

СИСТЕМА ФИЛЬТРАЦИИ MILLISOLVE



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Millisolve™ Clarification System

Cat. No. XX1614700

Introduction

The Millisolve™ Clarification System is designed for vacuum filtration of liquid chromatography (LC) buffers and solvents. The system uses a disposable 0.2/0.22 or 0.45 micron (µm) filter to remove particles which can shorten column life. Vacuum filtration through this system can also remove a large portion of dissolved gases from buffers, reducing the risk of air bubble interference with LC instrumentation.

NOTE: To avoid solvent and buffer cross-contamination, EMD Millipore Corporation recommends a dedicated filtration system for each solvent and use of a new filter to process each batch of solvent.

The Millisolve™ Clarification System is supplied with two different filter holder configurations. For hazardous fluids, the vacuum cap configuration allows filtration to take place in a closed system. When vacuum is applied, fluid is drawn directly from a bottle, through the filter, and into the conical Millisolve™ flask. For batch filtration, fluid is poured into the open 300 milliliter (mL) funnel and flows through the filter and into the Millisolve™ flask when vacuum is applied.

The following table shows the types of membrane filters appropriate for filtering various solvents and buffers.

Type of Solvent or Buffer	Filter to Use	Pore Size	Cat. No.
Water, buffers	MF-Millipore™ hydrophilic mixed cellulose esters filter (Triton® surfactant-free)	0.22 µm 0.45 µm	GSTF04700 HATF04700
	Nylon hydrophilic membrane filter	0.2 µm 0.45 µm	GNWP04700 HNWP04700
	Omnipore™ hydrophilic polytetrafluoroethylene (PTFE) filter	0.2 µm 0.45 µm	JGWP04700 JHWP04700
	LCR hydrophilic PTFE filter	0.45 µm	FHLC04700
Water, buffers, alcohol, or mixtures	Durapore® polyvinylidene fluoride (PVDF) hydrophilic filter	0.22 µm 0.45 µm	GVWP04700 HVLP04700
	Nylon hydrophilic membrane filter	0.2 µm 0.45 µm	GNWP04700 HNWP04700
	Omnipore™ hydrophilic PTFE filter	0.2 µm 0.45 µm	JGWP04700 JHWP04700
	LCR hydrophilic PTFE filter	0.45 µm	FHLC04700
All organic solvents (methylene chloride, hexane, tetrahydrofuran)	Fluoropore™ hydrophobic PTFE filter	0.2 µm 0.45 µm	FGLP04700 FHLP04700 or FHUP04700
	Omnipore™ hydrophilic PTFE filter	0.2 µm 0.45 µm	JGWP04700 JHWP04700
	LCR hydrophilic PTFE filter	0.45 µm	FHLC04700

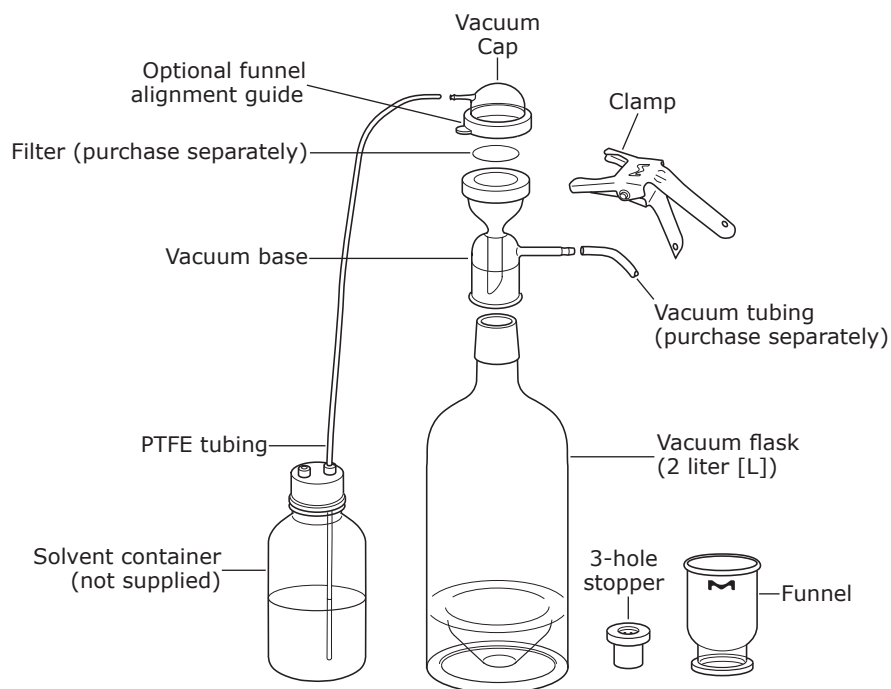
Additional Equipment Required

- 47 millimeter (mm) filter appropriate for your application
- Vacuum source, either central laboratory vacuum or a portable vacuum pump. See **Ordering Information** for available models.

 **WARNING:** Choose a vacuum source appropriate for the fluid being filtered. Many vacuum pumps are **NOT** explosion-proof and should not be used when filtering flammable or explosive liquids.

- Vacuum tubing, 3/16 inch (in.) (4.8 mm) inner diameter (ID) silicone rubber (cat. no. XX7100004)

Millisolve™ Clarification System Components



NOTE: Smooth-tip filter forceps are supplied but not shown.

A vacuum base with a stainless steel screen filter support (instead of a coarse-frit glass support) is also available (cat. no. XX1514732). The stainless steel screen filter support is easier to clean, and improves the filtration rate.

Precautions

⚠ WARNING: Filtration of flammable liquids can generate enough electrostatic charge to cause a fire or explosion. To mitigate this potential, follow these precautions:

- **DO NOT use the stainless steel screen filter support with highly flammable solvents.**
- **Work under a hood (or another ventilation system) when filtering flammable liquids to prevent accumulation of ignitable vapor and air mixtures. Ventilation systems, including fume hoods, must be designed in accordance with the National Fire Protection Association (NFPA) code.**
- **Keep the filtration rate low; apply only enough vacuum pressure to maintain steady flow through the filter.**

Specifications

Materials Millisolve™ flask, vacuum cap, filter holder base, funnel Clamp Funnel alignment guide 3-hole stopper	Borosilicate glass Anodized aluminum Silicone Polypropylene
Filter diameter	47 mm
Effective filter area	Approximately 9.6 square centimeters (cm ²) (1.5 in ²)
Funnel capacity	300 mL
Vacuum flask capacity	2 L
Maximum pressure	948 mbar (28 in. Hg)
Approximate dimensions Height with vacuum cap Height with funnel Vacuum flask diameter	45.7 cm (18.0 in.) 53.3 cm (21.0 in.) 12.5 cm (4.9 in.)

Ordering Information

This section lists catalogue numbers for the Millisolve™ Clarification System, replacement parts, and accessories.

Product Description	
Millisolve™ Clarification System	XX1614700
Replacement Parts	
Vacuum cap	XX1614701
Vacuum base	XX1514702
Funnel, 300 mL	XX1014704
Clamp	XX1014703
Vacuum flask with conical bottom, 2 L, ground glass attachment	XX1614705
Funnel alignment guide	ALIGNED05
Filter forceps, stainless, smooth-tip	XX6200006P
PTFE tubing for solvent and buffer, 70 cm (27.6 in.)	XT1200000
Accessories for Millisolve™ Clarification System	
Base	
Vacuum base with stainless steel screen filter support and gasket, ground glass attachment	XX1514732
Funnel	
Funnel, 500 mL	XX5014704
Flasks with ground glass attachment	
Vacuum filtering flask, 4 L	XX1014745
Vacuum filtering flask, 1 L	XX1514705
Vacuum filtering flask with conical bottom, 5 L	XX1614706
Flask with stopper attachment for use as vacuum trap	
Vacuum filtering flask, 1 L	XX1014705
Vacuum filtering flask, 1 L, threaded sidearm	XX1514706
Pumps	
Chemical Duty Pump, 115 V, 60 Hz	WP6111560
Chemical Duty Pump, 100 V, 50/60 Hz	WP6110060
Chemical Duty Pump, 220 V, 50 Hz	WP6122050
Filters	
MF-Millipore™ 0.22 µm hydrophilic MCE filter, Triton® surfactant-free, 47 mm, 100/pk	GSTF04700
Durapore® 0.22 µm hydrophilic PVDF filter, 47 mm, 100/pk	GVWP04700
Nylon 0.2 µm hydrophilic membrane filter, 47 mm, 100/pk	GNWP04700
Fluoropore™ 0.2 µm hydrophobic PTFE filter, 47 mm, 100/pk	FGLP04700
Omnipore™ 0.2 µm hydrophilic PTFE filter, 47 mm, 100/pk	JGWP04700
MF-Millipore™ 0.45 µm hydrophilic MCE filter, Triton® surfactant-free, 47 mm, 100/pk	HATF04700
Durapore® 0.45 µm hydrophilic PVDF filter, 47 mm, 100/pk	HVLP04700
Nylon 0.45 µm hydrophilic membrane filter, 47 mm, 100/pk	HNWP04700
Fluoropore™ 0.45 µm hydrophobic PTFE filter, 47 mm, 100/pk	FHLP04700
Fluoropore™ 0.45 µm hydrophobic PTFE filter, unbacked, 47 mm, 100/pk	FHUP04700
Omnipore™ 0.45 µm hydrophilic PTFE filter, 47 mm, 100/pk	JHWP04700
LCR 0.45 µm hydrophilic low extractables PTFE filter, 47 mm, 100/pk	FHLC04700
Miscellaneous	
Millex®-FA ₅₀ filter, 1.0 µm hydrophobic PTFE, 50 mm, 10/pk	SLFA05010
Tubing, 3/16 in. (4.8 mm) ID x 4.6 ft (140 cm), silicone with Luer adapter	XX7100004



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