Non-Sterile Millex® Syringe Filter Selection Guide

Membrane	Housing	Diameter, mm	Process Volume (hold-up)	Pore Size	Page
Non-sterile Millex® Syringe Filters with Millipore Express PLUS® (PES) Membrane Fastest flow, high throughput	Polypropylene	13	10 mL (≤ 15 µL)	0.22	159
				0.45	
		33	100 mL (≤ 80 µL)	0.22	
				0.45	
Non-sterile Millex® Syringe Filters with Durapore® (PVDF) Membrane Low protein binding	HDPE	4	1 mL (≤10 µL)	0.22	152
				0.45	
	Polypropylene	13	10 mL (≤ 15 µL)	0.22	
				0.45	
	PVC	25	100 mL (≤ 100 µL)	5.0	
	Polypropylene	33	100 mL (≤ 80 µL)	0.22	
				0.45	
Non-sterile Millex® Syringe Filters with Nylon Membrane Broad chemical compatibility	Polypropylene	13	10 mL (≤ 15 µL)	0.20	157
				0.45	
		33	100 mL (≤ 80 µL)	0.20	
				0.45	
Non-sterile Millex® Syringe Filters with LCR (Hydrophilic PTFE) Membrane Lowest extractables and excellent solvent resistance	HDPE	4	1 mL (≤10 µL)	0.20	153
				0.45	
		13	10 mL (≤ 25 µL)	0.20	
				0.45	
		25	100 mL (≤ 100 µL)	0.20	
				0.45	
Non-sterile IC Millex® Syringe Filters with LCR (Hydrophilic PTFE) Membrane Sample preparation for ion chromatography	HDPE	13	10 mL (≤ 25 µL)	0.20	156
				0.45	
		25	100 mL (≤ 100 µL)	0.20	
				0.45	
Non-sterile Millex® Syringe Filter with Fluoropore™ (Hydrophobic PTFE) Membrane Excellent solvent resistance	HDPE	4	1 mL (≤10 µL)	0.20	155
				0.45	
	Polypropylene	13	10 mL (≤ 15 µL)	0.20	
				0.45	
	HDPE	25	100 mL (≤ 100 µL)	0.20	
				0.45	
				5.0	
Non-sterile Millex® Syringe Filters with MCE Membrane General purpose filtration	PVC	25	100 mL (≤ 100 µL)	0.22	160
				0.45	
				0.80	
Automation-Compatible & High Particulate Filtration					
Glass Fiber	HDPE	25	100 mL (<250 µL)	1.0	162, 163
LCR (Hydrophilic PTFE) Membrane with graduated multi-layer glass fiber prefilter	HDPE	25	100 mL (<250 µL)	0.20	
			100 mL (<250 µL)	0.45	
Durapore® (PVDF) Membrane with graduated multi-layer glass fiber prefilter	HDPE	25	100 mL (<250 µL)	0.45	
Nylon Membrane with graduated multi-layer glass fiber prefilter	HDPE	25	100 mL (<250 µL)	0.20	
			100 mL (<250 µL)	0.45	

Non-Sterile Millex® Syringe Filter Selection Guide

Membrane	Pore Size	Dissolution Testing	IC	HPLC	UHPLC	LC-MS	Clarification of Particle-Laden Solutions	Clarification of Aqueous Solutions	Clarification of Organic Solutions	Clarification of Aqueous and Organic Solutions	Clarification of Proteinaceous Solutions	Vent Filtration
Millipore Express® PLUS (PES) Membrane Fastest flow, high throughput	0.22	●	●		●	●	●	●			●	
	0.45	●	●	●			●	●			●	
Durapore® (PVDF) Membrane Low-protein binding	0.22	●			●	●		●			●	
	0.45	●		●		●		●			●	
	5.0						●	●				
Nylon Membrane Broad chemical compatibility	0.20	●			●	●		●	●	●		
	0.45	●		●		●		●	●	●		
LCR (Hydrophilic PTFE) Membrane Lowest extractables and excellent solvent resistance	0.20	●			●	●		●	●	●	●	
	0.45	●		●		●		●	●	●	●	
IC Millex® Syringe Filters with LCR (Hydrophilic PTFE) Membrane Sample preparation for ion chromatography	0.20		●					●	●	●		
	0.45		●					●	●	●		
Fluoropore™(Hydrophobic PTFE) Membrane Excellent solvent resistance	0.20				●				●			●
	0.45			●					●			●
	5.0								●			●
MCE Membrane General purpose filtration	0.22	●						●				
	0.45	●						●				
	0.80						●	●	●			
Glass Fiber Membrane	Glass Fiber							●				
Automation-Compatible & High Particulate Filtration												
Glass Fiber	1.0	●					●	●	●	●		
LCR (Hydrophilic PTFE) Membrane with graduated multi-layer glass fiber prefilter	0.20	●			●	●	●	●	●	●	●	
	0.45	●		●		●	●	●	●	●	●	
Durapore® (PVDF) Membrane with graduated multi-layer glass fiber prefilter	0.45	●		●		●	●	●			●	
Nylon Membrane with graduated multi-layer glass fiber prefilter	0.20	●			●	●	●	●	●	●		
	0.45	●		●		●	●	●	●	●		

Non-Sterile Millex® Syringe Filters with Durapore® Membrane

Low protein binding

Non-sterile Millex® syringe filters with hydrophilic Durapore® (PVDF) membrane provide high flow rates and throughput, low levels of extractables and broad chemical compatibility. Hydrophilic PVDF membranes bind far less protein than nylon, nitrocellulose membranes, or PTFE membranes. Syringe filters are available in two pore sizes and three diameters to optimize results.

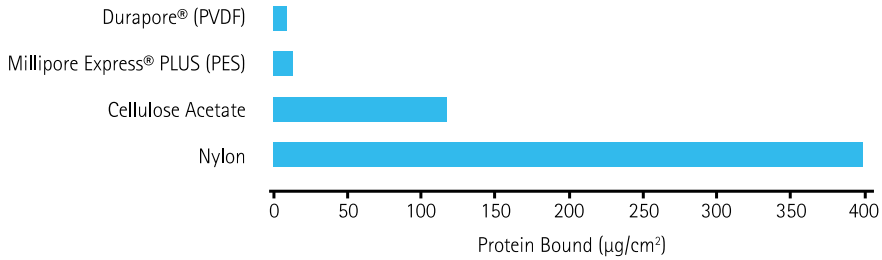
Features & Benefits

- Low protein binding to minimize interaction with your sample and maximize recovery
- Available in 0.22 µm and 0.45 µm pore sizes and three diameters to suit your application needs
- Housing materials are either polypropylene or high density polyethylene (HDPE), offering low levels of extractables and broad chemical compatibility

Applications

Sample Filtration Prior to UHPLC, HPLC and Mass Spec; Solvent Filtration; Filtration of Biological Samples and Protein Solutions

Product Performance



Lowest protein binding with Durapore® PVDF membrane. Membrane disks with a 0.22 µm pore size were exposed to a 1 mg/mL solution of ^{125}I-labeled IgG. The chart shows protein binding after incubation (normalized to membrane surface area).

Specifications

	4 mm Millex® Filters	13 mm Millex® Filters	25 mm Millex® Filters	33 mm Millex® Filters
Housing Material	HDPE	Polypropylene	PVC	Polypropylene
Housing Color	Natural	Yellow band	Clear	Yellow band
Membrane Material	Hydrophilic Durapore® (PVDF)	Hydrophilic Durapore® (PVDF)	Hydrophilic Durapore® (PVDF)	Hydrophilic Durapore® (PVDF)
Pore Sizes Available, µm	0.22, 0.45	0.22, 0.45	5.0	0.22, 0.45
Inlet Fittings	Female Luer-Lok®	Female Luer-Lok®	Female Luer-Lok®	Female Luer-Lok®
Outlet Fittings	Male LuerSlip™, stepped	Male Luer-Slip™	Male Luer-Slip™	Male Luer-Slip™
Filtration Area, cm²	0.1	0.8	3.9	4.5
Process Volume, mL	1	≤10	≤100	≤100
Hold-up Volume, µL	<10	≤15 after air purge	<100	≤80 after air purge
Maximum Pressure, bar (psi)	14 (200)	10 (150)	5.2 (75)	8.6 (125)
Maximum Temperature, °C	45	45	45	45

Ordering Information

Description	Diameter (mm)	Pore Size (µm)	Qty/Pk	Catalogue No.
Millex®-GV Syringe Filter	4	0.22	100	SLGVR04NL
			1000	SLGVR04NK
Millex®-HV Syringe Filter	4	0.45	100	SLHVR04NL
			1000	SLHVR04NK
Millex®-GV Syringe Filter	13	0.22	100	SLGVX13NL
			100	SLGVX13TL*
			1000	SLGVX13NK
Millex®-HV Syringe Filter	13	0.45	100	SLHVX13NL
			100	SLHVX13TL*
			1000	SLHVX13NK
Millex®-GV Syringe Filter	33	0.22	50	SLGV033NS
			250	SLGV033NB
			1000	SLGV033NK
Millex®-HV Syringe Filter	33	0.45	50	SLHV033NS
			250	SLHV033NB
			1000	SLHV033NK
Millex®-SV Syringe Filter	25	5.0	250	SLSV025NB

*Tube Outlet

For more information visit: www.merckmillipore.com/NSmillex

Non-Sterile Millex® Syringe Filters with Hydrophilic PTFE Membrane

Lowest level of extractables and excellent solvent resistance

Hydrophilic PTFE membranes provide the lowest level of extractables and broad chemical compatibility with both aqueous and organic solutions. Hydrophilic PTFE membranes are ideal for preparing samples and mobile phases prior to liquid chromatography (LC) or mass spectrometry (MS) analysis and can be used to filter aqueous solutions without prior wetting. Syringe filters are available in two pore sizes and three diameters to optimize results. The housing is made from a low-extractable, high density polyethylene (HDPE).

Features & Benefits

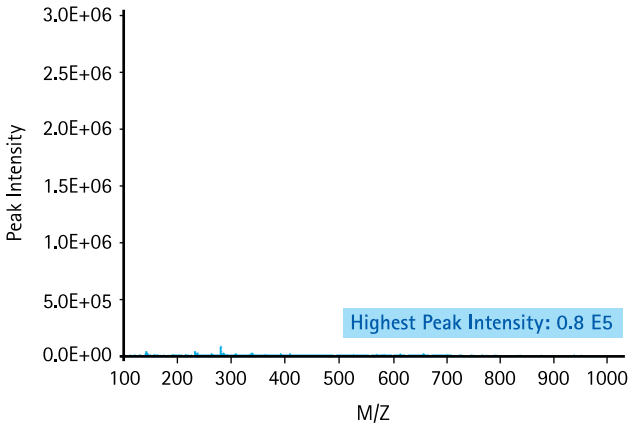
- Lowest level of extractables, optimizing background levels of sensitve analyses like UHPLC and LC-MS
- Compatible with both aqueous and organic solutions, providing broad chemical compatibility and flexibility in the lab
- Available in 0.20 µm and 0.45 µm pore sizes and three diameters to suit your application needs

Applications

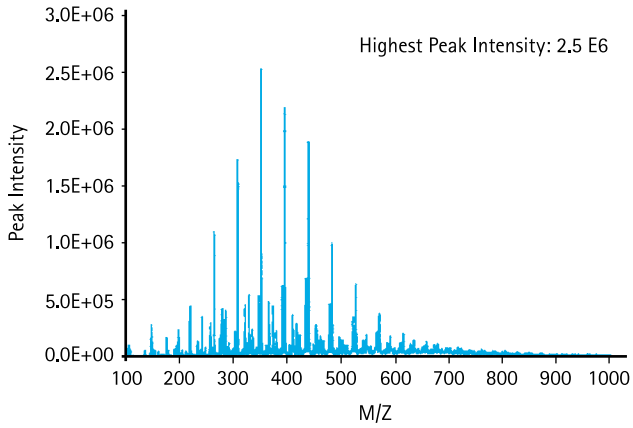
Sample Filtration Prior to UHPLC, HPLC and Mass Spec; Solvent Filtration; Clarification of Aqueous and Organic Solutions

Product Performance

A. Millex® Filter Unit, PTFE



B. Polypropylene



Millex® filters feature low extractables. Mass spectrometry detects few extractable impurities from Millex® syringe filters containing 0.45 µm pore hydrophilic PTFE membrane (A). In contrast, a syringe filter containing 0.45 µm pore polypropylene membrane from another vendor (B) shows significant leaching of impurities.

Specifications

	4 mm Millex® Filters	13 mm Millex® Filters	25 mm Millex® Filters
Housing Material	HDPE	HDPE	HDPE
Housing Color	Natural	Natural	Natural
Membrane Material	Hydrophilic PTFE	Hydrophilic PTFE	Hydrophilic PTFE
Pore Sizes Available, µm	0.20, 0.45	0.20, 0.45	0.20, 0.45
Inlet Fittings	Female Luer-Lok®	Female Luer-Lok®	Female Luer-Lok®
Outlet Fittings	Male Luer-Slip™, stepped	Male Luer-Slip™	Male Luer-Slip™
Filtration Area, cm^2	0.1	0.65	3.9
Process Volume, mL	1	≤10	≤100
Hold-up Volume, µL	<10	≤25 after air purge	<100 after air purge
Maximum Pressure, bar (psi)	14 (200)	7 (100)	7 (100)
Maximum Temperature, °C	45	45	45

Ordering Information

Description	Diameter (mm)	Pore Size (µm)	Qty/Pk	Catalogue No.
Millex®-LG Syringe Filter	4	0.20	100	SLLGR04NL
Millex®-LH Syringe Filter	4	0.45	100	SLLHR04NL
			1000	SLLHR04NK
Millex®-LG Syringe Filter	13	0.20	100	SLLGH13NL
			1000	SLLGH13NK
Millex®-LCR Syringe Filter	13	0.45	100	SLCR013NL
			100	SLCRT13NL*
			1000	SLCR013NK
Millex®-LG Syringe Filter	25	0.20	50	SLLGH25NS
			250	SLLGH25NB
			1000	SLLGH25NK
Millex®-LCR Syringe Filter	25	0.45	50	SLCR025NS
			250	SLCR025NB
			1000	SLCR025NK

*Tube Outlet

For more information visit: www.merckmillipore.com/NSmillex

Non-Sterile Millex® Syringe Filter with Fluoropore™ Membrane

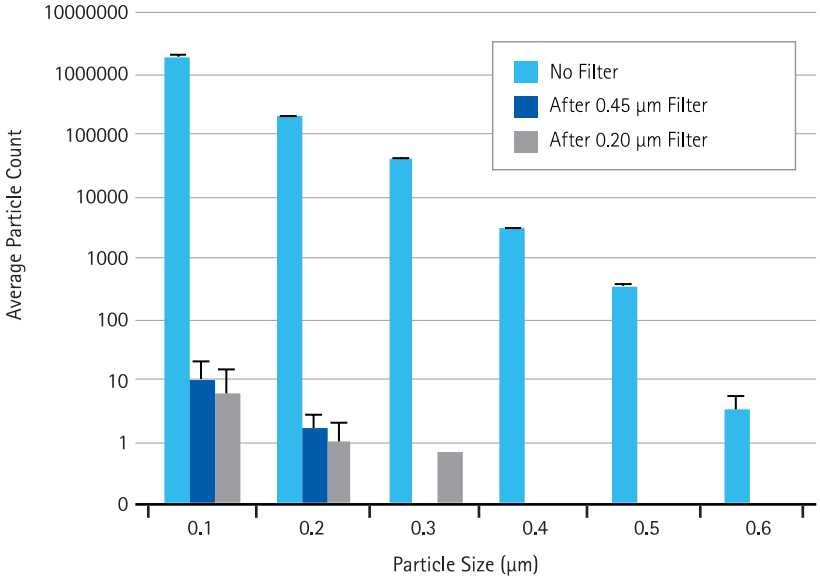
Excellent solvent resistance

Non-sterile Millex® syringe filters with hydrophobic Fluoropore™ (PTFE) membrane provide broad chemical compatibility and are ideal for filtering samples in organic solvents. Hydrophobic Fluoropore™ syringe filters can also be used to prevent back-streaming of atmospheric moisture in venting appications. Syringe filters are available in 0.20 µm and 0.45 µm pore sizes and three diameters to optimize results. The housing is made from a low-extractable, high density polyethylene (HDPE) or polypropylene.

Features & Benefits

- Broad chemical compatibility and excellent solvent resistance with organic solutions
- Available in two pore sizes and three diameters to suit your application needs

Product Performance



Excellent particle retention. Millex® syringe filters of two different pore sizes were used to remove particulates from samples of air. The resulting particulate levels per cubic foot of air, with and without syringe filtration, were measured using a particle counter (three samples per type of filter). Data show excellent particle retention by Millex®filters with Fluoropore™ membrane, as even particles smaller than the nominal pore size were efficiently removed from the samples (note that y axis is on a log scale).

Applications

Fine Particle Removal and Clarification of Organic Solutions, Vent Filtration, Sterilization of Gases

Specifications

	4 mm Millex® Filters	13 mm Millex® Filters	25 mm Millex® Filters
Housing Material	HDPE	Polypropylene	HDPE
Housing Color	Natural	Red band	Natural
Membrane Material	Hydrophobic PTFE	Hydrophobic PTFE	Hydrophobic PTFE
Pore Sizes Available, µm	0.20, 0.45	0.20, 0.45	0.20, 0.45, 5.0
Inlet Fittings	Female Luer-Lok®	Female Luer-Lok®	Female Luer-Lok®
Outlet Fittings	Male Luer-Slip™, stepped	Male Luer-Slip™	Male Luer-Slip™
Filtration Area, cm^2	0.1	0.8	3.9
Process Volume, mL	1	≤10	≤100
Hold-up Volume, µL	<10	≤15 after air purge	<100 after air purge*
Maximum Pressure, bar (psi)	14 (200)	10 (150)	7 (100)
Maximum Temperature, °C	45	45	45

* 5.0 µm device hold-up volume <300 after air purge

Ordering Information

Description	Diameter (mm)	Pore Size (µm)	Qty/Pk	Catalogue No.
Millex®-FG Syringe Filter	4	0.20	100	SLFGR04NL
Millex®-FH Syringe Filter	4	0.45	100	SLFHR04NL
Millex®-FG Syringe Filter	13	0.20	100	SLFGX13NL
			100	SLFGX13TL*
			1000	SLFGX13NK
Millex®-FH Syringe Filter	13	0.45	100	SLFHX13NL
			100	SLFHX13TL*
			1000	SLFHX13NK
Millex®-FG Syringe Filter	25	0.20	50	SLFG025NS
			250	SLFG025NB
			1000	SLFG025NK
Millex®-FH Syringe Filter	25	0.45	50	SLFH025NS
			250	SLFH025NB
			1000	SLFH025NK
Millex®-LS Syringe Filter	25	5.0	50	SLLS025NS

*Tube Outlet

For more information visit: www.merckmillipore.com/NSmillex

Non-Sterile IC Millex® Syringe Filters with Hydrophilic PTFE Membrane

Sample preparation for ion chromatography

Non-sterile ion chromatography (IC) Millex® syringe filters with hydrophilic PTFE membrane provide the lowest IC extractable levels and broad chemical compatibility with both aqueous and organic solutions. Syringe filters are available in two pore sizes and two diameters to optimize results. The housing is made from a low-extractable, high density polyethylene (HDPE). In addition, each unit is individually packaged to minimize the risk of extraneous ionic contamination. Lot release criteria include bubble point, flow rate, housing pressure, downstream particles, and IC levels. A certificate of quality with complete specifications is included in each box.

Features & Benefits

- Lowest level of IC extractables, optimizing background levels in sensitive IC analyses
- Compatible with both aqueous and organic solutions, offering broad chemical compatibility and flexibility in the lab
- Each lot is certified to contain low ion extractable levels
- Available in 0.20 µm and 0.45 µm pore sizes and two diameters to suit your application needs

Applications

Ion Chromatography

Specifications

	13 mm Millex® Filter	25 mm Millex® Filter
Housing Material	HDPE	HDPE
Inlet Fittings	Female Luer-Lok®	Female Luer-Lok®
Outlet Fittings	Male Luer-Slip™	Male Luer-Slip™
Filtration Area, cm^2	0.65	3.9
Process Volume, mL	10	100
Hold-up Volume, µL	<25 after air purge	<100 after air purge
Maximum Inlet Pressure, bar (psi)	7 (100)	7 (100)
Maximum Operating Temperature, °C	45	45

Ordering Information

Description	Diameter (mm)	Pore Size (µm)	Qty/Pk	Catalogue No.
IC Millex®-LG Syringe Filter	13	0.20	100	SLLGC13NL
	25		50	SLLGC25NS
IC Millex®-LH Syringe Filter	13	0.45	100	SLLHC13NL
	25		50	SLLHC25NS

For more information visit: www.merckmillipore.com/NSmillex

Non-Sterile Millex® Syringe Filters with Nylon Membrane

Broad chemical compatibility

Non-sterile Millex® syringe filters with hydrophilic nylon membrane are compatible with a broad range of solvents, making them ideal for sample filtration of most aqueous and organic solvents across the laboratory. Syringe filters are available in two pore sizes and three diameters to optimize results. The housing is made from polypropylene, offering a low level of extractables and broad chemical compatibility.

Features & Benefits

- Compatible with both aqueous and organic solutions, providing broad chemical compatibility and flexibility in the lab
- Available in 0.20 µm and 0.45 µm pore sizes and two diameters to suit your application needs

Applications

Sample Filtration Prior to UHPLC, HPLC and Mass Spec; Solvent Filtration; Clarification of Aqueous and Organic Solutions

Specifications

	13 mm Millex® Filters	33 mm Millex® Filters
Housing Material	Polypropylene	Polypropylene
Housing Color	Purple band	Purple band
Membrane Material	Hydrophilic Nylon	Hydrophilic Nylon
Pore Sizes Available, µm	0.20, 0.45	0.20, 0.45
Inlet Fittings	Female Luer-Lok®	Female Luer-Lok®
Outlet Fittings	Male Luer-Slip™	Male Luer-Slip™
Filtration Area, cm^2	0.8	4.5
Process Volume, mL	≤10	≤100
Hold-up Volume, µL	≤15 after air purge	≤80 after air purge
Maximum Pressure, bar (psi)	10 (150)	8.6 (125)
Maximum Temperature, °C	45	45

Ordering Information

Description	Diameter (mm)	Pore Size (µm)	Qty/Pk	Catalogue No.
Millex®-GN Syringe Filter	13	0.20	100	SLGNX13NL
			100	SLGNX13TL*
			1000	SLGNX13NK
Millex®-HN Syringe Filter	13	0.45	100	SLHNX13NL
			100	SLHNX13TL*
			1000	SLHNX13NK
Millex®-GN Syringe Filter	33	0.20	50	SLGN033NS
			250	SLGN033NB
			1000	SLGN033NK
Millex®-HN Syringe Filter	33	0.45	50	SLHN033NS
			250	SLHN033NB
			1000	SLHN033NK

*Tube Outlet

For more information visit: www.merckmillipore.com/NSmillex

Non-Sterile Millex® Syringe Filters with PES Membrane

Fastest flow, high throughput

Non-sterile Millex® syringe filters with Millipore Express® PLUS polyethersulfone (PES) membrane provide ultrafast filtration of aqueous solutions. This fast-filtering, low protein-binding membrane is preferred by many researchers. Syringe filters are available in two pore sizes and two diameters to optimize results. The housing is made from polypropylene, offering a low level of extractables and broad chemical compatibility.

Features & Benefits

- Low protein binding to minimize interaction with your sample and maximize recovery
- High-throughput PES membrane provides fast filtration for large sample volumes
- Available in 0.22 µm and 0.45 µm pore sizes and two diameters to suit your application needs

Applications

Buffer Filtration, Clarification of Aqueous Solutions

Specifications

	13 mm Millex® Filters	33 mm Millex® Filters
Housing Material	Polypropylene	Polypropylene
Housing Color	Green band	Green band
Membrane Material	Hydrophilic PES Millipore Express® PLUS	Hydrophilic PES Millipore Express® PLUS
Pore Sizes Available, µm	0.22, 0.45	0.22, 0.45
Inlet Fittings	Female Luer-Lok®	Female Luer-Lok®
Outlet Fittings	Male Luer-Slip™	Male Luer-Slip™
Filtration Area, cm^2	0.8	4.5
Process Volume, mL	≤10	≤100
Hold-up Volume, µL	≤15 after air purge	≤80 after air purge
Maximum Pressure, bar (psi)	10 (150)	8.6 (125)
Maximum Temperature, °C	45	45

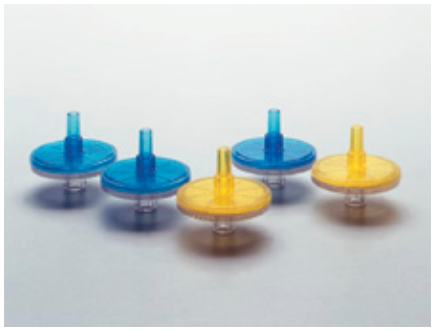
Ordering Information

Description	Diameter (mm)	Pore Size (µm)	Qty/Pk	Catalogue No.
Millex®-GP Syringe Filter	13	0.22	100	SLGPX13NL
			1000	SLGPX13NK
Millex®-HP Syringe Filter	13	0.45	100	SLHPX13NL
			1000	SLHPX13NK
Millex®-GP Syringe Filter	33	0.22	50	SLGP033NS
			250	SLGP033NB
			1000	SLGP033NK
Millex®-HP Syringe Filter	33	0.45	50	SLHP033NS
			250	SLHP033NB
			1000	SLHP033NK

For more information visit: www.merckmillipore.com/NSmillex

Non-Sterile Millex® Syringe Filters with MCE Membrane

Broad application and research use



Non-sterile Millex® syringe filters with hydrophilic mixed cellulose esters (MCE) membrane are widely used in general analytical and research applications. Syringe filters are available in three pore sizes to optimize results. The housing is made from a low-extractable polyvinylidene chloride (PVC).

Features & Benefits

- MCE is the most widely used and referenced general purpose membrane
- Available in 0.22 µm, 0.45 µm and 0.80 µm pore sizes to suit your application needs

Applications

Clarification of Aqueous Solutions, General Laboratory Filtration

Specifications

Housing Material	PVC
Housing Color	Clear top/blue base*
Membrane Material	Hydrophilic MCE
Pore Sizes Available, µm	0.22, 0.45, 0.80, prefilter
Inlet Fittings	Female Luer-Lok®
Outlet Fittings	Male Luer-Slip™
Filtration Area, cm^2	3.9
Process Volume, mL	100
Hold-up Volume, µL	≤100**
Maximum Pressure, bar (psi)	5.2 (75)
Maximum Temperature, °C	45

***0.8 µm device has clear top with green base. Glass prefilter device is natural colored.**

****Hold-up volume does not apply to glass prefilter device.**

Ordering Information

Description	Diameter (mm)	Pore Size (µm)	Qty/Pk	Catalogue No.
Millex®-GS Syringe Filter	25	0.22	250	SLGS025NB
			1000	SLGS02510
Millex®-HA Syringe Filter	25	0.45	100	SLHA025NB
			1000	SLHA02510
Millex®-AA Syringe Filter	25	0.80	250	SLAA025NB
			1000	SLAA025NK
Millex®-AP Syringe Filter	25	NA	50	SLAP02550

For more information visit: www.merckmillipore.com/NSmillex

In-Line Millex® Filter Units (25 mm and 50 mm)

Ideal for in-line sterilization of gases and venting sterile containers

Millex® syringe filter units with hydrophobic Fluoropore™ or Millipore Express® PLUS PES membrane are ideal for in-line sterilization of gases and venting sterile containers, and filters with Fluoropore™ membrane can also be used for sterilizing or clarifying organic solutions. There are also specialized filter units to protect hemodialysis transducers from blood and moisture. The 50 mm Millex® filter units are especially useful for vacuum line protection. All units are bi-directional.

Features & Benefits

- Specialized filter units protect hemodialysis transducers from blood and moisture
- 50 mm Millex® units ideal for vacuum line protection
- All Millex® Hydrophobic PTFE units are bi-directional in flow

Applications

Sterilizing Gases, Vacuum Line Protection, Venting Sterile Containers, Sterilizing and Clarifying Organic Solutions

Specifications

	25 mm Millex® Units	50 mm Millex® Units with PTFE Membrane	50 mm Millex® Units with PES Membrane
Housing Material	PVC	Polypropylene	Acrylic
Filtration Area, cm²	3.9	19.6	19.6
Maximum Inlet Pressure, bar (psi)	5.2 (75)	4.1 (60)	4.1 (60)
Maximum Operating Temperature, °C	45	121	45

Ordering Information

Description	Filter Diameter (mm)	Pore Size (µm)	Membrane	Fitting Inlet	Fitting Outlet	Sterilization	Qty/Pk	Catalogue No.
Millex®-FG Filter Unit	25	0.2	Fluoropore™ PTFE	Female Luer-Lok®	Male Luer Slip™	Ethylene oxide	50	SLFG025LS
				Female Luer-Lok®	Male Luer-Lok®	Ethylene oxide	50	SLFGL25BS
				Female Luer-Lok®	Male Luer Slip™	Autoclavable	50	SLFG02550
Millex®-FG$_{50}$ Filter Unit	50	0.2	Fluoropore™ PTFE	Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Autoclavable	10	SLFG05010
				Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Autoclavable	100	SLFG05000
Millex®-FG$_{50}$ Filter Unit	50	0.2	Fluoropore™ PTFE	Stepped hose barb with female Luer-Slip™ interior	1/8 in. NPTM	Autoclavable	10	SLFG55010
Millex®-FG$_{50}$ Filter Unit	50	0.2	Fluoropore™ PTFE	Stepped hose barb with female Luer-Slip™ interior	1/8 in. NPTM	Autoclavable	10	SLFG65010
				Stepped hose barb with female Luer-Slip™ interior	1/8 in. NPTM	Autoclavable	100	SLFG65000
Millex®-FG$_{50}$ Filter Unit	50	0.2	Fluoropore™ PTFE	1/8 in. NPTM	1/8 in. NPTM	Autoclavable	10	SLFG75010
				1/8 in. NPTM	1/8 in. NPTM	Autoclavable	100	SLFG75000
Millex®-FG$_{50}$ Filter Unit	50	0.2	Fluoropore™ PTFE	Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Autoclavable	10	SLFG85010
				Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Autoclavable	100	SLFG85000
Millex®-FH$_{50}$ Filter Unit	50	0.45	Fluoropore™ PTFE	Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Autoclavable	10	SLFH05010
				Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Autoclavable	10	SLFH05000
Millex®-FA$_{50}$ Filter Unit	50	1	Fluoropore™ PTFE	Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Autoclavable	100	SLFA05010
				Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Autoclavable	10	SLFA05000
Millex®-GP$_{50}$ Filter Unit	50	0.22	Millipore Express® PLUS PES	Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer-Slip™ interior	Gamma ir-radiated	10	SLGP05010
				Stepped hose barb with female Luer-Slip™ interior	Stepped hose barb with female Luer Slip™ interior and filling bell	Gamma ir-radiated	10	SLGPB5010
Transducer Protectors								
Dualex™ Ultra Filter Unit	25	0.22	Durapel™ PVDF	Female Luer-Lok®	Male Luer-Lok®	Ethylene oxide	50	SLGVS25US
				Female Luer-Lok®	Male Luer Slip™	Ethylene oxide	50	SLGVS25PS
				Female Luer-Slip™	Male Luer Slip™	Ethylene oxide	50	SLGVS25XS

25 mm Automation-Compatible Filter Units

High-throughput filtration

Automation-compatible, non-sterile Millex® syringe filter units provide efficient filtration for dissolution testing and other automated sample preparation applications, especially for pharmaceutical product analysis. These filters feature high-density polyethylene housing and a wide choice of membrane types, with or without prefilters, to fit any application need. The filters are designed with a pressure-resistant, domed housing and an optimized Luer-Lok® connection to ensure reliable delivery by automated systems.

Features & Benefits

- Domed housing ensures reliable delivery of filters
- Pressure-resistant housing resists bursting
- Luer-Lok® connection optimized for precise alignment and fit
- Available in either bulk or delivery tubes for use with automated filter-changing systems

Applications

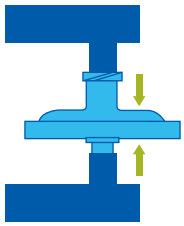
Drug Dissolution Testing, Automated Sample Preparation, Clarification of Solutions Containing High Particle Levels

Specifications

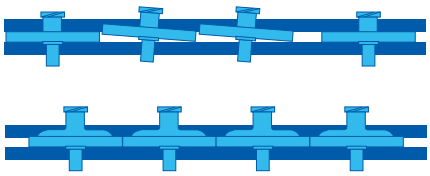
Housing Material	HDPE
Inlet Fittings	Female Luer-Lok®
Outlet Fittings	Male Luer-Slip™
Filtration Area, cm²	3.9
Process Volume, mL	100
Hold-up Volume, µL*	<100 (membrane); <200 (membrane and prefilter)
Maximum Inlet Pressure, bar (psi)	7 (100)
Maximum Operating Temperature, °C	45

*After air purge

Product Performance



A rigid domed housing design helps prevent backpressure, which can cause a workstation shut-down.



The domed housing of automation-compatible 25 mm Millex® syringe filters enables smooth, reliable delivery by eliminating shingling between filters in the transport rack.

Advantage: our automation-compatible syringe filters feature a rigid domed housing design that prevents backpressure buildup and also prevents shingling between filters, inside automated workstations.

Ordering Information

Description	Pore Size (µm)	Qty/Pk	Catalogue No.
Borosilicate glass fiber membrane (APFB) for clarifying aqueous and organic solutions containing high particle levels			
Millex®-PB Filter Unit	1.0	200 (8 x 25)	SLPBDZ5NZ
	1.0	1000	SLPBDZ5NK
Low protein-binding Durapore® (PVDF) membrane for clarifying aqueous and mild organic solutions			
Millex®-HV Filter Unit	0.45	200 (8 x 25)	SLHVDZ5NZ
		1000	SLHVDZ5NK
Low protein-binding Durapore® (PVDF) membrane and glass fiber prefilter for clarifying aqueous and mild organic solutions containing high particle levels			
Millex®-HV/PB Filter Unit	0.45	200 (8 x 25)	SLHVBZ5NZ
		1000	SLHVBZ5NK
Nylon membrane for clarifying aqueous and organic solutions			
Millex®-GN Filter Unit	0.2	200 (8 x 25)	SLGNDZ5NZ
		1000	SLGNDZ5NK
Millex®-HN Filter Unit	0.45	200 (8 x 25)	SLHNDZ5NZ
		1000	SLHNDZ5NK
Nylon membrane and glass fiber prefilter for clarifying aqueous and organic solutions containing high particle levels			
Millex®-HN/PB Filter Unit	0.45	200 (8 x 25)	SLHNBZ5NZ
		1000	SLHNBZ5NK
Low protein-binding hydrophilic LCR (PTFE) membrane for clarifying aqueous and organic solutions			
Millex®-LCR Filter Unit	0.2	200 (8 x 25)	SLLGDZ5NZ
		1000	SLLGDZ5NK
	0.45	200 (8 x 25)	SLCRDZ5NZ
		1000	SLCRDZ5NK
Low protein-binding hydrophilic LCR (PTFE) membrane and glass fiber prefilter for clarifying aqueous and organic solutions containing high particle levels			
Millex®-LCR/PB Filter Unit	0.45	200 (8 x 25)	SLCRBZ5NZ
		1000	SLCRBZ5NK

For more information visit: www.merckmillipore.com/NSmillex

Non-Sterile Millex® HPF Syringe Filters

Filter particle-laden or viscous samples

Non-sterile HPF Millex® filters include a graduated glass fiber prefilter to remove larger particles and either a 0.20 µm or 0.45 µm membrane filter for fine filtration. This combination of membranes provides significantly greater throughput than standard filters without prefiltration media, especially when filtering particle-laden solutions. HPF Millex® filters are available in bulk for individual sample filtration and in tubes for use with automated filter-changing systems. The filters feature a pressure-resistant, domed housing and an optimized Luer-Lok® connection to ensure reliable delivery by automated systems.

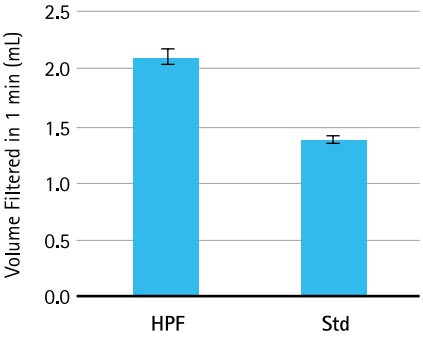
Features & Benefits

- Two to four times greater throughput than syringe filters without prefilters
- Domed housing ensures reliable delivery from automated filter-changing systems
- Pressure-resistant housing resists bursting
- Luer-Lok® connection optimized for precise alignment and fit
- Available in either bulk or delivery tubes for use with automated filter-changing systems

Applications

Drug Dissolution Testing, Automated Sample Preparation, Clarification of Solutions Containing High Particle Levels

Product Performance



Faster filtration for hard-to-filter solutions. A 25 mm Millex® HPF syringe filter and a standard 25 mm Millex® filter, both with 0.2 µm hydrophilic PTFE membrane, were used to filter a 1% solution of Pepto-Bismol® in Milli-Q® water using a pressure vessel set to 10 psi. Filtrate was collected in tared borosilicate tubes. The Millex® HPF filter enabled filtration of a higher volume of solution in one minute compared to the standard filter.

Specifications

Housing Material	HDPE
Inlet Fittings	Female Luer-Lok®
Outlet Fittings	Male Luer-Slip™
Filtration Area, cm²	3.9
Process Volume, mL	100
Hold-up Volume, µL	250
Maximum Inlet Pressure, bar (psi)	7 (100)
Maximum Operating Temperature, °C	45

Ordering Information

Description	Pore Size (µm)	Qty/Pk	Catalogue No.
Nylon membrane and graduated glass fiber prefilter for clarifying aqueous and mild organic solutions containing high particle levels			
Millex®-HPF/Nylon Filter Unit	0.20	50	SLGNM25NS
		1000	SLGNM25NK
	0.45	50	SLHNM25NS
		1000	SLHNM25NK
		200 (8 x 25)	SLHNMZ5NZ*
Low protein binding hydrophilic (PTFE) membrane and glass fiber prefilter for clarifying aqueous and organic solutions containing high particle levels.			
Millex®-HPF/LG/LCR Filter Unit	0.20	50	SLLGM25NS
		1000	SLLGM25NK
	0.45	50	SLCRM25NS
		1000	SLCRM25NK
Low protein binding Durapore® (PVDF) membrane and graduated glass fiber prefilter for clarifying proteinaceous solutions containing high particle levels			
Millex®-HPF/HV Filter Unit	0.45	50	SLHVM25NS
		1000	SLHVM25NK
		200 (8 x 25)	SLHVMZ5NZ*

*Automation-compatible

For more information visit: www.merckmillipore.com/NSmillex

Samplicity® Filtration System

Multi-sample vacuum filtration system

The Samplicity® Filtration System provides a convenient, high-throughput alternative to syringe-tip filters when preparing samples for chromatography. The easy-to-use Samplicity® system is the first vacuum-driven system with the designed-in flexibility to filter 1 to 8 samples directly into standard HPLC vials. Just attach a vacuum pump, load samples with a standard pipettor and flip the lever to recover particulate-free samples—even those with high viscosity or particulates—in seconds. In addition, the system has a low hold-up volume, which allows processing of samples as small as 300 µL.

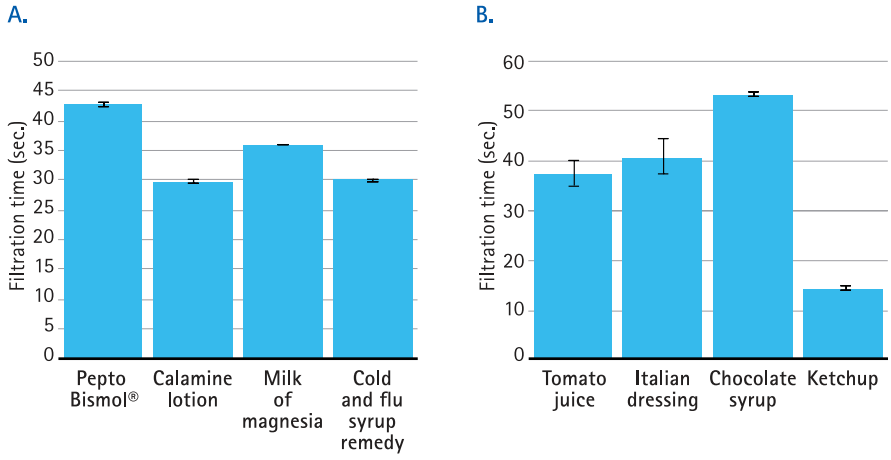
Features & Benefits

- Higher throughput with simultaneous vacuum filtration of up to eight samples
- Easy sample preparation of even highly viscous or particulate-laden mixtures
- Ergonomic alternative to syringe filters
- Millex Samplicity® membrane filters provide long-trusted quality with low extractables and low analyte binding

Applications

Sample Filtration Prior to UHPLC, HPLC and Mass Spec; Filtration of Hard-to-Filter Samples

Product Performance



Concentration	2%	2%	100%	5%	100%	25%	25%	25%
Viscosity (cP)	2.30	298.3	10088.00	2.20	18600	12.07	24.73	252.33

Efficient filtration of hard-to-filter samples. Hydrophilic PTFE Millex Samplicity® filters (0.45 µm) efficiently processed hard-to-filter pharmaceutical samples (A) and food/beverage samples (B) in seconds. Filtration times were the average of 4 replicates and error bars represent standard deviation.

Specifications

	PTFE	Durapore® PVDF
Housing Material	HDPE	HDPE
Housing Color	White	White
Membrane Material	Hydrophilic PTFE	Hydrophilic Durapore® PVDF
Pore Sizes	0.20 µm, 0.45 µm	0.45 µm
Process Volume, mL	0.3–1.6	0.3–1.6
Hold-up Volume, µL	<100	<100
Chemical Compatibility	Few limitations	Aqueous, some solvents
Inlet Fitting	Easy loading funnel	Easy loading funnel
Outlet Fitting	Tip for smooth transfer to vial	Tip for smooth transfer to vial

Ordering Information

Description	Pore Size (µm)	Qty/Pk	Catalogue No.
Samplicity® Filtration System, Glossy Green		1	SAMPSYSGR
Samplicity® Filtration System, Bold Blue		1	SAMPSYSBL
Millex Samplicity® Filters Hydrophilic PTFE	0.20	96	SAMPLG001
	0.45	96	SAMPLCR01
	0.20	384	SAMPLG004
	0.45	384	SAMPLCR04
Millex Samplicity® Filters Hydrophilic PVDF	0.45	96	SAMPHV001
		384	SAMPHV004

For more information visit: www.merckmillipore.com/samplicity

MultiScreen® Filter Plates for Enzyme Assays

Save time and sample, increase consistency

Enzyme assays are widely used in life science research and compound screening. Filter plates, by facilitating the separation of the products from the reactants in enzymatic reactions, enable reliable, highly sensitive, and automation-compatible assays. MultiScreen®$_{HTS}$ filter plates set the standard for filtration-based enzyme assays. These versatile systems are widely used for kinase, phosphatase, protease and endonuclease assays, as well as second messenger assays such as for cAMP, cGMP, phosphodiesterase (PDE), Nitric Oxide (NO), Ca^{2+} and inositols. The filtration-based protocol produces specific, reliable results that are well-referenced in literature.

Features & Benefits

- Saves time and sample, reduces solvent and radioactive wastes
- Multiple configurations to match your application
- Automation compatible
- Superior vacuum filtration and filtrate collection for better washing and consistent data

Applications

Protein Kinase Assays with Peptide Substrates, Other Enzyme Assays, Second Messenger Assays

Specifications

Dimensions, cm	128 x 85.5 x 14.6
Pore Size	0.65 µm
Sterility	Non-sterile

Ordering Information

Description	Membrane Type	Well Volume (mL)	Device Material	Qty/Pk	Catalogue No.
MultiScreen®$_{HTS}$ plates with negatively charged membrane for enzyme assays					
MultiScreen®$_{HTS}$-PH Plate, 96 well	Negatively Charged Phosphocellulose	0.5	Barex®/TiO_2	10	MSPHN6B10
				50	MSPHN6B50
MultiScreen®$_{HTS}$+ Hi Flow PH Plate, 96 well	Negatively Charged Phosphocellulose/ polyester mesh	0.5	Barex®/TiO_2	50	MSPHNXB50
MultiScreen®$_{HTS}$-PH Plate, 384 well	Negatively Charged Phosphocellulose/ polyester mesh	0.1	Styrene acrylonitrile (SAN)/TiO_2	10	MZPHN0W10
				50	MZPHN0W50
MultiScreen® Classic plates with negatively charged membrane for enzyme assays					
MultiScreen®-PH Plate, 96 well	Negatively Charged Phosphocellulose	0.5	Barex®/TiO_2	50	MAPHN0B50