCE	0.8	37	50
MFMCE047080	MCE	0.8	47	50
MFMCE090080	MCE	0.8	90	25
MFMCE142080	MCE	0.8	142	25
MFMCE293080	MCE	0.8	293	25
MFMCE013100	MCE	1.0	13	200
MFMCE025100	MCE	1.0	25	100
MFMCE037100	MCE	1.0	37	50
MFMCE047100	MCE	1.0	47	50
MFMCE090100	MCE	1.0	90	25
MFMCE142100	MCE	1.0	142	25
MFMCE293100	MCE	1.0	293	25
MFMCE013300	MCE	3.0	13	200
MFMCE025300	MCE	3.0	25	100
MFMCE037300	MCE	3.0	37	50
MFMCE047300	MCE	3.0	47	50
MFMCE090300	MCE	3.0	90	25
MFMCE142300	MCE	3.0	142	25
MFMCE293300	MCE	3.0	293	25
MFMCE013500	MCE	5.0	13	200
MFMCE025500	MCE	5.0	25	100
MFMCE037500	MCE	5.0	37	50
MFMCE047500	MCE	5.0	47	50
MFMCE090500	MCE	5.0	90	25
MFMCE142500	MCE	5.0	142	25
MFMCE293500	MCE	5.0	293	25

Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFNY037300	Nylon	3.0	37	100
MFNY047300	Nylon	3.0	47	50
MFNY090300	Nylon	3.0	90	25
MFNY142300	Nylon	3.0	142	25
MFNY293300	Nylon	3.0	293	25
MFNY013500	Nylon	5.0	13	200
MFNY025500	Nylon	5.0	25	100
MFNY037500	Nylon	5.0	37	100
MFNY047500	Nylon	5.0	47	50
MFNY090500	Nylon	5.0	90	25
MFNY142500	Nylon	5.0	142	25
MFNY293500	Nylon	5.0	293	25

MS® PTFE Membrane Filter

- PTFE membrane with supporting layer polyester or polypropylene
- Suitable for applications involving aggressive organic solvents, strong acids, and alkalis
- Hydrophobic nature of the membrane has applications for air and gas sterilization
- High temperature resistance



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFPTFE013010B	Hydrophobic PTFE	0.1	13	200
MFPTFE025010B	Hydrophobic PTFE	0.1	25	100
MFPTFE037010B	Hydrophobic PTFE	0.1	37	100
MFPTFE047010B	Hydrophobic PTFE	0.1	47	50
MFPTFE090010B	Hydrophobic PTFE	0.1	90	25
MFPTFE142010B	Hydrophobic PTFE	0.1	142	25
MFPTFE293010B	Hydrophobic PTFE	0.1	293	25
MFPTFE013022B	Hydrophobic PTFE	0.22	13	200
MFPTFE025022B	Hydrophobic PTFE	0.22	25	100
MFPTFE037022B	Hydrophobic PTFE	0.22	37	100
MFPTFE047022B	Hydrophobic PTFE	0.22	47	50
MFPTFE090022B	Hydrophobic PTFE	0.22	90	25
MFPTFE142022B	Hydrophobic PTFE	0.22	142	25
MFPTFE293022B	Hydrophobic PTFE	0.22	293	25
MFPTFE013045B	Hydrophobic PTFE	0.45	13	200
MFPTFE025045B	Hydrophobic PTFE	0.45	25	100
MFPTFE037045B	Hydrophobic PTFE	0.45	37	100
MFPTFE047045B	Hydrophobic PTFE	0.45	47	50
MFPTFE090045B	Hydrophobic PTFE	0.45	90	25
MFPTFE142045B	Hydrophobic PTFE	0.45	142	25
MFPTFE293045B	Hydrophobic PTFE	0.45	293	25
MFPTFE013100B	Hydrophobic PTFE	1.0	13	200
MFPTFE025100B	Hydrophobic PTFE	1.0	25	100



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFPTFE037100B	Hydrophobic PTFE	1.0	37	100
MFPTFE047100B	Hydrophobic PTFE	1.0	47	50
MFPTFE090100B	Hydrophobic PTFE	1.0	90	25
MFPTFE142100B	Hydrophobic PTFE	1.0	142	25
MFPTFE293100B	Hydrophobic PTFE	1.0	293	25
MFPTFE013300B	Hydrophobic PTFE	3.0	13	200
MFPTFE025300B	Hydrophobic PTFE	3.0	25	100
MFPTFE037300B	Hydrophobic PTFE	3.0	37	100
MFPTFE047300B	Hydrophobic PTFE	3.0	47	50
MFPTFE090300B	Hydrophobic PTFE	3.0	90	25
MFPTFE142300B	Hydrophobic PTFE	3.0	142	25
MFPTFE293300B	Hydrophobic PTFE	3.0	293	25
MFPTFE013500B	Hydrophobic PTFE	5.0	13	200
MFPTFE025500B	Hydrophobic PTFE	5.0	25	100
MFPTFE037500B	Hydrophobic PTFE	5.0	37	100
MFPTFE047500B	Hydrophobic PTFE	5.0	47	50
MFPTFE090500B	Hydrophobic PTFE	5.0	90	25
MFPTFE142500B	Hydrophobic PTFE	5.0	142	25
MFPTFE293500B	Hydrophobic PTFE	5.0	293	25

MS® PES Membrane Filter

- Inherently hydrophilic
- Low protein binding
- Good chemical compatibility
- Superior thermo stability



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFPE013005	PES	0.05	13	200
MFPE025005	PES	0.05	25	100
MFPE037005	PES	0.05	37	100
MFPE047005	PES	0.05	47	50
MFPE090005	PES	0.05	90	25
MFPE142005	PES	0.05	142	25
MFPE013010	PES	0.1	13	200
MFPE025010	PES	0.1	25	100
MFPE037010	PES	0.1	37	100
MFPE047010	PES	0.1	47	50
MFPE090010	PES	0.1	90	25
MFPE142010	PES	0.1	142	25



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFPES013022	PES	0.22	13	200
MFPES025022	PES	0.22	25	100
MFPES037022	PES	0.22	37	100
MFPES047022	PES	0.22	47	50
MFPES090022	PES	0.22	90	25
MFPES142022	PES	0.22	142	25
MFPES013045	PES	0.45	13	200
MFPES025045	PES	0.45	25	100
MFPES037045	PES	0.45	37	100
MFPES047045	PES	0.45	47	50
MFPES090045	PES	0.45	90	25
MFPES142045	PES	0.45	142	25
MFPES013065	PES	0.45	13	200
MFPES025065	PES	0.65	25	100
MFPES037065	PES	0.65	37	100
MFPES047065	PES	0.65	47	50
MFPES090065	PES	0.65	90	25
MFPES142065	PES	0.65	142	25
MFPES013100	PES	0.65	13	200
MFPES025100	PES	1.0	25	100
MFPES037100	PES	1.0	37	100
MFPES047100	PES	1.0	47	50
MFPES090100	PES	1.0	90	25
MFPES142100	PES	1.0	142	25

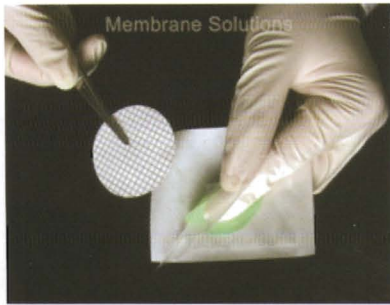
MS® MCE Membrane Filter

- A mixture of nitrocellulose and cellulose acetate
- Naturally hydrophilic
- Available in both supported or non-supported
- High porosity provides superior flow rates
- Ideal for use in lateral flow assays and dot/slot blotting



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFMCE013022	MCE	0.22	13	200
MFMCE025022	MCE	0.22	25	100
MFMCE037022	MCE	0.22	37	50
MFMCE047022	MCE	0.22	47	50
MFMCE090022	MCE	0.22	90	25
MFMCE142022	MCE	0.22	142	25
MFMCE293022	MCE	0.22	293	25

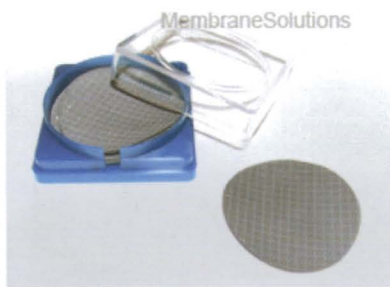
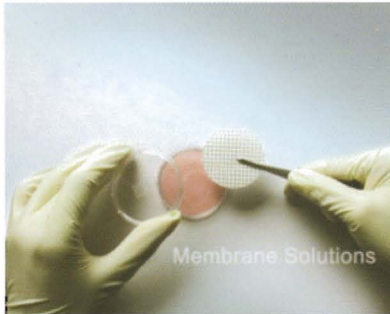
Lab Filtration



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFMC013045	MCE	0.45	13	200
MFMC025045	MCE	0.45	25	100
MFMC037045	MCE	0.45	37	50
MFMC047045	MCE	0.45	47	50
MFMC090045	MCE	0.45	90	25
MFMC142045	MCE	0.45	142	25
MFMC293045	MCE	0.45	293	25
MFMC013080	MCE	0.8	13	200
MFMC025080	MCE	0.8	25	100
MFMC037080	MCE	0.8	37	50
MFMC047080	MCE	0.8	47	50
MFMC090080	MCE	0.8	90	25
MFMC142080	MCE	0.8	142	25
MFMC293080	MCE	0.8	293	25
MFMC013100	MCE	1.0	13	200
MFMC025100	MCE	1.0	25	100
MFMC037100	MCE	1.0	37	50
MFMC047100	MCE	1.0	47	50
MFMC090100	MCE	1.0	90	25
MFMC142100	MCE	1.0	142	25
MFMC293100	MCE	1.0	293	25
MFMC013300	MCE	3.0	13	200
MFMC025300	MCE	3.0	25	100
MFMC037300	MCE	3.0	37	50
MFMC047300	MCE	3.0	47	50
MFMC090300	MCE	3.0	90	25
MFMC142300	MCE	3.0	142	25
MFMC293300	MCE	3.0	293	25
MFMC013500	MCE	5.0	13	200
MFMC025500	MCE	5.0	25	100
MFMC037500	MCE	5.0	37	50
MFMC047500	MCE	5.0	47	50
MFMC090500	MCE	5.0	90	25
MFMC142500	MCE	5.0	142	25
MFMC293500	MCE	5.0	293	25

MS® Microbiology Test Membrane Filter(MCE)

- Available in white and black
- Gridded or non-gridded
- Individual pack, pre-sterilized
- Standard for microbiological analysis of water, waste water, and beverages.



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MCE Membrane Filter, White, Gridded, Sterile, Individually packed				
MFMCE025022GWS	MCE	0.22	25	100
MFMCE037022GWS	MCE	0.22	37	100
MFMCE047022GWS	MCE	0.22	47	100
MFMCE025045GWS	MCE	0.45	25	100
MFMCE037045GWS	MCE	0.45	37	100
MFMCE047045GWS	MCE	0.45	47	100
MFMCE025080GWS	MCE	0.8	25	100
MFMCE037080GWS	MCE	0.8	37	100
MFMCE047080GWS	MCE	0.8	47	100
MFMCE025100GWS	MCE	1.0	25	100
MFMCE037100GWS	MCE	1.0	37	100
MFMCE047100GWS	MCE	1.0	47	100
MFMCE025300GWS	MCE	3.0	25	100
MFMCE037300GWS	MCE	3.0	37	100
MFMCE047300GWS	MCE	3.0	47	100
MCE Membrane Filter, Black, Gridded, Sterile, Individually packed				
MFMCE025045GBS	MCE	0.45	25	100
MFMCE037045GBS	MCE	0.45	37	100
MFMCE047045GBS	MCE	0.45	47	100
MFMCE025080GBS	MCE	0.8	25	100
MFMCE037080GBS	MCE	0.8	37	100
MFMCE047080GBS	MCE	0.8	47	100

Lab Filtration

MS® Absorbent Pad

- Pure cellulose pad will not inhibit any bacterial grow.
- Available non-sterile or sterilized by gamma irradiation.
- Individually packed for pre-sterilized
- Customized diameter is available



Cat. No.	Description	Diameter (mm)	Qty/pack
MFAP047N	Non-sterile Absorbent Pad	47	100
MFAP047S	Sterile Absorbent Pad, individually packed	47	100
MFAP050N	Non-sterile Absorbent Pad	50	100
MFAP050S	Sterile Absorbent Pad, individually packed	50	100
MFAP015050D	Petri-Pad dish, 55×15mm, with absorbent pad, sterile	50	200

MS® PVDF Membrane Filter

- Wide chemical compatibility
- Excellent mechanical properties
- High temperature capabilities
- Low extractable levels



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFPVDF013022	PVDF	0.22	13	200
MFPVDF025022	PVDF	0.22	25	100
MFPVDF037022	PVDF	0.22	37	100
MFPVDF047022	PVDF	0.22	47	50
MFPVDF090022	PVDF	0.22	90	25
MFPVDF142022	PVDF	0.22	142	25
MFPVDF293022	PVDF	0.22	293	25
MFPVDF013045	PVDF	0.45	13	200
MFPVDF025045	PVDF	0.45	25	100
MFPVDF037045	PVDF	0.45	37	100
MFPVDF047045	PVDF	0.45	47	50
MFPVDF090045	PVDF	0.45	90	25
MFPVDF142045	PVDF	0.45	142	25
MFPVDF293045	PVDF	0.45	293	25

Lab Filtration

MS® CA Membrane Filter

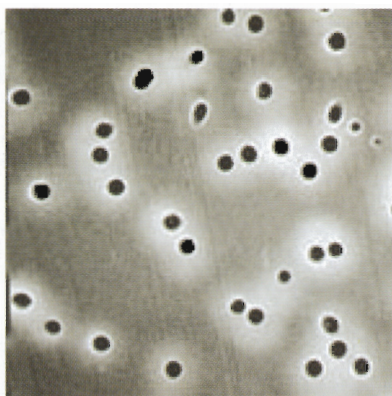
- Hydrophilic
- Very low protein binding capacity
- High physical strength
- Strength and dimension stability



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFCA013022	Cellulose Acetate	0.22	13	200
MFCA025022	Cellulose Acetate	0.22	25	100
MFCA037022	Cellulose Acetate	0.22	37	100
MFCA047022	Cellulose Acetate	0.22	47	50
MFCA090022	Cellulose Acetate	0.22	90	25
MFCA142022	Cellulose Acetate	0.22	142	25
MFCA293022	Cellulose Acetate	0.22	293	25
MFCA013045	Cellulose Acetate	0.45	13	200
MFCA025045	Cellulose Acetate	0.45	25	100
MFCA037045	Cellulose Acetate	0.45	37	100
MFCA047045	Cellulose Acetate	0.45	47	50
MFCA090045	Cellulose Acetate	0.45	90	25
MFCA142045	Cellulose Acetate	0.45	142	25
MFCA293045	Cellulose Acetate	0.45	293	25
MFCA013080	Cellulose Acetate	0.8	13	200
MFCA025080	Cellulose Acetate	0.8	25	100
MFCA037080	Cellulose Acetate	0.8	37	100
MFCA047080	Cellulose Acetate	0.8	47	50
MFCA090080	Cellulose Acetate	0.8	90	25
MFCA142080	Cellulose Acetate	0.8	142	25
MFCA293080	Cellulose Acetate	0.8	293	25
MFCA013300	Cellulose Acetate	3.0	13	200
MFCA025300	Cellulose Acetate	3.0	25	100
MFCA037300	Cellulose Acetate	3.0	37	100
MFCA047300	Cellulose Acetate	3.0	47	50
MFCA090300	Cellulose Acetate	3.0	90	25
MFCA142300	Cellulose Acetate	3.0	142	25
MFCA293300	Cellulose Acetate	3.0	293	25

MS® Polycarbonate (PC) Membrane Filter

- Precise pore sizes and pore distribution for absolute filtration and separation
- Excellent chemical resistance and thermal stability
- Smooth glass-like surface with cylindrical pores for maximum particulate capture
- Optically transparent in most pore sizes



Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFPC013005	PC	0.05	13	100
MFPC025005	PC	0.05	25	100
MFPC037005	PC	0.05	37	100
MFPC047005	PC	0.05	47	100
MFPC090005	PC	0.05	90	30
MFPC142005	PC	0.05	142	25
MFPC293005	PC	0.05	293	25
MFPC013010	PC	0.1	13	100
MFPC025010	PC	0.1	25	100
MFPC037010	PC	0.1	37	100
MFPC047010	PC	0.1	47	100
MFPC090010	PC	0.1	90	30
MFPC142010	PC	0.1	142	25
MFPC293010	PC	0.1	293	25
MFPC013020	PC	0.2	13	100
MFPC025020	PC	0.2	25	100
MFPC037020	PC	0.2	37	100
MFPC047020	PC	0.2	47	100
MFPC090020	PC	0.2	90	30
MFPC142020	PC	0.2	142	25
MFPC293020	PC	0.2	293	25
MFPC013040	PC	0.4	13	100
MFPC025040	PC	0.4	25	100
MFPC037040	PC	0.4	37	100
MFPC047040	PC	0.4	47	100
MFPC090040	PC	0.4	90	30
MFPC142040	PC	0.4	142	25
MFPC293040	PC	0.4	293	25
MFPC013080	PC	0.8	13	100
MFPC025080	PC	0.8	25	100
MFPC037080	PC	0.8	37	100
MFPC047080	PC	0.8	47	100

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Lab Filtration

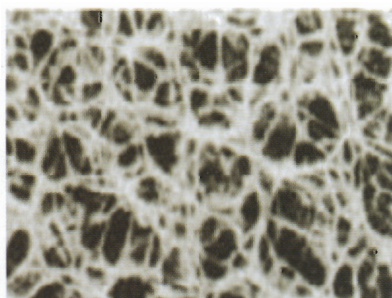
Note:

- Other sizes and pore sizes available upon request

Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFPC090080	PC	0.8	90	30
MFPC142080	PC	0.8	142	25
MFPC293080	PC	0.8	293	25
MFPC013100	PC	1.0	13	200
MFPC025100	PC	1.0	25	100
MFPC037100	PC	1.0	37	100
MFPC047100	PC	1.0	47	100
MFPC090100	PC	1.0	90	30
MFPC142100	PC	1.0	142	25
MFPC293100	PC	1.0	293	25
MFPC013300	PC	3.0	13	100
MFPC025300	PC	3.0	25	100
MFPC037300	PC	3.0	37	100
MFPC047300	PC	3.0	47	100
MFPC090300	PC	3.0	90	30
MFPC142300	PC	3.0	142	25
MFPC293300	PC	3.0	293	25
MFPC013500	PC	5.0	13	100
MFPC025500	PC	5.0	25	100
MFPC037500	PC	5.0	37	100
MFPC047500	PC	5.0	47	100
MFPC090500	PC	5.0	90	30
MFPC142500	PC	5.0	142	25
MFPC293500	PC	5.0	293	25
MFPC013800	PC	8.0	13	100
MFPC025800	PC	8.0	25	100
MFPC037800	PC	8.0	37	100
MFPC047800	PC	8.0	47	100
MFPC090800	PC	8.0	90	30
MFPC142800	PC	8.0	142	25
MFPC293800	PC	8.0	293	25

MS® Regenerated Cellulose(RC) Membrane Filter

- Hydrophilic
- Easily wettable
- Resistant to almost all solvents and aqueous solutions in pH range 3-12
- Low non-specific adsorption

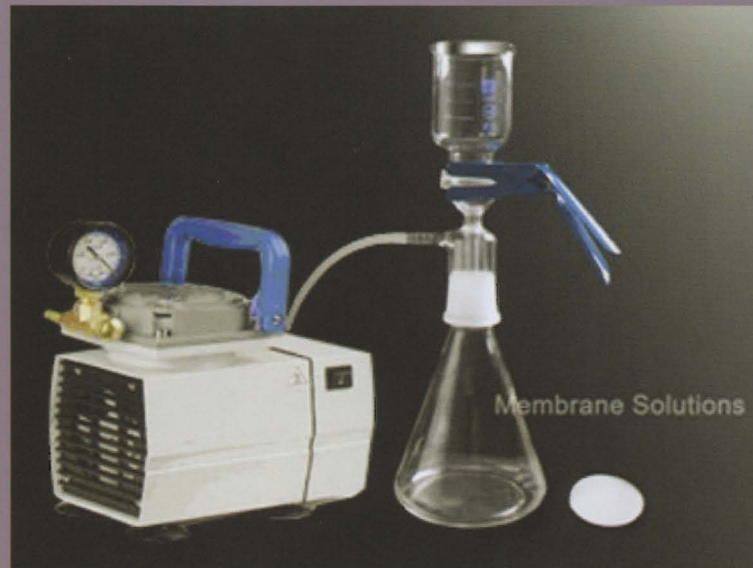


Cat. No.	Filter Medium	Pore Size (µm)	Diameter (mm)	Qty/pack
MFRC013022	RC	0.22	13	100
MFRC025022	RC	0.22	25	100
MFRC037022	RC	0.22	37	100
MFRC047022	RC	0.22	47	100
MFRC090022	RC	0.22	90	25
MFRC142022	RC	0.22	142	25
MFRC013045	RC	0.45	13	100
MFRC025045	RC	0.45	25	100
MFRC037045	RC	0.45	37	100
MFRC047045	RC	0.45	47	100
MFRC090045	RC	0.45	90	25
MFRC142045	RC	0.45	142	25

Note:

- Other sizes available upon request

2009 Catalog



Vacuum Filter Series

Vacuum Filter is used primarily in microbiological and analytical procedures that involve collecting a particulate (bacteria, precipitate, etc.) from a liquid suspension. Liquid poured into a funnel passes through a filter, which retains the particulate, and filtrate can be collected into a filter flask, directly or via a vacuum manifold. Applying vacuum reduces process time compared to gravity flow.

Lab Filtration

MS® Glass Solvent Filter

- All-glass design restricts contact with reactive surfaces such as steel or rubber to minimize contamination of sample or filtrate.
- Standard 47/50mm filtration funnels mount on filtration flask using a ground glass joint.
- Outlet of support base drip tube is positioned below the side arm connection to prevent sample aspiration into vacuum line.
- All wetted surfaces are borosilicate glass with the exception of stainless steel and PTFE support options.
- Compatible with aqueous and alcoholic solutions and solvents; suitable for HPLC.



Technical Specifications

Material

Funnel, base unit and flask	Borosilicate glass
Support	Borosilicate glass frit, stainless steel, or PTFE

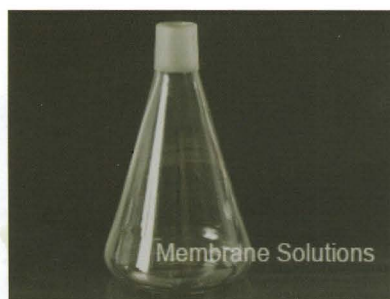
Connection

Ground glass joint	14/20 female, 40/35 female
Side arm	6 mm (3/8 inch), 6 mm (3/8 inch)

Capacity

Funnel	250ml, 300ml, 500ml
Receiver flask	1000ml, 2000ml
Suitable Membrane	φ47 or φ50, φ60

Cat. No.	Description	Qty/pack
VFG025005	1) 250ml Glass Funnel with cover	1set
	2) 500ml Glass Solvent Collection	
	3) Stainless Steel Clamp	
	4) Solid Glass Frit	
	5) Packaging: 30cmX30cmX25cm	
VFG030005	1) 300ml Glass Funnel with cover	1set
	2) 500ml Glass Solvent Collection	
	3) Stainless Steel Clamp	
	4) Solid Glass Frit	
	5) Packaging: 30cmX30cmX25cm	
VFG025010	1) 250ml Glass Funnel with cover	1set
	2) 1000ml Glass Solvent Collection	
	3) Stainless Steel Clamp	
	4) Solid Glass Frit	
	5) Packaging: 30cmX30cmX25cm	



Cat. No.	Description	Qty/pack
VFG030010	1) 300ml Glass Funnel with cover	1set
	2) 1000ml Glass Solvent Collection	
	3) Stainless Steel Clamp	
	4) Solid Glass Frit	
	5) Packaging: 30cmX30cmX25cm	
VFG025020	1) 250ml Glass Funnel with cover	1set
	2) 2000ml Glass Solvent Collection	
	3) Stainless Steel Clamp	
	4) Solid Glass Frit	
	5) Packaging: 30cmX30cmX25cm	
VFG030020	1) 300ml Glass Funnel with cover	1set
	2) 2000ml Glass Solvent Collection	
	3) Stainless Steel Clamp	
	4) Solid Glass Frit	
	5) Packaging: 30cmX30cmX25cm	
VFG147SS	Pyrex glass support screen	1set
VFG047SS	Pyrex glass support screen	1set
VFG010RB	Solvent Collection Bottle, 1000ml	1set
VFG020RB	Solvent Collection Bottle, 2000ml	1set

MS® Disposable Plastic Vacuum Filters

- Funnel is manufactured from optically clear polystyrene and graduated.
- Receiver bottle and filter adapter are manufactured from 100% virgin polypropylene.
- Hose connector is designed to accept multiple hose diameter and features an easy gripping collar to simplify tightening/loosening and adjustment.
- Individually wrapped sterile, certified RNase-free, DNase-free, non-pyrogenic, and DNA free.



Funnel Capacity	Filter Diameter	Process Volume	Hold-up Volume after purge	Maximum Operating Temperature	Fitting Outlet (Thread)	Full Unit Overall Height	Housing Material
150mL	50mm	150mL	3mL	45	45mm	156mm	ABS
250mL	50mm	250mL	3mL	45	45mm	156mm	ABS
500mL	50mm	500mL	3mL	45	45mm	156mm	ABS



Cat. No.	Funnel Capacity(ml)	Filter Pore Size(μ m)	Filter Medium	Qty/ pack
Plastic Vacuum Filter				
VFPPVDF110150	150	0.1	PVDF	12
VFPPVDF122150	150	0.22	PVDF	12
VFPPES122150	150	0.22	PES	12
VFPMCE122150	150	0.22	MCE	12
VFPPVDF145150	150	0.45	PVDF	12
VFPPES145150	150	0.45	PES	12
VFPMCE145150	150	0.45	MCE	12
VFPNY145150	150	0.45	Nylon	12
VFPPVDF110250	250	0.1	PVDF	12
VFPPVDF122250	250	0.22	PVDF	12
VFPPES122250	250	0.22	PES	12
VFPMCE122250	250	0.22	MCE	12
VFPPVDF145250	250	0.45	PVDF	12
VFPPES145250	250	0.45	PES	12
VFPMCE145250	250	0.45	MCE	12
VFPNY145250	250	0.45	Nylon	12
VFPPVDF110250	500	0.1	PVDF	12
VFPPVDF122500	500	0.22	PVDF	12
VFPPES122500	500	0.22	PES	12
VFPMCE122500	500	0.22	MCE	12
VFPPVDF145500	500	0.45	PVDF	12
VFPPES145500	500	0.45	PES	12
VFPMCE145500	500	0.45	MCE	12
VFPNY145500	500	0.45	Nylon	12
Filter Funnel Cups				
VFPPVDF110150F	150	0.1	PVDF	24
VFPPVDF122150F	150	0.22	PVDF	24
VFPPES122150F	150	0.22	PES	24
VFPMCE122150F	150	0.22	MCE	24
VFPPVDF145150F	150	0.45	PVDF	24
VFPPES145150F	150	0.45	PES	24
VFPMCE145150F	150	0.45	MCE	24
VFPNY145150F	150	0.45	Nylon	24
VFPPVDF110250F	250	0.1	PVDF	24
VFPPVDF122250F	250	0.22	PVDF	24
VFPPES122250F	250	0.22	PES	24
VFPMCE122250F	250	0.22	MCE	24
VFPPVDF145250F	250	0.45	PVDF	24

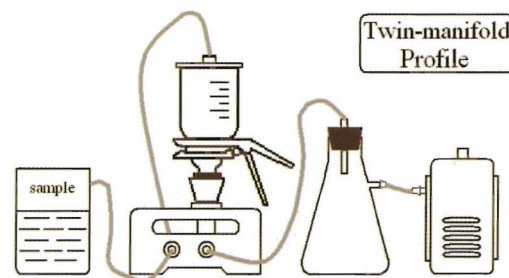
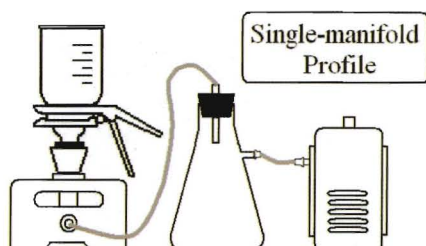
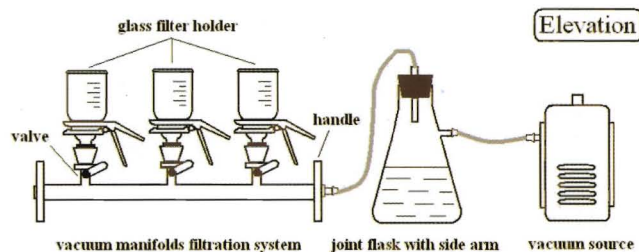
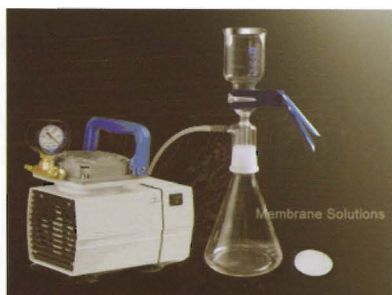
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Cat. No.	Funnel Capacity(ml)	Filter Pore Size(µm)	Filter Medium	Qty/ pack
Filter Funnel Cups				
VFPNY145250F	250	0.45	Nylon	24
VFPPVDF110250F	500	0.1	PVDF	24
VFPPVDF122500F	500	0.22	PVDF	24
VFPPE122500F	500	0.22	PES	24
VFPMC122500F	500	0.22	MCE	24
VFPPVDF145500F	500	0.45	PVDF	24
VFPPE145500F	500	0.45	PES	24
VFPMCE145500F	500	0.45	MCE	24
VFPNY145500F	500	0.45	Nylon	24

Cat. No.	Capacity(ml)	Material	Qty /Pack
Reservoir Bottles			
VFP150B	250	PP	12
VFP250B	500	PP	12
VFP500B	500	PP	12

MS® Multiple Vacuum Filtration Systems

- Each station use separate control valve for independent operation.
- Sturdy units have low center of gravity so they won't tip when full loaded.
- Anodized aluminium handles on both ends for positioning on bench top.



2009 Catalog



Labware

Membrane Solutions, LLC provides quality lab products and services for the life science community.

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11/12

Microlit Liquid DISPENSERS



PIPETTE FILLING D E V I C E



fill is a friendly, efficient and reliable electronic pipette filling instrument. Designed for ease and comfort to suit all types of liquid handling needs in every Laboratory.

15



SPECIFICATIONS & ORDERING INFORMATION

Pipette Filling Device

Model	Description
MPF-GG-220V	Grey body/ Grey collet and plunger
MPF-GV-220V	Grey body/ Violet collet and plunger
MPF-GR-220V	Grey body/ Red collet and plunger
MPF-GG-110V	Grey body/ Grey collet and plunger
MPF-GV-110V	Grey body/ Violet collet and plunger
MPF-GR-110V	Grey body/ Red collet and plunger

ELECTRONIC MICROPIPETTES



11

Microlit Electronic Pipette is based on Stepper Motor with Microprocessor controlled piston movement. These are user friendly and offer effortless pipetting. Accuracy & Precision levels are very high and user-independent. This is a complete solution for every pipetting need.

- User friendly software.
- Easy, User friendly calibration.
- Recharging during operation.
- Optimized ergonomony and working comfort.
- Large Liquid Crystal Display.
- Built-in tip ejector.
- Six models cover the complete pipetting range from 0.2 μ l to 10000 μ l.



SPECIFICATIONS & ORDERING INFORMATION

Electronic Micropipettes

Model	Volume Range	Inc. μ l	Vol. μ l	Acc. \pm %	CV \leq %
ME-10	0.2-10 μ l	0.05	0.2	12.00	10.00
			5	1.00	0.70
			10	0.90	0.40
ME-120	5-120 μ l	0.5	5	3.50	1.50
			50	0.70	0.30
			120	0.40	0.15
ME-300	20-300 μ l	1.0	20	2.50	0.70
			150	0.60	0.20
			300	0.40	0.15
ME-1000	50-1000 μ l	5.0	50	2.00	1.00
			500	0.60	0.20
			1000	0.40	0.15
ME-5000	100-5000 μ l	10.0	100	1.60	0.40
			2500	0.80	0.20
			5000	0.50	0.15
ME-10000	500-10000 μ l	50.0	500	1.50	0.30
			5000	0.50	0.15
			10000	0.60	0.20

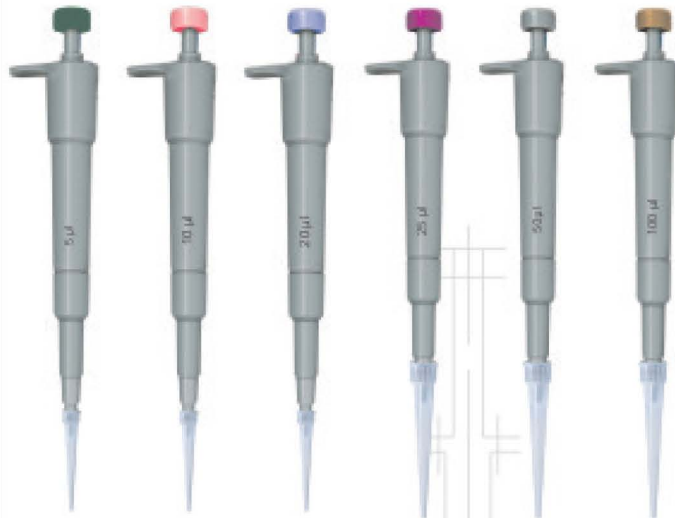
MINIATURE FIXED VOLUME MICROPIPETTES

LI'LPET- The Little Giant

These low cost miniature fixed volume pipettes are specially designed for use with Diagnostic Kits.



9



These high volume Li'lpet of 200 µl, 250 µl, 500 µl and 1000 µl are specially designed for routine Laboratory work.



SPECIFICATIONS & ORDERING INFORMATION

Miniature Fixed Volume Micropipettes

Model	Vol. µl	Acc. ±%	CV ≤%
MM-5	5	1.5	1.0
MM-10	10	1.0	1.0
MM-20	20	0.5	0.5
MM-25	25	0.5	0.5
MM-50	50	0.4	0.3
MM-100	100	0.3	0.3

Miniature Fixed Volume Micropipettes

Model	Vol. µl	Acc. ±%	CV ≤%
MM-200	200	0.5	0.5
MM-250	250	0.5	0.5
MM-500	500	0.5	0.5
MM-1000	1000	0.5	0.5

CALIBRATION & SPECIFICATIONS CONFORMING TO ISO 8655 STANDARDS

MULTICHANNEL MICROPIPETTES

Recommended for ELISA, Molecular screening, Kinetic studies, DNA amplifications....

7

Available in both fully Autoclavable and Non Autoclavable versions.

NON AUTOCLAVABLE

8-Channel



12-Channel



FEATURES:

- Lower assembly rotates 360° for optimal working position.
- Optimum piston-spring balance for soft plunger movement.
- Easy volume setting.
- Easy sequential tip ejection system.
- Easy user calibration.
- High accuracy and performance conforming to ISO 8655 standards.

SPECIFICATIONS & ORDERING INFORMATION

8-channel Non Autoclavable Micropipette

Model	Volume Range	Inc. μ l	Vol. μ l	Acc. \pm %	CV \leq %
MC-8/10	0.5-10 μ l	0.1	1	4.00	4.00
			5	2.50	2.50
			10	1.50	1.50
MC-8/20	02-20 μ l	0.1	2	4.00	4.00
			10	1.50	1.50
			20	1.50	1.00
MC-8/50	05-50 μ l	1.0	5	3.00	2.00
			25	1.50	1.00
			50	0.50	0.50
MC-8/100	10-100 μ l	1.0	10	3.00	1.50
			50	1.00	0.50
			100	1.00	0.50
MC-8/200	20-200 μ l	1.0	20	2.00	0.80
			100	1.00	0.50
			200	0.70	0.25
MC-8/300	40-300 μ l	1.0	40	2.00	0.80
			150	1.00	0.50
			300	0.70	0.25

12-channel Non Autoclavable Micropipette

Model	Volume Range	Inc. μ l	Vol. μ l	Acc. \pm %	CV \leq %
MC-12/10	0.5-10 μ l	0.1	1	4.00	4.00
			5	2.50	2.50
			10	1.50	1.50
MC-12/20	02-20 μ l	0.1	2	4.00	4.00
			10	1.50	1.50
			20	1.50	1.00
MC-12/50	05-50 μ l	1.0	5	3.00	2.00
			25	1.50	1.00
			50	0.50	0.50
MC-12/100	10-100 μ l	1.0	10	3.00	1.50
			50	1.00	0.50
			100	1.00	0.50
MC-12/200	20-200 μ l	1.0	20	2.00	0.80
			100	1.00	0.50
			200	0.70	0.25
MC-12/300	40-300 μ l	1.0	40	2.00	0.80
			150	1.00	0.50
			300	0.70	0.25

CALIBRATION & SPECIFICATIONS CONFORMING TO ISO 8655 STANDARDS

FIXED VOLUME MICROPIPETTES

5

Fixed Volume Pipettes are designed for many different types of routine laboratory work. Using the same state-of-art design and basic features of Variable Volume Pipettes, these fixed volume pipettes are ideal for Clinical Diagnostics, Control Analysis etc....

Available in both Fully and Semi Autoclavable versions.

Fully Autoclavable

Semi Autoclavable



Fixed volume pipettes are available in all capacities from 0.5 µl to 10000 µl (10 ml).

Call our customer service for any Custom-made fixed volume micropipette.

SPECIFICATIONS & ORDERING INFORMATION

Fixed Volume Micropipettes

Model	Vol. µl	Acc. ±%	CV ≤%	
Fully Autoclavable	Semi Autoclavable			
FAF-1	FV-1	1.0	2.5	1.8
FAF-2	FV-2	2.0	2.5	1.2
FAF-5	FV-5	5.0	1.5	0.8
FAF-10	FV-10	10.0	1.0	0.5
FAF-20	FV-20	20.0	0.5	0.3
FAF-25	FV-25	25.0	0.5	0.3
FAF-50	FV-50	50.0	0.3	0.3
FAF-100	FV-100	100.0	0.3	0.2

Fixed Volume Micropipettes

Model	Vol. µl	Acc. ±%	CV ≤%	
Fully Autoclavable	Semi Autoclavable			
FAF-200	FV-200	200.0	0.3	0.2
FAF-250	FV-250	250.0	0.3	0.2
FAF-500	FV-500	500.0	0.3	0.2
FAF-1000	FV-1000	1000.0	0.3	0.2
FAF-2000	FV-2000	2000.0	0.3	0.2
FAF-5000	FV-5000	5000.0	0.3	0.2
FAF-10000	FV-10000	10000.0	0.3	0.2

CALIBRATION & SPECIFICATIONS CONFORMING TO ISO 8655 STANDARDS

VARIABLE VOLUME MICROPIPETTES

3

AUTOCLAVABLE TIP-CONE

These Variable Volume Micropipettes are semi-autoclavable where the Tip-cone assembly (consisting of Piston, O-ring, spring and the tip-cone) can be detached and autoclaved. This economical version is suitable for every application including Molecular biology, Microbiology, Immunology, cell culture, Analytical Chemistry, Biochemistry, Genetics etc....



SPECIFICATIONS & ORDERING INFORMATION

Semi Autoclavable Variable Volume Micropipettes

Model	Volume Range	Inc. μ l	Vol. μ l	Acc. \pm %	CV \leq %
VV-2	0.2 - 2.0 μ l	0.01	0.2	12.0	6.0
			1.0	2.5	1.5
			2.0	1.5	0.7
VV-10	0.5 - 10 μ l	0.1	0.5	5.0	2.8
			5.0	1.5	0.8
			10.0	1.0	0.4
VV-20	2 - 20 μ l	0.1	2.0	5.0	1.5
			10.0	1.0	0.6
			20.0	1.0	0.3

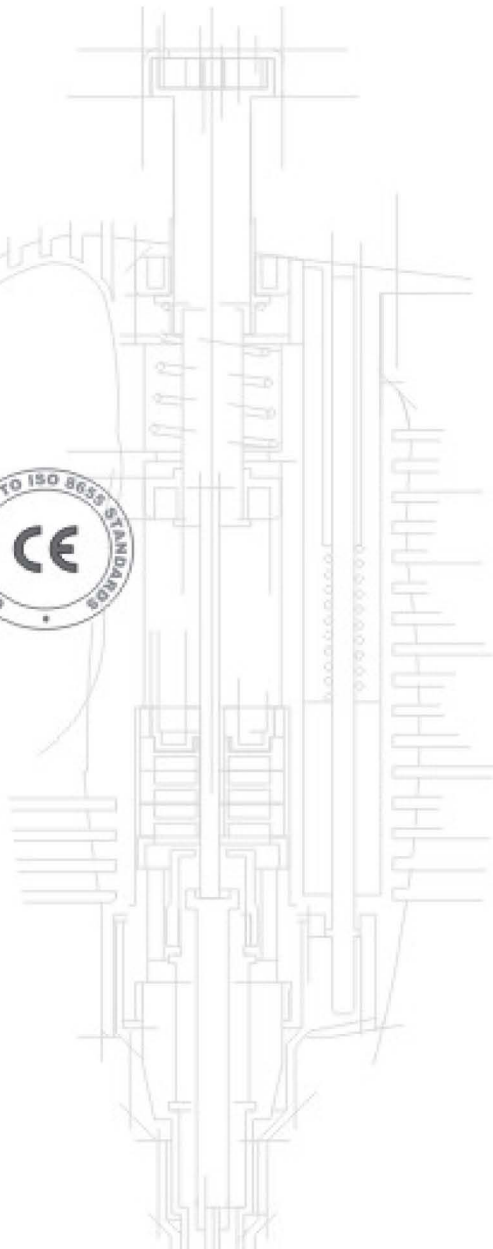
Model	Volume Range	Inc. μ l	Vol. μ l	Acc. \pm %	CV \leq %
VV-50	5 - 50 μ l	1.0	5.0	2.5	1.5
			25.0	0.7	0.3
			50.0	0.7	0.3
VV-100	10 - 100 μ l	1.0	10.0	2.5	0.7
			50.0	0.8	0.3
			100.0	0.8	0.15
VV-200	20 - 200 μ l	1.0	20.0	2.5	0.7
			100.0	1.0	0.3
			200.0	0.6	0.2

CALIBRATION & SPECIFICATIONS CONFORMING TO ISO 8655 STANDARDS

VARIABLE VOLUME MICROPIPETTES

FULLY AUTOCLAVABLE

In order to keep pace with the rapid progress made in research sector in recent years, MICROLIT has made one logical step further and proudly presents the new, high precision micropipette series for today's sophisticated users in the field of Molecular biology, Microbiology, Immunology, cell culture, Analytical Chemistry, Biochemistry, Genetics etc.



SPECIFICATIONS & ORDERING INFORMATION

Fully Autoclavable Variable Volume Micropipettes

Model	Volume Range	Inc. μ l	Vol. μ l	Acc. \pm %	CV \leq %
FAA-2	0.2 - 2.0 μ l	0.01	0.2	12.0	6.0
			1.0	2.5	1.5
			2.0	1.5	0.7
FAA-10	0.5 - 10 μ l	0.1	0.5	5.0	2.8
			5.0	1.5	0.8
			10.0	1.0	0.4
FAA-20	2 - 20 μ l	0.1	2.0	5.0	1.5
			10.0	1.0	0.6
			20.0	1.0	0.3

Model	Volume Range	Inc. μ l	Vol. μ l	Acc. \pm %	CV \leq %
FAA-50	5 - 50 μ l	1.0	5.0	2.5	1.5
			25.0	0.7	0.3
			50.0	0.7	0.3
FAA-100	10 - 100 μ l	1.0	10.0	2.5	0.7
			50.0	0.8	0.3
			100.0	0.8	0.15
FAA-200	20 - 200 μ l	1.0	20.0	2.5	0.7
			100.0	1.0	0.3
			200.0	0.6	0.2

CALIBRATION & SPECIFICATIONS CONFORMING TO ISO 8655 STANDARDS



Bottle Top Dispenser



Classic & Research Models

Microlit Bottle top dispenser is genius of its strong R& D base . responding to the needs of the present generation , microlit is proud to offer its New Bottle top Dispensers in two versions : classic and Research which is an unique combination of affordable pricing and high performance

Classic Models: Wetted parts are PP, borosilicate Glass and FEP. Suitable for routine laboratory application

Research models: All wetted parts are PTFE , FEP and borosilicate glass only .this can be used for all laboratory reagent application.

Simple design clubbed with variety of useful feature makes microlit Bottle Top Dispensing an obvious choice for all dispensing needs

High precision and accuracy is ensured though careful selection of component raw material and several stages of strict quality checks during manufacturing process.

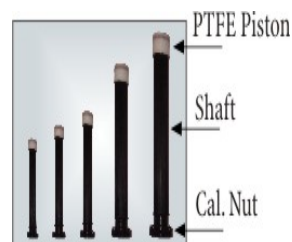
Each instrument is individually calibrated in accordance with ISO 8655 standards and comes with Individual Calibration certificate.

GENERAL PRODUCT INFORMATION:-

Description	Classic Models	Research models
Piston	PTFE	PTFE
Cylinder	Glass	Glass
Volume adjustment knob	Screw Types	Screw Types
Valve Housing	Polypropylene	PTFE
Valve assembly	Glass ball & Seat	Glass ball & Seat
Discharge assembly	PTFE	PTFE
Delivery tube	FEP	FEP
Inlet tube	FEP	FEP
Calibration	Individually Calibrated and certified in lab easy calibration by user is also possible.	
Accuracy & Reproducibility	In accordance with ISO 8655 atandards	
Compatibility	Good for routine lab application	Excellent Compatibility with all reagent except hf

FEATURES: CLASSIC & Research models :-

- Both classic and reasech models have five adjectable volume sizes:
(a)0.25 – 2.5 ml (b) 0.5-5.0 ml (c) 1.0-10.0 ml (d) 2.5 -30 ml (e) 5.0-60.0 ml.
- Easy to use ,simple contruction and smoth , effortless plunger movement for bubble free dispensing.
- Piston : Specially designed PTFE piston with silicone O-ring ensures wiper -like sooth , effortless piston movement and high accuracy.
- Each instrmt comes with five adaptors to fit in most of the labaratory reagent bottles.
Standards threads : 30mm
Adaptors : 28mm, 32mm, 36mm, 40mm and 45mm
- Nozzle cap prevents only unwanted drop on the work sapce.
- Easy to dis-assemble for cleaning and servicing.
- Glass barrel is protected by a polypropylene sleeve.It also ensures no glass splitting in case of any accidental breakage.
- Valve Manifold : specially designed, springless, single piece PTFE valve manifold in the research model ensures excellent chemical compatibility, leak proof valve functioning and excellent reproductibility.
- Instrument is fully autoclavable at 121°C, 15 psi. No need for dis-assembling the instrument for autoclaving.



- Screw type volume adjustment knob with large pointer ensures precise, easy and quick volume adjustment.



- Calibration : Specially designed universal calibration tool is provided for convenient and quick In-lab user re-calibration. This is in compliance with GLO/ISO Norms.



BT Adaptors included . . . to FIT **GL-45, GL-33** and others

Classic Discontinued 2012 - Research Model ONLY

Price AUD	Model No.		Vol. Range	Increment	ISO 8655 Specifications				Microlit Specification			
	Classic Model	Research Model			Accuracy		CV		Accuracy		CV	
					± %	± ml	± %	± ml	± %	± ml	± %	± ml
195.00	BTD-1	BTDR-1	0.25-2.5 ml	0.05 ml	0.6	0.015	0.2	0.005	0.6	0.015	0.2	0.005
195.00	BTD-2	BTDR-2	0.5-5 ml	0.1 ml	0.6	0.030	0.2	0.010	0.5	0.025	0.1	0.005
195.00	BTD-3	BTDR-3	1-10 ml	0.2 ml	0.6	0.060	0.2	0.020	0.5	0.050	0.1	0.010
220.00	BTD-4	BTDR-4	2.5-30 ml	0.5 ml	0.6	0.180	0.2	0.060	0.5	0.150	0.1	0.030
240.00	BTD-5	BTDR-5	5-60 ml	1.0 ml	0.6	0.360	0.2	0.120	0.5	0.300	0.1	0.060

GL-45 Bottles 250, 500, 1-Liter

CT-GBGL45-1000 : \$28.00

CT-GBGL45-250 : \$12.00

CT-GBGL45-500 : \$18.00



**GL45 Glass Bottles
1000, 500, 250ml**

For HPLC / GC



NYLON / PTFE Syringe Filters Promotion



Excellent and flow rate chemical resistance against the standard aqueous and organic HPLC solvents

Nylon Syringe Filter

PTFE Syringe Filter

US\$169.5 / 1000pcs(13mm)

US\$216.5 / 1000pcs(25mm)

US\$199.5 / 1000pcs(13mm)

US\$249.5 / 1000pcs(25mm)

USA

China

Japan

HROMalytic +61(0)3 9762 2034

ECHnology Pty Ltd

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For HPLC / GC



Specification and Ordering Information

	Nylon		PTFE	
Item Number	SFNY013022N SFNY013045N	SFNY025022N SFNY025045N	SFPTFE013022N SFPTFE013045N	SFPTFE025022N SFPTFE025045N
Diameter	13mm	25mm	13mm	25mm
Membrane material	Nylon	Nylon	PTFE	PTFE
Housing material	PP (medical-grade)	PP (medical-grade)	PP (medical-grade)	PP (medical-grade)
Filtration area (cm ²)	0.65	3.90	0.65	3.90
Pore Size(μm)	0.22 / 0.45	0.22 / 0.45	0.22 / 0.45	0.22 / 0.45
Holdup volume (μl)	<10	<30	<10	<30
Sample volume (ml)	2-10ml	10-100ml	2-10ml	10-100ml
Flow Rate (ml/min@10psi)	0.22μm: 10 0.45μm: 15	0.22μm: 50 0.45μm: 70	0.22μm: 7 0.45μm: 12	0.22μm: 20 0.45μm: 35
Maximum Operating Temperature	110°C	110°C	90°C	90°C
Maximum Operating Pressure (psi@20°C)	13mm: 90 25mm: 60	13mm: 90 25mm: 60	13mm: 90 25mm: 60	13mm: 90 25mm: 60
Applicable pH value	3-12	3-12	1-14	1-14
Unit Package	100pcs/pk	100pcs/pk	100pcs/pk	100pcs/pk

Other options: 1) We can offer Nylon / PTFE Syringe Filters with pore size range: 0.1-5.0μm.
2) MCE / PVDF / PP / PES / Glass Fiber Syringe Filters.

Quality Assurance

All certified MS syringe filters are manufactured in a DIN EN ISO 9001 certified environment. Representative batch samples are extracted with water, methanol and acetonitrile. The extracts are measured by HPLC at 210 and 254 nm to ensure the lowest UV-absorbing extractables from the filter. Critical specifications are set for:

- Bubble Point
- Burst Pressure
- Flow Rate
- UV Extractable (by HPLC and UV-Vis Systems)



CA / PES Syringe Filters Promotion

GREAT QUALITY GREAT PRICE



PES Syringe Filter
(Gamma Sterile)

Ideal For

Protein Analysis /
Biological Samples

CA Syringe Filter
(Gamma Sterile)

Ideal For

Tissue Culture
Media, Buffers

USA

China

Japan

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CA / PES Syringe Filters Promotion

Features of PES and CA Syringe Filters

- Naturally hydrophilic
- Strength and dimension stability
- Fast flow / high-throughput
- Ultra-low protein binding



Specification and Ordering Information

	CA (Sterile)		PES (Sterile)	
Item Number	SFCA013022S	SFCA025022S	SFPES013022S	SFPES025022S
	SFCA013045S	SFCA025045S	SFPES013045S	SFPES025045S
Diameter	13mm	15mm	13mm	15mm
Membrane material	CA	CA	PES	PES
Housing material	PP(medical-grade)	PP(medical-grade)	PP(medical-grade)	PP(medical-grade)
Filtration area (cm ²)	0.65	3.90	0.65	3.90
Pore Size(μm)	0.22 / 0.45	0.22 / 0.45	0.22 / 0.45	0.22 / 0.45
Holdup volume (μl)	<10	<30	<10	<30
Sample volume (ml)	2-10ml	10-100ml	2-10ml	10-100ml
Flow Rate (ml/min@10psi)	0.22μm: 10	0.22μm: 55	0.22μm: 10	0.22μm: 55
	0.45μm: 20	0.45μm: 80	0.45μm: 18	0.45μm: 85
Maximum Operating Temperature	110°C	110°C	90°C	90°C
Maximum Operating Pressure (psi@20°C)	13mm: 90	13mm: 90	13mm: 90	13mm: 90
	25mm: 60	25mm: 60	25mm: 60	25mm: 60
Applicable pH value	4-8	4-8	1-14	1-14
Sterilization	γ-ray	γ-ray	γ-ray	γ-ray
Unit Package	100pcs/pk	100pcs/pk	100pcs/pk	100pcs/pk

Quality Assurance

Membrane Solutions Syringe Filters must pass a battery of certification methods and tests. Both manufacturing and packaging processes adhere to **ISO Quality System**.

Critical specifications are set for:

Bubble Point
Burst Pressure
Flow Rate
UV Extractable
(by HPLC and UV-Vis Systems)

Each Sterile Filter is:

Individual packed
Sterilized by γ-ray
Labeled with a batch number for
easy QC tracking

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APPROVED**

SuperpureTM

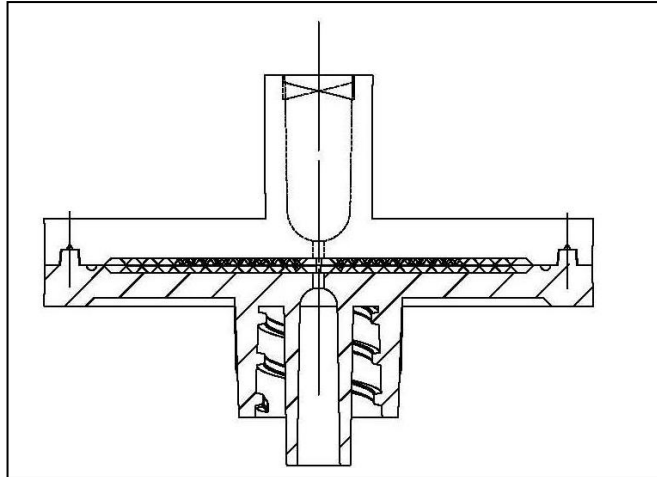
5 Improvements, SAME LOW PRICE, 5 Days Delivery

New range of HPLC 17mm, 30mm Syringe Filters

The Superpure 17 mm and Superpure 30 mm syringe filters manufactured by Membrane Solutions are designed to speed up and increase sample volume throughput while reducing thumb pressure. The 17 mm and 30 mm sizes, replacing the 13 mm and 25 mm sizes, offer far more value to researchers due to several new features.

They will be available with one of the following membranes in 0.22 µm or 0.45 µm pore size: Nylon66 , MCE, PTFE, PES and PVDF. These filters should mainly be used for small sample volumes where the dead volume should be kept to a minimum.

New Filter Design Drawing



Improved Performance Benefits:

Feature	Benefit
Color coding	Easier to tell the filter membrane
Larger filtration areas (bigger than 33mm)	Increased sample throughput
Female lure lock	Can be used as the venting filter
High resolutions print	Easier to tell the pore size of filter
Better membrane media	Improved membrane flow rates

This table offers general guidelines for membrane characteristics and compatible applications.

Membrane Type	Membrane Characteristics	Applications
Nylon66	Most frequently selected membrane; broad compatibility with aqueous and organic samples; naturally hydrophilic membrane; extremely low in extractables; excellent flow rate with most sample matrices; not compatible with strong acids or bases	General laboratory filtration; filtration for most HPLC samples. NOTE: Nylon binds protein, do not use when high protein recovery is desired
Polyethersulfone	High flow rates with good throughput volume; low protein binding; compatible with high temperature liquids; mechanically strong membrane low in inorganic extractable ions	PES is certified for Ion Chromatography; Tissue Culture filtration; filtration of proteins and nucleic acids
PTFE	Hydrophobic membrane is resistant to nearly all solvents, acids, and bases; membrane is mechanically strong and will withstand exposure to high temperature liquids; low in extractables; PTFE blocks water vapor; can be used to filter aqueous solutions	Filtration of aggressive organic, highly basic or hot solutions, ideal for transducer protectors
Hydrophilic PTFE	Hydrophilic PTFE is especially useful in HPLC sample preparation and is highly resistant to most solvents. And it's generally used for aqueous-based biological samples.	Filtration of aggressive organic, highly basic or hot solutions, ideal for aqueous filtration
MCE	Ideal for aqueous-based samples; high protein recovery from filtrate; higher tensile strength compared to CA	Aqueous sample preparation
PVDF	High protein binding, Hydrophobic membrane is resistant to nearly most solvents acid and bases.	Filtration of aggressive organic



Order Information

Part No.	Pore Size(μm)	Membrane	Diameter	Package
SFNY017022N	0.22	Nylon66	17mm,	100/pk
SFNY017045N	0.45	Nylon66	17mm,	100/pk
SFNY030022N	0.22	Nylon66	30mm,	100/pk
SFNY030045N	0.45	Nylon66	30mm,	100/pk
SFPES017022N	0.22	PES	17mm,	100/pk
SFPES017045N	0.45	PES	17mm,	100/pk
SFPES030022N	0.22	PES	30mm,	100/pk
SFPES030045N	0.45	PES	30mm,	100/pk
SFMCE017022N	0.22	MCE	17mm,	100/pk
SFMCE017045N	0.45	MCE	17mm,	100/pk
SFMCE030022N	0.22	MCE	30mm,	100/pk
SFMCE030045N	0.45	MCE	30mm,	100/pk
SFPTFE017022NB	0.22	PTFE	17mm,	100/pk
SFPTFE017045NB	0.45	PTFE	17mm,	100/pk
SFPTFE030022NB	0.22	PTFE	30mm,	100/pk
SFPTFE030045NB	0.45	PTFE	30mm,	100/pk
SFPVDF017022N	0.22	PVDF	17mm,	100/pk
SFPVDF017045N	0.45	PVDF	17mm,	100/pk
SFPVDF030022N	0.22	PVDF	30mm,	100/pk
SFPVDF030045N	0.45	PVDF	30mm,	100/pk



MS[®] G-MP syringe filter



Introduction

MS[®] G-MP syringe filters are designed specially to filter high particulate solutions. With four layers, the first filter is a composite membrane of 10 μ m glass fiber and 1.0 μ m PP, the second prefilter is 0.7 μ m GF/F membrane media, the last one is filtration media as specified. G-MP special membrane materials can eliminate sample contamination and allow you to filter difficult samples with less hand pressure and fast flow rate. They prevent the build up of back pressure typically caused by the blocking of an unprotected membrane.

Feature

Increased volume throughput:

Volume of sample filtered can be three to seven times greater than conventional filters.

Superior performance:

Four layers of filtration media reduce blockage and the need to replace the filter in mid-operation.

Less hand force required:

The unique pre-filter layer allows high particulate samples to be filtered with less hand force, minimizing operator fatigue.



Application

- Hard-to-filter samples
- Dissolution testing
- Content uniformity
- Environmental samples
- Composite assays
- Food analysis
- Biofuel analysis

Technical Specification

Specification	25mm
Filtration Area	4.6cm ²
Maximum Pressure	75psi(5.2bar)
Materials of construction	Housing: Polypropylene Filtration Media: As specified
Connectors	Inlet: Female Luer Lock (FLL) Outlet: Male Luer (ML)
Flow direction	Flow from inlet to outlet (FLL to ML)

Order Information

25mm Non-sterile

Catalog No.	Membrane	Pore size(μm)	Package(pcs/pk)
SFNY025022NM	Nylon	0.22	100
SFNY025045NM	Nylon	0.45	100
SFPVDF025022NM	PVDF	0.22	100
SFPVDF025045NM	PVDF	0.45	100
SFPTFE025022NM	PTFE	0.22	100
SFPTFE025045NM	PTFE	0.45	100
SFPES025022NM	PES	0.22	100
SFPES025045NM	PES	0.45	100
SFPP025022NM	PP	0.22	100
SFPP025045NM	PP	0.45	100
SFCA025022NM	CA	0.22	100
SFCA025045NM	CA	0.45	100

Note: Ster



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CA / PES Syringe Filters Promotion

GREAT QUALITY GREAT PRICE



PES Syringe Filter
(Gamma Sterile)

Ideal For

Protein Analysis /
Biological Samples

CA Syringe Filter
(Gamma Sterile)

Ideal For

Tissue Culture
Media, Buffers

CA / PES Syringe Filters Promotion

Features of PES and CA Syringe Filters

- Naturally hydrophilic
- Strength and dimension stability
- Fast flow / high-throughput
- Ultra-low protein binding



Specification and Ordering Information

	CA (Sterile)		PES (Sterile)	
Item Number	SFCA013022S SFCA013045S	SFCA025022S SFCA025045S	SFPES013022S SFPES013045S	SFPES025022S SFPES025045S
Diameter	13mm	15mm	13mm	15mm
Membrane material	CA	CA	PES	PES
Housing material	PP(medical-grade)	PP(medical-grade)	PP(medical-grade)	PP(medical-grade)
Filtration area (cm ²)	0.65	3.90	0.65	3.90
Pore Size(μm)	0.22 / 0.45	0.22 / 0.45	0.22 / 0.45	0.22 / 0.45
Holdup volume (μl)	<10	<30	<10	<30
Sample volume (ml)	2-10ml	10-100ml	2-10ml	10-100ml
Flow Rate (ml/min@10psi)	0.22μm: 10 0.45um: 20	0.22μm: 55 0.45um: 80	0.22μm: 10 0.45um: 18	0.22μm: 55 0.45um: 85
Maximum Operating Temperature	110°C	110°C	90°C	90°C
Maximum Operating Pressure (psi@20°C)	13mm: 90 25mm: 60	13mm: 90 25mm: 60	13mm: 90 25mm: 60	13mm: 90 25mm: 60
Applicable pH value	4-8	4-8	1-14	1-14
Sterilization	γ-ray	γ-ray	γ-ray	γ-ray
Unit Package	100pcs/pk	100pcs/pk	100pcs/pk	100pcs/pk

Quality Assurance

Membrane Solutions Syringe Filters must pass a battery of certification methods and tests. Both manufacturing and packaging processes adhere to **ISO Quality System**.

Critical specifications are set for:

Bubble Point
Burst Pressure
Flow Rate
UV Extractable
(by HPLC and UV-Vis Systems)

Each Sterile Filter is:

Individual packed
Sterilized by γ-ray
Labeled with a batch number for easy QC tracking

**LIFE SCIENCE
APPROVED**

MS[®] Disposable Vacuum Filtration

MS[®] disposable Vacuum Filtration units are very useful in large volume samples separation and purification for tissue culture media, biological fluids and fixation buffers.

The unit includes membrane filter, graduated funnel of clear polystyrene with polyethylene neck adapter and polystyrene reservoir bottle with a separate sterile polyethylene cap. Glass fiber pre-filter is available.

MS[®] filters feature adapters are color-coded to indicate membrane type for easy product identification.

Four membranes are available to meet all of your filtration needs: Mixed cellulose ester, Nylon, PES and PVDF.

Available in three styles: complete filter/storage unit and bottle top filters and the Reservoir bottle.



Application

- Ideal for filtration of tissue culture media, biological fluids, fixation buffers etc
- Cell culture media and other aqueous solutions
- Sterile filtration of solutions which can't be autoclaved
- Sterile filtration and clarification of difficult-to-filter aqueous solutions with a glass fiber pre-filter.



Features

- Available in of 0.22µm and 0.45µm
- Filter Diameter: 50mm membrane diameter
- Volume sizes: 125, 250 and 500ml
- Light weight and heavy wall construction
- Large knurls on the reservoir bottle cap for easy screw
- Reservoir bottles feature easy grip sides for improved handling, simplify tightening/ loosening and adjustments
- Designed wide and easy access bottle mouth for efficiently and stably pour out
- Engraved graduation ensure veracity
- Designed hose connector can fit multiplicate hose diameters
- Detergent-free, tissue culture compatible, and heat-sealed to the support grid to maximize flow rate, reduce foaming and protein denaturization
- Certified non- pyrogenic



Choosing guide

Membrane	Characteristics and typical application
PES	Provides fast flow rates and very low protein binding and extractables than cellulosic or nylon membranes, highly recommended for filtering and sterilization cell culture media, biological fluids of aqueous solutions.
MCE	Especially recommended for applications requiring low protein binding, such as filtering culture media containing sera.
Nylon	Naturally hydrophilic, protein binding, are recommended for filtering protein-free culture media for the retention of fine particles and microorganisms in HPLC/FPLC solutions
PVDF	With very low protein binding, high chemical resistance is used for filtration of buffers with DMSO, and retrovirus filtration
Glass fiber	Used a depth filter for prefiltration of solutions with very high particle loading capacity and are ideal for prefiltering dirty solutions and difficult to filters biological fluids such as sera, increase flow rates

Ordering information:

- Packaged in easy peel-to-open plastic bag, and receiver bottle cap is individually wrapped
- Each individual unit is lot-numbered for easy identification and tracking.
- Gamma irradiation sterilized

Technical Product Information

Item number	Funnel Capacity	Pore size(μ m)	Membrane Material	Qty per Case	
VFPPVDF122150	150ml Capacity Diameter:50mm Both Upper capacity and Receiver capacity is 150ml	0.22	PVDF	12	
VFPPE122150			PES	12	
VFPMCE122150			MCE	12	
VFPPVDF145150		Both Upper capacity and Receiver capacity is 150ml	0.45	PVDF	12
VFPPE145150				PES	12
VFPMCE145150				MCE	12
VFPNY145150				Nylon	12
Item number	Funnel Capacity	Pore Size(μ m)	Membrane Material	Qty per Case	
VFPPVDF122250	250ml Capacity Diameter:50mm Both Upper capacity and Receiver capacity is 250ml	0.22	PVDF	12	
VFPPE122250			PES	12	
VFPMCE122250			MCE	12	
VFPPVDF145250		Both Upper capacity and Receiver capacity is 250ml	0.45	PVDF	12
VFPPE145250				PES	12
VFPMCE145250				MCE	12
VFPNY145250				Nylon	12
Item number	Funnel Capacity	Pore Size(μ m)	Membrane Material	Qty per Case	
VFPPVDF122500	250ml Capacity Diameter:50mm Upper capacity 250ml and Receiver capacity is 500ml	0.22	PVDF	12	
VFPPE122500			PES	12	
VFPMCE122500			MCE	12	
VFPPVDF145500		Upper capacity 250ml and Receiver capacity is 500ml	0.45	PVDF	12
VFPPE145500				PES	12
VFPMCE145500				MCE	12
VFPNY145500				Nylon	12

For some special experiment purposes or research outlay saving and etc, the Filter Upper Cups and Reservoir Bottle are also available respectively

Filter Funnel Bottle Top Cups					
Item number	Funnel Capacity	Pore Size(μm)	Membrane Material	Qty per Case	
VFPPVDF122150F	150mL Capacity Diameter:50mm Filter top funnel	0.22	PVDF	24	
VFPPE122150F			PES	24	
VFPMCE122150F			MCE	24	
VFPPVDF145150F		150mL Capacity Diameter:50mm Filter top funnel	0.45	PVDF	24
VFPPE145150F				PES	24
VFPMCE145150F				MCE	24
VFPNY145150F				Nylon	24
Item number	Funnel Capacity	Pore Size(μm)	Membrane Material	Qty per Case	
VFPPVDF122250F	250mL Capacity Diameter:50mm Filter top funnel	0.22	PVDF	24	
VFPPE122250F			PES	24	
VFPMCE122250F			MCE	24	
VFPPVDF145250F		250mL Capacity Diameter:50mm Filter top funnel	0.45	PVDF	24
VFPPE145250F				PES	24
VFPMCE145250F				MCE	24
VFPNY145250F				Nylon	24

Reservoir Bottles			
Item number	Bottle Capacity	Bottle Material	Qty per Case
VFP250B	250ml	PS	24
VFP500B	500ml	PS	24



Glass Fiber Pre-filters

Glass fiber pre-filters may be placed in the funnel on top of the membrane and secured by a convenient tab for difficult-to-filter solutions.

Recommended filter size GFB(1.0 μ m) and GFF(0.7 μ m) dependant on apparatus used. Must be ordered separately.

Item number	Description	Pack
SPGFB047100N	Glass Fiber Filter, Binder free, Pore:1.0(μ m), Diameter:47(mm)	100pk
SPGFF047070N	Glass Fiber Filter, Binder free, Pore: 0.7(μ m), Diameter:47(mm)	100/pk

Membrane Solutions LLC

Membrane Solutions



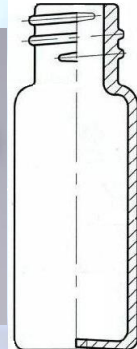
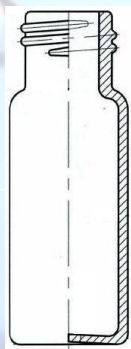
Membrane Solutions

MS® Sample Vials for Chromatography

11mm Crimp & Screw Cap 2ml 12x32 8-425 and 9-425



... 4ml 13-425 Screw, Headspace 20, 40, 60ml 24-425 Screw ...
pre-cleaned VOA HS Grade ... also Available



Caps and Septa available separately ... if required

HRMalytic +61(0)3 9762 2034
ECHnology Pty Ltd
Australian Distributors; Importers & Manufacturers

MS® Sample Vials

MS® Sample vial are made from first hydrolytical class, borosilicate glass, compliant with the requirements of U.S. and European Pharmacopeia which improves your laboratory productivity, by reducing costs and saving time. These products considerably reduce the risk of analytical test results compromised by ghost peaks, damaged needles or dislodged septa, decreasing analysis failures and sample reruns.

MS® offer Type 1, 51-expansion glass vials and type-2, 33- expansion glass vials.

Feature

- LCGC certificate
- High quality glass Type 1, 51-expansion glass (clear and amber) and type-2, 33- expansion glass (only clear)
- Computerized camera system for quality control throughout the manufacturing process to test critical dimensions, including Height, Diameter, Bottom Thickness and Neck/Thread.
- Compatible with a wide range of HPLC, LCMS and GC Instruments
- Pre-packs including 100 vials and caps for ease and convenience in ordering
- Vials and caps and septas also available separately
- Meet standards set by governing bodies
- Tightest dimensional tolerances in industry

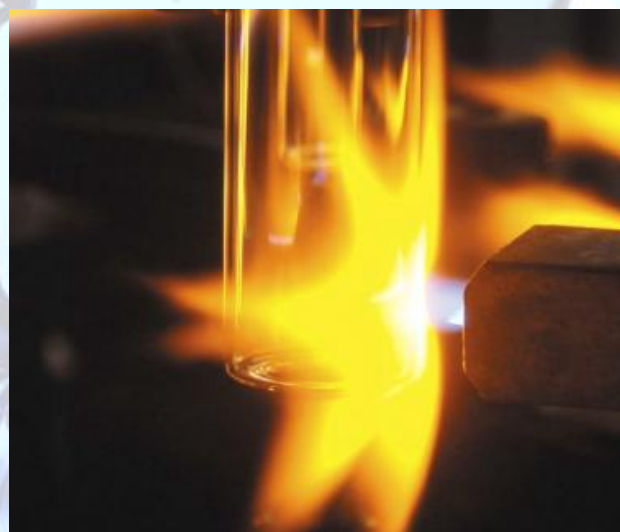
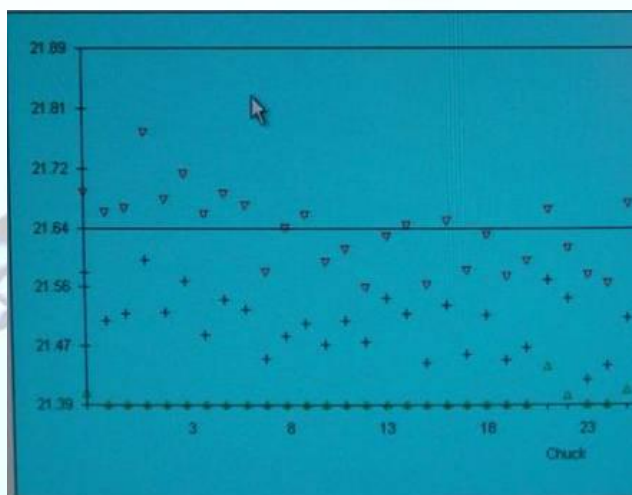
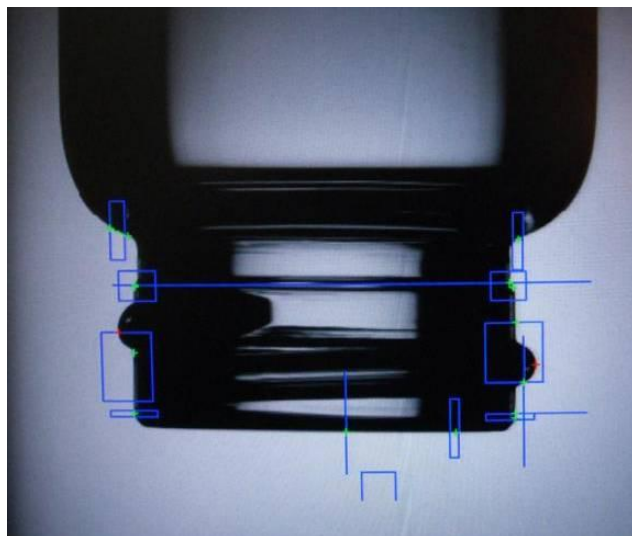
Application

- HPLC instruments
- LCMS instruments
- GC instruments

Vial Closures Guide

Available in three types: crimp, snap and screw cap.

Cap Design	Strength Design	Comments
Crimp	Excellent seal	Requires tools
Snap	Moderate seal	Fast, no tools
Screw	Excellent seal	Universal



Septa Selection Guide

PTFE

- Recommended for single injection application.
- Ideal for use in MS applications
- Excellent solvent resistance and chemical compatibility
- Does not reseal upon punching
- Not for Long-term sample storage

PTFE/Silicone

- Recommended for multiple injection and sample storage
- Excellent resealing
- PTFE chemical resistance until punctured, then will have the chemical compatibility of silicone
- Working temperature range from -40 °C to 200 °C

- Pre-slit PTFE/Silicone
- Prevent vacuum formation in vials
- Eliminates coring from bottom draw-port needles
- Good resealing capabilities
- Recommended for multiple injections
- PTFE chemical resistance until punctured, then will have the chemical compatibility of silicone
- Working temperature range from -40 °C to 200 °C

Vials Selection Guide

- Type 1, 51-expansion borosilicate glass
- type-2, 33- expansion glass
- Deactivated glass (DV)

Treated with gas phase reactive organosilane to produce a hydrophobic glass surface. Can be stored indefinitely.

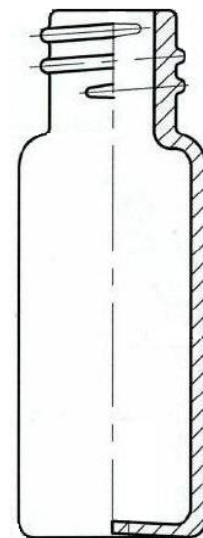
- Headspace Vials

Uniform glass thickness which insures even heat distribution for consistent sampling reliability.

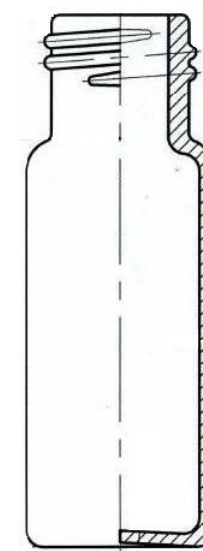


Ordering Information

Screw Top, Standard Opening Vials		
Part No.	Description	Unit
LBSV012C	2ml Clear vial, 8-425 screw top	100/pk
LBSV032C	2ml Clear vial, 8-425 screw top, graduated with writing area	100/pk
LBSV012A	2ml Amber vial, 8-425 screw top	100/pk
LBSV032A	2ml Amber vial, 8-425 screw top, graduated with writing area	100/pk
Screw caps - 8-425, polypropylene plastic for standard screw top vial		
LBSV012	Black screw cap with hole, for 2ml 8-425 screw top vial	100/pk
LBSV032	Blue screw cap with hole, for 2mL 8-425 screw top vial	100/pk
Septa for 8-425 Screw caps		
LBSV02RS	White PTFE/red silicone septa, for 2ml 8-425 screw top vial	10000/pk
LBSV02SS	Red PTFE/white silicone septa, for 2ml 8-425 screw top vial	10000/pk
Screw caps + Septa for standard screw top vial		
LBSV012CRS	White PTFE/red silicone septa + Black screw cap with hole, for 2ml 8-425 screw top vial	100/pk
LBSV012CSS	Red PTFE/white silicone septa + Black screw cap with hole, for 2ml 8-425 screw top vial	100/pk



Screw Top, Wide Opening Vials		
Part No.	Description	Unit
LBSV002C	2ml Clear vial, 9-425 screw top	100/pk
LBSV022C	2ml Clear vial, 9-425 screw top, graduated with writing area	100/pk
LBSV002A	2ml Amber vial, 9-425 screw top	100/pk
LBSV022A	2ml Amber vial, 9-425 screw top, graduated with writing area	100/pk
Screw caps - 9-425, polypropylene plastic for Wide Opening screw top vial		
LBSV002	Blue screw cap with hole, for 2ml 9-425 screw top vial	100/pk
Septa for 9-425 Screw caps		
LBSV03RS	White PTFE/red silicone septa, for 2ml 9-425 screw top vial	10000/pk
LBSV03SS	Red PTFE/white silicone septa, for 2ml 9-425 screw top vial	10000/pk
LBSV23SS	Blue PTFE/white silicone septa, Pre-slit, for 2mL 9-425 screw top vial	10000/pk
Screw caps + Septa for Wide Opening screw top vial		
LBSV002CRS	White PTFE/red silicone septa + Blue screw cap with hole, for 2ml 9-425 screw top vial	100/pk
LBSV102CSS	Red PTFE/white silicone septa + Blue screw cap with hole, for 2ml 9-425 screw top vial	100/pk
LBSV222CSS	Blue PTFE/white silicone septa, Pre-slit + Blue screw cap with hole, for 2ml 9-425 screw top vial	100/pk



Crimp Top, Wide Opening Vials

Part No.	Description	Unit
LBSV042C	2ml Clear vial, crimp top	100/pk
LBSV062C	2ml Clear vial, crimp top, graduated with writing area	100/pk
LBSV042A	2ml Amber vial, crimp top	100/pk
LBSV062A	2ml Amber vial, crimp top, graduated with writing area	100/pk

Crimp seal - aluminum cap with large hole, for crimp top vial

LBSV022	Aluminium cap 11 mm for 2ml crimp top vial	100/pk
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Septa for Crimp seal - aluminum cap

LBSV04RS	White PTFE/red silicone septa, for 2ml crimp vial	10000/pk
LBSV04SS	Red PTFE/white silicone septa, for 2ml crimp vial	10000/pk

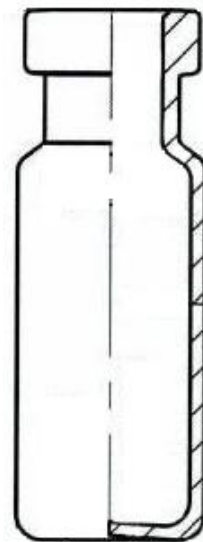
Aluminum cap + Septa for Wide Opening Crimp top vial

LBSV112CRS	White PTFE/red silicone septa+ Aluminium cap, for 2ml crimp top vial	100/pk
LBSV122CRS	Red PTFE/white silicone septa + Aluminium cap, for 2ml crimp top vial	100/pk

Actual DIM : Volume 1.8ml 32x11.7mm, Top ID 1/4"(6.3mm)

Pics are to scale

Engineering Drawings available : to select Customers ONLY

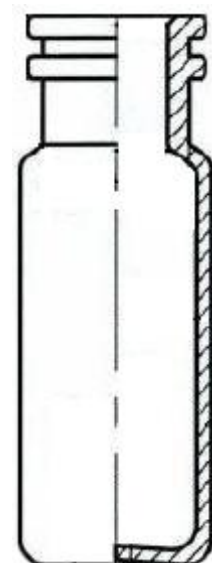


Snap Ring Top, Wide Opening Vials

Part No.	Description	Unit
LBSV052C	2ml Clear vial, snap top	100/pk
LBSV072C	2ml Clear vial, snap top, graduated with writing area	100/pk
LBSV052A	2ml Amber vial, snap top	100/pk
LBSV072A	2ml Amber vial, snap top, graduated with writing area	100/pk

Snap caps- for snap ring top vial with bonded-in septa

LBSV202CSS	Red PTFE/white silicone septa + Blue snap cap, for 2ml 9-425 Snap Ring Top vial	100/pk
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both Crimp & Screw Vials available . . .

with and without Graduations / White Marking Spot

Septa - Disc Type (in-situ pre-moulded) Silicone Rubber/PTFE laminated

- replacable - Silicone -Top, PTFE - Inner layer

- both red on White and White on Red

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ECHnology Pty Ltd
 Australian Distributors; Importers & Manufacturers

2ml 12*32mm Vials, flat base, clear and amber - Nominal sizes Only - designed to fit common chromatography Autosamplers

Standard Opening Crimp Top 8-425 1. Narrow neck crimp top vials fit many older GC autosamplers.
2. Compatible with all 11mm crimp seals and 5mm nominal diameter inserts

Wide Opening Crimp Top 9-425 1. Easier to fill
eg Agilent Autosamplers 2. Used with either 11mm aluminum seals

Standard Opening Screw Thread Standard neck vial—8-425 thread finish, 12x32mm outer profile
8-425

Wide opening Screw Thread 9-425 Wide neck vial is easy to fill

11mm Snap 1. Wide opening vial is easier to fill and provides a larger target area for the autosampler needle
2. Used with snap caps

4ml 15*45mm Vials, flat base

Screw Thread, Crimp Top, Snap Top Vials

Headspace Vials

Beveled Edge, Square Rim

Also Available with 10ml, 20ml, and 40ml vials.

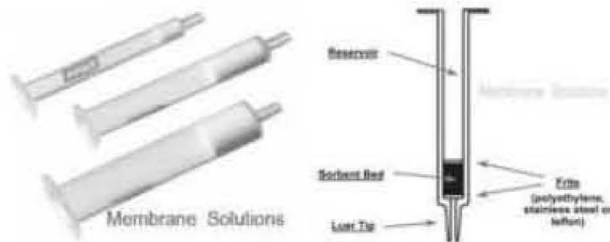
More information please visit our website : www.chromtech.net.au

Or mail : Chromalytic Technology Pty Ltd in AUSTRALIA at : info@chromtech.net.au





MS[®] Chrompure SPE Columns



Solid Phase Extraction

Solid-phase extraction (SPE) is a separation process by which compounds that are dissolved or suspended in a liquid mixture are separated from other compounds in the mixture according to their physical and chemical properties. Analytical laboratories use solid phase extraction to concentrate and purify samples for analysis. Solid phase extraction can be used to isolate analytes of interest from a wide variety of matrices, including urine, blood, water, beverages, soil, and animal tissue.

SPE's low solvent consumption, is convenient, safe and with high efficiency. The principle of "like dissolves like", SPE can be classified in four types: inverse SPE, normal phase SPE, ion exchange SPE, absorption SPE.



MS[®] Chrompure SPE Columns

MS offers Chrompure series to our customers, which have silica-based, organic copolymer or inorganic chemical based SPE columns. The filling material includes C18, NH₂, C8, Alumina, GCB, CN, Florisil, Si, SAX, SCX, PSA, PCX, PAX and so on. Column capacities consist of 1, 3, 6, and 10 ml sizes, etc. Our manufacturing process minimizes variability and improves recovery and cleanup procedures. Chrompure SPE product have the following several characteristics

SPE Main applications:

- Biological samples and natural compounds
- Pharmaceuticals and Drugs
- Pesticides and antibiotics in food and agricultural matrices
- Environmental Samples, organic compounds and pollutants.

Chrompure Feature

- Available in a range of packing media
- Chrompure quality sorbents for consistent results
- With various packing, ensure better selectivity



MS[®] Chrompure SPE Product

Silica-Based
SPE

Polymer

Adsorptive
material

C18
C18-ne
C8
CN
PSA
NH₂
SAX
SCX
Silica

PLS
PAX
PCX

Silica
Florisil
AL-A
AL-N
AL-B
GCB

Membrane Solutions LLC





Silica Base

Chrompure C18-ne



Partical Size: 40-60 μm
 Silica Base: irregular shaped
 Pore Size: 52-68 \AA
 Endcapped: no
 Carbon(C%): 17%

- **Non-endcapped bonded phase** that enables the silica surface to be more active.
- Moderately nonpolar and polar secondary interactions.
- Enhanced the retention of polar and basic compounds than C18

Chrompure C18



Partical Size: 40-60 μm
 Silica Base: irregular shaped
 Pore Size: 52-68 \AA
 Endcapped: no
 Carbon(C%): 17%

- **Organic analytes extraction** C18 has the broadest spectrum of retention among bonded silica sorbents, since it retains most organic analytes from aqueous matrices, when the compounds of interest vary widely in structure.
- **Desalting** When analyzing small to intermediate molecules, Chrompure C18 can be used for desalting aqueous matrices prior to ion exchange, as salts pass through the sorbent unretained.

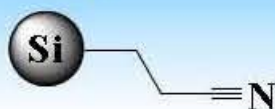
Chrompure C8



Partical Size: 40-60 μm
 Silica Base: irregular shaped
 Pore Size: 52-68 \AA
 Endcapped: yes
 Carbon(C%): 11%

- **Moderate Hydrophobicity:** separating a wide range of compounds and replace C18 when too strongly retention on C18.
- **Simultaneous Extraction:** fat- and water-solution vitamins from human serum and herbicides, fungicides, pesticides from waste

Chrompure CN



Partical Size: 40-60 μm
 Silica Base: irregular shaped
 Pore Size: 52-68 \AA
 Endcapped: yes
 Carbon(C%): 6.5%

- Both **normal** and **reversed-phase** chromatography
- Less polar compared to silica and less hydrophobic compared to C18 and C8.
- Usually used to extract acidic, neutral, and basic compounds from aqueous solutions.

Chrompure PSA



Partical Size: 40-60 μm
 Silica Base: irregular shaped
 Pore Size: 52-68 \AA
 Endcapped: No
 Carbon(C%): 7%
 pK_a: 10.1 and 10.9

- Similar selectivity to Chrompure NH₂.
- Strong affinity and high capacity for removing fatty acids, organic acids, and some polar pigments and sugars when conducting multi-residue pesticide analysis in foods.
- Excellent sorbent for **chelation**.

Chrompure NH₂

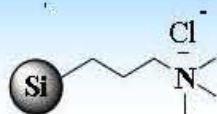


Partical Size: 40-60 μm
 Silica Base: irregular shaped
 Pore Size: 52-68 \AA
 Endcapped: No
 Carbon(C%): 3.5%
 pK_a: 9.8

- **Amino propyl phase**, both hydrogen bonding and anion exchange.
- Weaker anion exchanger retention of very strong anions such as sulfonic acids which may be retained irreversibly on SAX.
- Separate peptides, drugs and metabolites from physiological fluids, and extraction of mono- and polysaccharides, steroids, cholesterol and triglycerides.



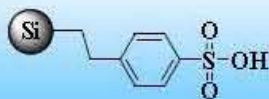
Chrompure SAX



Partical Size: 40-60 μm
Silica Base: irregular shaped
Pore Size: 52-68 Å
Endcapped: no
Carbon(C%): 7.5%
pK_a: completely dissociated

- **Strongest anion exchange sorbent** because of its quaternary amine functional group.
- Positive charged, better retention of **weaker anions** such as carboxylic acids that may not retain strongly enough on PSA or NH₂.
- Activate the ion exchanger by conditioning it with appropriate buffers.

Chrompure SCX



Partical Size: 40-60 μm
Silica Base: irregular shaped
Pore Size: 52-68 Å
Endcapped: no
Carbon(C%): 10.9%
pK_a<1.0

- **Strongest cation exchange sorbent** because of its benzenesulfonic acid functional group.
- Optimized for use in organic applications.
- **Nonpolar character** exhibited by benzene ring is useful to compounds with both cationic and nonpolar properties in aqueous solvent.

Inorganic Chemical Base

Chrompure Si



Partical Size: 40-60 μm
Silica Base: irregular shaped
Pore Size: 52-68Å
Endcapped: no

- The most polar sorbent, one of the best sorbents available for selectively separating analytes of very similar structure.
- Extract various compounds from non-polar solvents using hydrogen bonding, accomplishing the elution successively with increasing the solvent polarity.
- Excellent capacity for removing target molecules from reaction by-products and excess reagents.

Chrompure Florisil



Average Partical Size: 150-200 μm
Silica Base: irregular shaped

- Florisil is a magnesia silica gel, a polar sorbent capable to extract polar compounds from nonpolar matrix.
- Separate chlorinated pesticides, amines, herbicides, PCBs, ketones, organic acids and phenols

Chrompure Alumina-A



Acidic pH: ~4.5 (Brockman Act. I)
Average Partical Size: 125 μm
Silica Base: irregular shaped

- Alumina-A enhances Lewis acid properties, which makes the sorbent more retentive towards electron-rich compounds.
- Alumina-A has a slightly cationic nature through pretreatment with acidic solutions.
- Suitable for retention neutral and anionic species



Chrompure Alumina-B



Basic pH: ~10.0
(Brockman Act. I)
Average Partical Size:
125 μm
Silica Base: irregular shaped

- Exhibits Lewis base properties, more retentive towards electron-donors compounds.
- The surface has a slightly anionic nature through pretreatment with acidic solutions.
- Suitable for retention of neutral and cationic compounds.
- Strong hydrogen bonding is also effective for polar cations.

Chrompure Alumina-N



Neutral pH: ~7.5
(Brockman Act. I)
Average Partical Size:
125 μm
Silica Base: irregular shaped

- Extremely polar sorbent, similar to silica.
- More stable under high pH conditions than unbonded silica.
- An electrically neutral surface retentive for electron-rich compounds like aromatic species and aliphatic amines, and compounds with electronegative group like oxygen, phosphorus and sulfur atoms.
- Extrat both nonpolar and polar compounds from aqueous and nonaqueous matrices respectively.

Chrompure Carbon

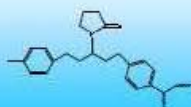
GCB

Sorbent : laminated structure
graphitized carbon
Average Partical Size::
120-400 μm

- Higher and more stable recovery rates in extracting polar substance, like organochlorine , organophosphorus and nitrogen pesticides
- Excellent performance in organic extraction and purification
- Extremely rapid extract processing due to the few-porosity.

Organic Copolymer Base

Chrompure PLS



particle size: 80-100 μm
pore size: 70-90 \AA
area: 600-800 m^2

- Copolymer of polystyrene/ divinylbenzene, contained both hydrophilic and hydrophobic radicals
- Good retention on polar and non-polar molecule hydrophilelipophile balance.
- PLS has higher stability and wider pH range. Popular utilised in food

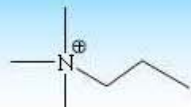
Chrompure PCX



particle size: 80-100 μm
pore size: 70-90 \AA
area: 600-800 m^2

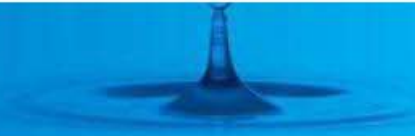
- Sulfonic acid group bonding polystyrene/divinylbenzene copolymer is mixed strong cation exchange sorbent. Both cation exchange and reverse phase retention mode, suitable for carboxylic acid compounds pKa between 2-8, mainly anionic compounds.

Chrompure PAX



particle size: 80-100 μm
pore size: 70-90 \AA
area: 600-800 m^2

- Quaternary ammonium group bonded copolymer is mixed anion exchange and reverse phase sorbent.
- Excellent extraction to purified acid, carboxy acid compounds, pKa between 2-8.



Ordering Information

Cat. No.	Description	Mass	Volume	Package (pcs/pk)
LBSC181001	C18	100mg	1mL	100
LBSC182003		200mg	3mL	50
LBSC185003		500mg	3mL	50
LBSC185006		500mg	6mL	30
LBSC1810006		1000mg	6mL	30
LBSC18N1001		C18-ne	100mg	1mL
LBSC18N2003	200mg		3mL	50
LBSC18N5003	500mg		3mL	50
LBSC18N5006	500mg		6mL	30
LBSC18N10006	1000mg		6mL	30
LBSC81001	C8		100mg	1mL
LBSC82003		200mg	3mL	50
LBSC85003		500mg	3mL	50
LBSC85006		500mg	6mL	30
LBSC810006		1000mg	6mL	30
LBSCN1001		CN	100mg	1mL
LBSCN5003	500mg		3mL	50
LBSCN10006	1000mg		6mL	30
LBSPSA1001	PSA	100mg	1mL	100
LBSPSA5003		500mg	3mL	50
LBSPSA5006		500mg	6mL	30
LBSPSA10006		1000mg	6mL	30
LBSNH21001	NH2	100mg	1mL	100
LBSNH22003		200mg	3mL	50
LBSNH25003		500mg	3mL	50
LBSNH25006		500mg	6mL	30
LBSNH210006		1000mg	6mL	30
LBSSAX1001		SAX	100mg	1mL
LBSSAX5003	500mg		3mL	50
LBSSAX5006	500mg		6mL	30
LBSSCX1001	SCX	100mg	1mL	100
LBSSCX5003		500mg	3mL	50
LBSSCX5006		500mg	6mL	30
LBSSII1001	Silica	100mg	1mL	100
LBSSII5003		500mg	3mL	50
LBSSII10006		1000mg	6mL	30



LBSFL1001		100mg	1mL	100
LBSFL5003	Florisil	500mg	3mL	50
LBSFL5006		500mg	6mL	30
LBSFL10006		1000mg	6mL	30
LBSALA1001		100mg	1mL	100
LBSALA5003	AL-A	500mg	3mL	50
LBSALA10006		1000mg	6mL	30
LBSALB1001		100mg	1mL	100
LBSALB5003	AL-B	500mg	3mL	50
LBSALB10006		1000mg	6mL	30
LBSALN1001		100mg	1mL	100
LBSALN5003	AL-N	500mg	3mL	50
LBSALN10006		1000mg	6mL	30
LBSGCB2503		250mg	3mL	50
LBSGCB5003	GCB	500mg	3mL	50
LBSGCB5006		500mg	6mL	30
LBSPLS0603		60mg	3mL	50
LBSPLS1506		150mg	6mL	30
LBSPLS2006	PLS	200mg	6mL	30
LBSPLS5006		500mg	6mL	30
LBSPLS5012		500mg	12mL	20
LBSPCX0603		60mg	3mL	50
LBSPCX1506		150mg	6mL	30
LBSPCX2006	PCX	200mg	6mL	30
LBSPCX5012		500mg	12mL	20
LBSPCX10020		1000mg	20mL	20
LBSPCX0603		60mg	3mL	50
LBSPCX1506		150mg	6mL	30
LBSPCX5012	PAX	500mg	12mL	20
LBSPCX10020		1000mg	20mL	20

Membrane Solutions LLC