User Guide

IC Millex®-LG and LH

Ion Chromatography Certified Syringe Filters

13 and 25 mm

For laboratory use only

Introduction

This document provides chemical compatibility information, operating steps, and specifications for nonsterile IC Millex®-LG (0.2 µm) and IC Millex®-LH (0.45 µm) syringe filters. These single-use, disposable, syringe-operated filter units are certified for ion chromatography sample preparation. The 13 millimeter (mm) size is recommended for filtering volumes from 1 to 10 milliliter (mL) and the 25 mm size for filtering volumes from 10 mL to 100 mL.

IC Millex® syringe filters contain a low-binding, low-ion-extractable, hydrophilic polytetrafluoroethylene (PTFE) membrane sealed in a high density polyethylene housing. They are used to clarify aqueous and organic solutions prior to ion chromatography analysis.

Chemical Compatibility

IC Millex® syringe filters are compatible with aqueous and organic solutions. You can use them to filter the agents listed in the following table. This information was developed from technical publications, materials suppliers, and laboratory tests, and is believed to be accurate and reliable. However, because of variability in temperature, concentrations, exposure time, and other factors beyond our control that may affect the use of the syringe filter, no warranty is provided or implied with respect to such information. Agents not listed below should be tested with the IC Millex® syringe filter prior to use.

NOTE: For low extractable IC instrumentation analysis applications, it is recommended that you discard the first 1 mL or rinse with 1 to 2 mL of primary solvent before sample filtration.

Chemical

Acetic acid, glacial	Dimethyl sulfoxide	Hydrogen peroxide (30%)
Acetone	Dioxane	Isobutyl alcohol
Acetonitrile	Ethers	Isopropyl acetate
Amyl acetate	Ethyl acetate	Isopropyl alcohol
Amyl alcohol	Ethyl alcohol	Kerosene
Benzyl alcohol (1%)	Ethylene glycol	Methyl alcohol
Boric acid	Formaldehyde	Methylene chloride
Brine (sea water)	Freon® (TF or PCA) solvent	Methyl ethyl ketone
Butyl alcohol	Gasoline	Methyl isobutyl ketone
Carbon tetrachloride	Glycerine (glycerol)	Mineral spirits
Cellosolve® (ethyl) solvent	Helium	Nitric acid (6 N)
Chloroform	Hexane	Nitrogen
Cyclohexanone	Hydrochloric acid (conc.)	Ozone
Dimethylacetamide	Hydrofluoric acid	Paraldehyde
Dimethylformamide	Hydrogen	Pentane

Chemical Compatibility, continued

Perchloroethylene	Silicone oils	Trichloroethylene
Petroleum based oils	Sulfuric acid	Trifluoroacetic acid
Petroleum ether	Tetrahydrofuran	Xylene
Phenol (10%)	Toluene	
Pyridine	Trichloroethane	

How to Use IC Millex® Syringe Filters

WARNINGS:

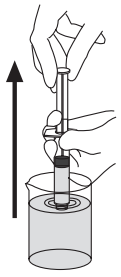
- **Do not use this product if package is damaged.**
- **The IC Millex® syringe filter is intended for laboratory use only and is not a medical device for direct patient care applications.**
- **Do not use with syringes smaller than 10 mL because pressures in excess of the maximum pressure rating may be reached, potentially causing damage to the syringe filter and/or personal injury.**

CAUTIONS:

- Do not use the syringe filter at temperatures above 45 °C (113 °F).
- Do not use the same syringe filter to filter solutions in both directions.
- Do not reuse the syringe filter.
- Do not use the syringe filter to filter emulsions or suspensions.
- Perform a binding study before use if there is a concern about loss of analyte (proteins, nucleic acids, active pharmaceuticals) due to binding.

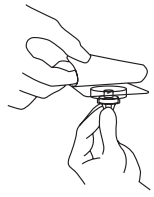
Instructions for Use

1



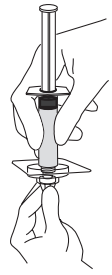
Fill syringe with solution to be filtered.

2



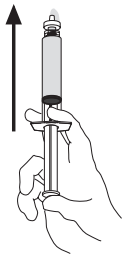
Remove cover from package.

3



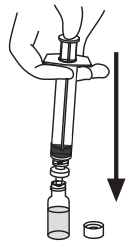
Attach syringe to syringe filter and remove assembly from package. Attach needle to Luer-slip outlet if necessary.

4



Hold syringe with filter (and needle if attached) pointing up and "top off" by pushing a few drops through the filter.

5



Insert needle (if attached) and push syringe plunger to deliver filtered solution.

Optional: To purge syringe filter and maximize sample throughput, remove filter from syringe and draw air into syringe. Reattach filter and push plunger to force some air through filter.

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Specifications

Housing	High density polyethylene	
Membrane		
IC Millex® -LG filter	Hydrophilic PTFE, 0.2 µm pore size	
IC Millex® -LH filter	Hydrophilic PTFE, 0.45 µm pore size	
Dimensions	**13 mm**	**25 mm**
Inlet to outlet	21.1 mm (0.83 in.)	19.8 mm (0.78 in.)
Diameter	14.7 mm (0.58 in.)	30.0 mm (1.18 in.)
Filtration surface area	0.65 cm^2 (0.10 in^2)	3.9 cm^2 (0.60 in^2)
Filtration volume (guideline)	1–10 mL	10–100 mL
Hold-up volume (after air purge)	≤ 25 µL	≤ 100 µL
Connections	Female Luer-Lok™ inlet, male Luer-slip outlet	
Temperature limit	45 °C (113 °F) maximum	
Pressure limit at 21 °C	6.9 bar (100 psi) inlet and differential	
Typical water flow rate at 21 °C	13 mm LG: 32 mL/min at 2.1 bar (30 psi) 13 mm LH: 18 mL/min at 0.7 bar (10 psi) 25 mm LG: 164 mL/min at 2.1 bar (30 psi) 25 mm LH: 97 mL/min at 0.7 bar (10 psi)	
IC extractables	< 0.20 µg/unit Cl^- < 0.20 µg/unit NO_3^- < 0.50 µg/unit SO_4^{2-}	

Product Ordering Information

This section lists the catalogue numbers for IC Millex® syringe filters. See the Technical Assistance section for contact information. You can purchase these products on-line at www.millipore.com/products.

Syringe Filter Description	Cat. No.	Qty/pk
IC Millex®-LG, 13 mm, PTFE membrane, 0.2 µm	SLLGC13NL	100
IC Millex®-LG, 25 mm, PTFE membrane, 0.2 µm	SLLGC25NS	50
IC Millex®-LH, 13 mm, PTFE membrane, 0.45 µm	SLLHC13NL	100
IC Millex®-LH, 25 mm, PTFE membrane, 0.45 µm	SLLHC25NS	50

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Technical Assistance

For more information, contact the office nearest you. In the U.S., call 1-800-645-5476. Outside the U.S., go to our web site at www.millipore.com/offices for up-to-date worldwide contact information. You can also visit the tech service page on our web site at www.millipore.com/techservice.

Standard Warranty

The applicable warranty for the products listed in this publication may be found at www.millipore.com/terms ("Conditions of Sale")

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