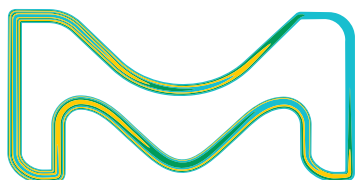


Maximize System Performance
with Easy-to-Use

HPLC Accessories



A Select Group of HPLC Accessories Designed to Maximize the Performance of Your HPLC System

Introduction

The use of HPLC systems to achieve faster analyses and increased resolution pushes systems toward higher operating pressures. For instance, faster flow rates, longer column lengths, and reduced particle sizes gain a performance advantage in HPLC, but at a cost of increased operating pressures. With these current trends, it is important to choose the correct products when replacing fittings, tubing, and other similar parts to maximize performance and reliability.

High Performance Liquid Chromatography columns containing particles that are smaller than 3.5 μm create very narrow peak widths that can no longer be routinely measured by all HPLC systems. The quality of separations performed with these columns is dependent on the system having components designed to minimize instrument bandwidth (IBW). It is good laboratory practice to install the proper fittings, ferrules, and other accessories to ensure the analytical results show no peak broadening from extra column effects created by excessive volume or improper assembly.

To serve this rapidly growing area of High Performance Liquid Chromatography, we have selected products from the most trusted names in the industry, making product selection easy. This selection of accessories for high speed and high sensitivity analytical applications maximizes the efficiency and reliability of the analysis while protecting the column investment. Please note that this represents only a brief listing of the HPLC Accessories that we offer.

MilliporeSigma has brought together the world's leading Life Science brands, so whatever your life science problem, you can benefit from our expert products and services.

Supelco®

The Supelco® portfolio of analytical solutions of MilliporeSigma is developed by analytical chemists for analytical chemists to ensure your results are accurate, precise and reproducible. Every product is meticulously quality-controlled to maintain the integrity of your testing protocols and, with our dedicated scientists, the expertise you need is always on hand.

Millipore®

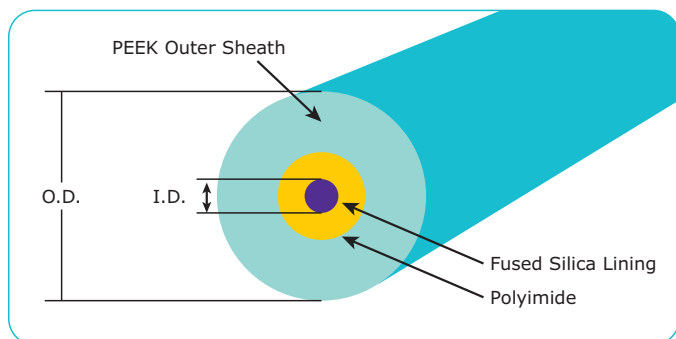
The Millipore® portfolio of MilliporeSigma offers an ecosystem of industry-leading products and services, spanning preparation, separation, filtration and monitoring – all of which are deeply rooted in quality, reliability and time-tested processes. Our proven products, regulatory and application expertise are a strong foundation you can rely on to consistently perform at the highest level.

Tubing

PEEKsil™ Tubing

Various types of tubing, stainless steel and PEEK, are available to supply a variety of uses for HPLC systems. For the most sensitive applications, chemical compatibility, and extremely low adsorption characteristics, PEEKsil™ tubing is an excellent tubing choice. Capable of withstanding pressures up to 10,000 psi, PEEKsil™ is fused silica tubing surrounded by a protective PEEK sheath, making it mechanically strong. PEEKsil™ can be used with either stainless steel or polymer fittings.

| Length | I.D. | Color | Qty. | Cat. No. |
|------------------------------------|----------------|---------|------|----------------|
| PEEKsil™ Tubing, 1/32" O.D. | | | | |
| 10 cm | 25 µm (.010") | Orange | Pk/2 | 51308-U |
| 50 cm | 50 µm (.002") | Natural | Pk/2 | 51321-U |
| 20 cm | 75 µm (.003") | Black | Pk/2 | 51324-U |
| 50 cm | 75 µm (.003") | Black | Pk/2 | 51328-U |
| 50 cm | 150 µm (.006") | Purple | Pk/2 | 51329-U |
| PEEKsil™ Tubing, 1/16" O.D. | | | | |
| 50 cm | 50 µm (.002") | Natural | Pk/2 | 51332-U |
| 10 cm | 25 µm (.010") | Orange | Pk/5 | 51333-U |
| 20 cm | 50 µm (.002") | Natural | Pk/2 | 51334-U |
| 50 cm | 25 µm (.002") | Orange | Pk/2 | 51335-U |
| 50 cm | 100 µm (.004") | Red | Pk/2 | 51337-U |



PEEK Tubing

A popular replacement for stainless steel tubing, PEEK tubing is especially useful when contact between the sample and metal components must be avoided. PEEK tubing has excellent mechanical stability and chemical compatibility.

| Length | I.D. | Color | Qty. | Cat. No. |
|--------------------------------|--------|---------|-------|----------------|
| PEEK Tubing, 1/16" O.D. | | | | |
| 10' | 0.005" | Red | 1 ea. | Z227307 |
| 10' | 0.007" | Yellow | 1 ea. | Z226688 |
| 10' | 0.010" | Blue | 1 ea. | Z226661 |
| 10' | 0.020" | Orange | 1 ea. | Z227293 |
| 10' | 0.030" | Green | 1 ea. | Z226955 |
| 10' | 0.055" | Black | 1 ea. | 54994 |
| PEEK Tubing, 1/8" O.D. | | | | |
| 10' | 0.062" | Natural | 1 ea. | 54995 |

Stainless Steel Tubing

Precut 316 stainless steel tubing is ready-to-use with flat, burr-free ends and a clean finish that is needed for achieving zero-dead volume connections.

| Length | I.D. | O.D. | Qty. | Cat. No. |
|---|--------|-------|-------|----------------|
| Stainless Steel Tubing, 1/16" O.D. | | | | |
| 5 cm | 0.005" | 1/16" | 1 ea. | 56707 |
| 10 cm | 0.005" | 1/16" | 1 ea. | 56708 |
| 30 cm | 0.005" | 1/16" | 1 ea. | 56710-U |
| 0.5 m | 0.005" | 1/16" | 1 ea. | 56711 |
| 1.0 m | 0.005" | 1/16" | 1 ea. | 56712-U |
| 5 cm | 0.007" | 1/16" | 1 ea. | 56713 |
| 10 cm | 0.007" | 1/16" | 1 ea. | 56714 |
| 30 cm | 0.007" | 1/16" | 1 ea. | 56716 |
| 0.5 m | 0.007" | 1/16" | 1 ea. | 56717 |
| 1.0 m | 0.007" | 1/16" | 1 ea. | 56718-U |

Tubing Cutters

A zero dead volume connection is important for maximum chromatographic performance. Unswept volume, caused by a poor fit between tubing and the mating seat, can cause sample dispersion and unsatisfactory chromatographic results.

Upchurch® Polymer Tubing Cutter

Upchurch® designed this reliable and durable device specifically for cutting PEEK, Teflon™, and Tefzel™ tubing. Includes four replacement blades.



| Description | Cat. No. |
|-------------------------------|----------------|
| Polymer Tubing Cutter | 57665-U |
| Replacement Blades (pk. of 5) | 57666-U |

PEEK Tubing Cutter

Makes burr-free, perpendicular cuts through polymer tubing with outside diameters from 1/16" to 1/8". Designed for cutting PEEK tubing, but also easily slices through Teflon™ and Tefzel™ capillary tubing. Compact design includes a safety locking mechanism. One spare blade included.



| Description | Cat. No. |
|--------------------|--------------------|
| PEEK Tubing Cutter | Z290882-1EA |
| Replacement Blade | Z290947-1EA |

High-Performance Fittings

PEEK Fingertight Fittings

PEEK fingertight fittings are convenient, inert, and biocompatible. When changing out the fitting, the one-piece design prevents the ferrule from sticking in the receiving port. Use these fittings with 1/16" tubing. Fingertight fittings are compatible with most HPLC solvents.



| Description | Qty. | Cat. No. |
|----------------------------------|-------|----------|
| One Piece PEEK Fitting - (10-32) | Pk/5 | 2227250 |
| One-Piece PEEK Fitting- (10-32) | Pk/10 | 55067-U |

MarvelX™ UHPLC Connector

Key Features and Benefits:

- Zero-dead volume
- Compatible with 10-32 coned receiving ports
- Finger-tight to 19,000 psi
- Reusable up to 200 times

MarvelX™ is the next generation UHPLC connection technology. Designed for easy routing throughout the UHPLC system, the MarvelX™ UHPLC connection kit provides consistent performance and superior reusability. The connector is made with convenient, removable, stainless steel fittings and comes with either stainless steel or biocompatible PEEK lined stainless steel tubing.



| Description | Cat. No. |
|---|----------|
| MarvelX™ Kits (includes tubing and 2 fittings) | |
| MarvelX™ PLS, 25 µm x 150 mm | 51874-U |
| MarvelX™ PLS, 100 µm x 150 mm | 51875-U |
| MarvelX™ PLS, 25 µm x 350 mm | 51882-U |
| MarvelX™ PLS, 100 µm x 350 mm | 51888-U |
| MarvelX™ SS, 125 µm x 150 mm | 51894-U |
| MarvelX™ SS, 125 µm x 350 mm | 51896-U |
| MarvelX™ SS, 254 µm x 150 mm | 51897-U |
| MarvelX™ SS, 254 µm x 350 mm | 51899-U |

Practical Recommendations to Maximum System Performance

- Use 0.005 in. I.D. inlet and outlet tubing. Broadening is much less sensitive to the tube length than to the I.D. Minimize lengths of the inlet and outlet tubes for best performance, but do not worry about having a few extra centimeters of length if it makes maintenance or column installation easier.
- If high pressure becomes a problem, then use acetonitrile as modifier and elevate the column temperature whenever possible. If methanol, THF, or another more viscous modifier is required, then elevating the temperature becomes even more beneficial. Even a modest temperature increase will greatly reduce the mobile phase viscosity and the required pressure while improving mass transfer.
- Keep the sample volumes small – 5 µL or less if the peaks of interest elute early ($k = 1$). Up to 20 µL is acceptable if k exceeds 10.
- Avoid sample solvents that are stronger than the mobile phase.
- Use data rates of 10 Hz or greater and watch out for bunching factors.

ColumnSaver™ Precolumn Filter

General description

- Economical protection for your guard or analytical HPLC column
- No wrenches or tools required to install, fingertight to 5,000 psi
- Lower dead volume than conventional filters with holders
- Universal connection is compatible with all manufacturers' fittings

The ColumnSaver™ precolumn filter offers all of the protection of conventional precolumn filters at much less the cost. With its convenient, direct connect design, changeover time is measured in seconds, and requires no wrenches or tools to install.

The PEEK filter body contains a HiFlo™ filter element and is designed for maximum filtration of particulate matter with minimal dead volume or backpressure. As soon as an increase in backpressure is observed, simply remove and dispose of the ColumnSaver™ and install a new one. The direct connect design is compatible with all 1/16 in, 10-32 internal fitting ports regardless of the manufacturer.



| Description | Cat. No. |
|--|----------|
| ColumnSaver™ Precolumn Filter, 0.5 µm, pkg 10 ea | 55214-U |
| ColumnSaver™ Precolumn Filter, 2.0 µm, pkg 10 ea | 55215-U |

UHPLC Fittings

Upchurch® UHPLC Fingertight Fittings

Manufactured from a proprietary PEEK blend, the Upchurch® Scientific UHPLC Fingertight fittings can be used at temperatures up to 200 °C and higher pressure than more traditional HPLC fittings. These fittings are available in one piece 10-32.



| Description | Qty. | Cat. No. |
|--|-------|----------|
| Ultra-High Pressure Fitting, PEEK | | |
| Fingertight I Nut (Black) | Pk/10 | 51262-U |

Upchurch® PEEK Fingertight Unions

Operate the carbon-filled PEEK zero dead volume unions to 5000 psi/352 kg/cm², the PEEK tees and crosses to 4000 psi/281 kg/cm². All items include Fingertight III nuts and ferrules.

| Description | Cat. No. |
|----------------------|----------|
| 10-32 Threads | |
| Union, 0.010" ID | 57658 |
| Union, 0.020" ID | 57659 |
| Tee, 0.020" ID | 57661 |
| Cross, 0.020"ID | 57663 |



Nonsterile Millex® Syringe Filters

Setting the standard in small-volume filtration (1-200 mL), the unsurpassed consistency of Millex® syringe filters in sample preparation has led to the development of many methods specifying their use.

- Applications include filtration-based sample preparation for dissolution testing, HPLC, UHPLC, LC-MS, ion chromatography (IC), and general particulate removal
- Hydrophilic PTFE Millex® filters are HPLC-certified for low extractables
- Best recovery of protein samples with hydrophilic Durapore® PVDF Millex® syringe filters

| Membrane | Diameter (mm) | Pore Size (µm) | Process Volume (hold-up) | 50 units/pk | 100 units/pk | 250 units/pk | 1000 units/pk | |
|---|--|----------------|--------------------------|-----------------|-------------------------|--------------|---------------|-----------|
| PTFE Hydrophilic Millipore® LCR Membrane Lowest extractables and excellent solvent resistance | 4 | 0.20 | 1 mL (< 10 µL) | | SLLGR04NL | | | |
| | | 0.45 | 1 mL (< 10 µL) | | SLLHR04NL | | | |
| | 13 | 0.20 | 10 mL (≤ 15 µL) | | SLLGX13NL | | SLLGX13NK | |
| | | 0.45 | 10 mL (≤ 15 µL) | | SLCRX13NL SLCRX13TL* | | SLCRX13NK | |
| | 33 | 0.20 | 100 mL (≤ 80 µL) | | SLLG033NS | | SLLG033NB | SLLG033NK |
| | | 0.45 | 100 mL (≤ 80 µL) | | SLCR033NS | | SLCR033NB | SLCR033NK |
| PTFE Hydrophilic IC Millex® Filters Low IC extractables/Ion Chromatography Certified | 13 | 0.20 | 10 mL (≤ 25 µL) | | SLLGC13NL | | | |
| | | 0.45 | 10 mL (≤ 25 µL) | | SLLHC13NL | | | |
| | 25 | 0.20 | 100 mL (≤ 100 µL) | | SLLGC25NS | | | |
| | | 0.45 | 100 mL (≤ 100 µL) | | SLLHC25NS | | | |
| | PTFE Hydrophobic Fluoropore™ Membrane Excellent solvent resistance | 4 | 0.20 | 1 mL (< 10 µL) | | SLFGR04NL | | |
| | | | 0.45 | 1 mL (< 10 µL) | | SLFHR04NL | | |
| 13 | | 0.20 | 10 mL (≤ 15 µL) | | SLFGX13NL SLFGX13TL* | | SLFGX13NK | |
| | | 0.45 | 10 mL (≤ 15 µL) | | SLFHX13NL SLFHX13TL* | | SLFHX13NK | |
| 33 | | 0.20 | 100 mL (≤ 80 µL) | | SLFG033NS | | SLFG033NB | SLFG033NK |
| | | 0.45 | 100 mL (≤ 80 µL) | | SLFH033NS | | SLFH033NB | SLFH033NK |
| PVDF Durapore® Membrane Low-protein binding | 4 | 0.22 | 1 mL (< 10 µL) | | SLGVR04NL | | SLGVR04NK | |
| | | 0.45 | 1 mL (< 10 µL) | | SLHVR04NL | | SLHVR04NK | |
| | 13 | 0.22 | 10 mL (≤ 15 µL) | | SLGVX13NL SLGVX13TL* | | SLGVX13NK | |
| | | 0.45 | 10 mL (≤ 15 µL) | | SLHVX13NL SLHVX13TL* | | SLHVX13NK | |
| | 33 | 0.22 | 100 mL (≤ 80 µL) | | SLGV033NS | | SLGV033NB | SLGV033NK |
| | | 0.45 | 100 mL (≤ 80 µL) | | SLHV033NS | | SLHV033NB | SLHV033NK |
| Nylon Membrane Broad chemical compatibility | 13 | 0.20 | 10 mL (≤ 15 µL) | | SLGNX13NL SLGNX13TL* | | SLGNX13NK | |
| | | 0.45 | 10 mL (≤ 15 µL) | | SLHNX13NL SLHNX13TL* | | SLHNX13NK | |
| | 33 | 0.20 | 100 mL (≤ 80 µL) | | SLGN033NS | | SLGN033NB | SLGN033NK |
| | | 0.45 | 100 mL (≤ 80 µL) | | SLHN033NS | | SLHN033NB | SLHN033NK |
| | PES Millipore Express® Membrane Fastest flow, high throughput | 13 | 0.22 | 10 mL (≤ 15 µL) | | SLGPX13NL | | SLGPX13NK |
| | | | 0.45 | 10 mL (≤ 15 µL) | | SLHPX13NL | | SLHPX13NK |
| 33 | | 0.22 | 100 mL (≤ 80 µL) | | SLGP033NS | | SLGP033NB | SLGP033NK |
| | | 0.45 | 100 mL (≤ 80 µL) | | SLHP033NS | | SLHP033NB | SLHP033NK |
| MCE General laboratory filtration of aqueous solutions | 25 | 0.22 | 100 mL (≤ 100 µL) | | | SLGS025NB† | | |
| | | 0.45 | 100 mL (≤ 100 µL) | | | SLHA025NB† | SLHA025NK† | |
| | | 0.8 | 100 mL (≤ 100 µL) | | | SLAA025NB† | SLAA025NK† | |

Millipore®

Preparation, Separation,
Filtration & Monitoring Products



OPTI-SOLV® EXP® Pre-Column Filter

Key Features and Benefits

- Tested to 30,000 psi
- Easily interchangeable with hand tight EXP® guard column
- Auto adjusting ZDV column connection
- Hand tight filter replacement - NO TOOLS
- Low volume, low dispersion cartridges



The OPTI-SOLV® EXP® Hand Tight Pre-Column Filter for extreme, high-pressure applications is ideal for protecting HPLC columns with small particles employing ultra high pressure techniques. Such techniques analyze samples in the most demanding applications, which can decrease the life of these expensive columns. EXP® Pre-Column Filters help extend that life and protect your column investment, without sacrificing performance. EXP® Pre-Column Filters are available with Titanium Hybrid ferrules for easy direct connection to any UHPLC column. The filter comes as a complete package including fittings to provide repeated tube stop and zero-dead volume column connections. Use EXP® Pre-Column Filters to protect any HPLC column of 2 mm I.D. to 4.6 mm I.D. The pre-column filter can be used up to at least 15,000 psi (1000 bar).

OPTI-SOLV® EXP® Pre-Column Filter Holder with EXP® Titanium Hybrid Ferrule

| Description | Qty. | Cat. No. |
|-------------------------------------|-------|----------|
| 2 Ferrules, 1 Nut in pack | 1 ea. | 51163-U |
| Replacement Titanium Hybrid Ferrule | Pk/10 | 51391-U |

Order cartridges separately.

OPTI-SOLV® EXP® Pre-Column Filter Cartridge

| Frit Porosity | Qty. | Cat. No. |
|---------------|-------|----------|
| 0.5 µm | Pk/5 | 51164-U |
| 0.5 µm | Pk/10 | 51165-U |
| 0.2 µm | Pk/10 | 51167-U |

OPTI-GUARD® 1 mm Guard Columns

OPTI-GUARD® sets the standard for low-impact, easy to use pre-column protection. Designed for use with analytical (4.6 mm, 3.0 mm I.D.) and narrow bore (2.1 mm, 1.0 mm I.D.) columns, the patented floating stem design automatically adjusts to any manufacturer's tube stop depth for a zero-dead volume connection every time. The OPTI-GUARD® 1 mm requires no special connecting hardware or tools for installation.

| Description | Qty. | Cat. No. |
|--------------------------------|-------|----------|
| OPTI-GUARD® C18 (Violet Label) | 5 ea. | 51177-U |
| OPTI-GUARD® C18, Biocompatible | 5 ea. | 51183-U |
| OPTI-GUARD® C8 | 5 ea. | 51184-U |



OPTI-SOLV® Filter

The OPTI-SOLV® filter provides low-impact filtering with a zero dead volume connection. Use the OPTI-SOLV® filter to prolong the life of your analytical column or before the mass spectrometer as a last defense against debris.

| Description | Qty. | Cat. No. |
|-----------------------------|-------|----------|
| OPTI-SOLV® Mini Filter 2 µm | 5 ea. | 51170-U |



Stericup® Quick Release Filtration System

At a Glance: Features and Benefits of the Stericup® Quick Release Filtration System

The **Quick Release** filter funnel disconnects from the receiver bottle with just a quarter turn—reducing the likelihood of spillage and making it easier to manipulate on the bench or under the hood.

Frosted, ample writing surface on the receiver bottle and lighter cap color facilitate clear labeling to improve legibility and reduce unreadable smears.

Click seal cap is flanged and modified to enable a firm grip in wet or dry conditions—and a tactile stop confirms secure closure. Worry less about the possibility of spilling or contamination of sterilized contents.



Bold product identification on the Steritop® filter funnel plainly displays membrane characteristics, including composition and pore size, for rapid, application-appropriate product selection.

Stericup® filters are **packaged to ensure sterility** during transport and storage. Easy-open packaging sleeve provides a tab on every corner for convenient, quick and easy access.

Improved peel-and-stick label on the sterile bag clearly denotes lot and part number of the filter device. Simply peel and place in a lab notebook for accurate tracking and reference.

Designed for single use – The Stericup® Quick Release filter reduces the risk of inadvertent re-use and ensures that media starts sterile and stays sterile.

Choose Stericup® and Steritop® filters based on your volume and pore size requirements:

| Product No. | Name | Description | Membrane/Application | Pore Size (µm) | Funnel Capacity (mL) | Qty/Pk |
|-------------|---|--|---|----------------|----------------------|--------|
| S2GPT01RE | Steritop®-GP Quick Release Threaded Bottle Top Filter | Steritop®-GP Quick Release Filter Unit Receiver Bottle opening: 45 mm | Millipore Express® PLUS (PES) / fast filtration of tissue culture media and buffers | 0.22 | 150 | 12 |
| S2GPT02RE | Steritop®-GP Quick Release Threaded Bottle Top Filter | Steritop®-GP Quick Release Filter Unit Receiver Bottle opening: 45 mm | Millipore Express® PLUS (PES) / fast filtration of tissue culture media and buffers | 0.22 | 250 | 12 |
| S2GPT05RE | Steritop®-GP Quick Release Threaded Bottle Top Filter | Steritop®-GP Quick Release Filter Unit Receiver Bottle opening: 45 mm | Millipore Express® PLUS (PES) / fast filtration of tissue culture media and buffers | 0.22 | 500 | 12 |
| S2GPT10RE | Steritop®-GP Quick Release Threaded Bottle Top Filter | Steritop®-GP Quick Release Filter Unit Receiver Bottle opening: 45 mm | Millipore Express® PLUS (PES) / fast filtration of tissue culture media and buffers | 0.22 | 1000 | 12 |

Millipore®

Preparation, Separation,
Filtration & Monitoring Products

MX High Pressure Valves

MXT High Pressure Valve for UHPLC

The 2-position, 6-port MXT switching valve is ideal for use as a two-column switching valve, allowing it to be used with more than one column and multiple applications. Used also as a traditional injection valve, the MXT features the Rheodyne® patented MBB™ (Make-Before-Break) for improved reproducibility and system stability. The valve can withstand pressures up to 15,000 psi (1,034 bar).

| Description | Qty. | Cat. No. |
|--|-------|----------|
| MXT 2-Position, 6-Port Switching Valve | 1 ea. | 51343-U |



MXP High Pressure Valve for HPLC

The MXP 2-position, 6-port high pressure switching valve is designed for traditional HPLC. This standard valve will provide dual-column functionality and can be used for traditional sample injections. The MXP high pressure valve is also available for biocompatible applications and is compatible to be used with most HPLC solvents. This high pressure valve withstands pressures up to 6,000 psi (414 bar).

| Description | Qty. | Cat. No. |
|--|-------|----------|
| MXP 2-Position, 6-Port Switching Valve | 1 ea. | 51354-U |
| MXP 2-Position, 6-Port Biocompatible Switching Valve | 1 ea. | 51356-U |

LC-MS Post Column Flow Splitters

Key Features and Benefits

- Eliminates tedious adjustments to capillary tubing for split ratio optimization
- Ultra-low dead volume design
- Easy-to-use, interchangeable fluid resistors
- Rugged, stainless steel construction

The design of the ASI QuickSplit™ Flow Splitter with the fixed or adjustable split ratio allows split flow ratios to remain stable and reproducible, and not be affected by changes in viscosity or pressure. Conventional splitters use long lengths of capillary tubing, but the QuickSplit™ Flow Splitter uses two compact fluid resistor elements which are designed as cartridges for easy replacement. The QuickSplit™ flow splitter is available in a variety of configurations including fixed split ratios from 3:1 to 20:1 or an adjustable flow splitter with a range of 1:1 to 20:1.



| Description | Cat. No. |
|--|----------|
| HPLC Post Column Flow Splitters – Fixed | |
| Split Ratio = 20:1 | 56624-U |
| Split Ratio = 10:1 | 56625-U |
| Split Ratio = 5:1 | 56626-U |
| Split Ratio = 3:1 | 56627-U |
| HPLC Post Column Flow Splitter – Adjustable | |
| Split Ratio = 1:1 to 20:1 | 56629-U |

HyperShear™ Static Mixers for UHPLC

ASI Static Mixers help to solve the most demanding high pressure HPLC solvent mixing problems. The HyperShear™ Mixers incorporate a highly efficient, cross-flowing shearing mechanism which produces vortex shear mixing over a wide flow range. The mixing technology typically delivers between 25% to 200% better mixing efficiency compared to conventional packed bed or tortuous path mixers.



| Description | Cat. No. |
|--|----------|
| High Pressure Binary Tee Mixer Assembly | |
| 50 µL | 56648-U |
| 150 µL | 56649-U |

Low Adsorption HPLC Vials

Supelco® Low Adsorption (LA) vials are manufactured using a process that decreases the number of hydroxyl groups on the vial's glass surface, significantly reducing surface activity while improving analytical quantitation and minimizing pH shifts in the sample. This same process also removes unwanted surface metals such as sodium and boron that can contaminate samples and interfere with trace analysis. Unlike other methods used to decrease vial surface activity, the elimination of surface activity in LA vials is integral to the manufacturing process and is not a chemical surface treatment.



Low Adsorption Sample Vials and Caps

| Description | Cat. No. |
|---|----------|
| CD (Center Draining) Vial Kits* | |
| Clear glass vial, 1.5 mL, PTFE/silicone septa | 29655-U |
| Clear glass vial, 1.5 mL, PTFE/silicone septa with slit | 29656-U |
| MRQ30 Vial Kits* | |
| Clear glass vial, 1.2 mL, PTFE/silicone septa | 29658-U |
| Clear glass vial, 1.2 mL, PTFE/silicone septa with slit | 29659-U |
| QSertVial™ (0.3 mL) Vial Kits* | |
| Clear glass, natural PTFE/silicone septa | 29661-U |
| Clear glass, natural PTFE/silicone septa with slit | 29662-U |
| Amber glass vial, natural PTFE/silicone septa | 29663-U |
| Amber glass vial, natural PTFE/silicone septa with slit | 29664-U |
| Low Adsorption 2 mL (12 x 32 mm) Vial Kits* | |
| Clear glass vial with marking spot, natural PTFE/silicone septa | 29651-U |
| Clear glass vial with marking spot, natural PTFE/silicone septa with slit | 29652-U |
| Amber glass vial with marking spot, natural PTFE/silicone septa | 29653-U |
| Amber glass vial with marking spot, natural PTFE/silicone septa with slit | 29654-U |
| Replacement Mass Spec Quality (MSQ) Caps with Septa | |
| Caps with septa, 9 mm, natural PTFE/silicone, pack of 100 | 29665-U |
| Caps with septa, 9 mm, natural PTFE/silicone with slit, pack of 100 | 29666-U |

* Kits include 100 each of vial, cap and septa

HPLC Syringes

High-Quality Syringes for Any Sample Matrix

Whether you need a liquid, gastight, manual, or autosampler syringe, we have the appropriate quality and size you need for your application and sample volume.



Popular Hamilton® Syringes for Rheodyne®, Valco® VISF-2, Altex™ and SSI™ Injection Valves

| Description | Needle Type | Volume | Mfr Model | Pkg. Size | Cat. No. |
|---------------------------------------|-------------------|--------|-----------|-----------|----------|
| Hamilton® 700 Series Syringes | | | | | |
| 10 µL Syringe with Cemented Needle | 22s ga, blunt tip | 10 µL | 701 SNR | 1 | 58380-U |
| 25 µL Syringe with Cemented Needle | 22s ga, blunt tip | 25 µL | 702 SNR | 1 | 58381 |
| 50 µL Syringe with Cemented Needle | 22s ga, blunt tip | 50 µL | 705 SNR | 1 | 58382 |
| 100 µL Syringe with Cemented Needle | 22s ga, blunt tip | 100 µL | 710 SNR | 1 | 58383 |
| 250 µL Syringe with Cemented Needle | 22 ga, blunt tip* | 250 µL | 725 SNR | 1 | 58384 |
| 500 µL Syringe with Cemented Needle | 22 ga, blunt tip | 500 µL | 750 SNR | 1 | 26222-U |
| Hamilton® 1700 Series Syringes | | | | | |
| 100 µL Syringe with Removable Needle | 22s ga, blunt tip | 100 µL | 1710 RNR | 1 | 20888 |
| 250 µL Syringe with Removable Needle | 22 ga, blunt tip | 250 µL | 1725 RNR | 1 | 20889 |
| 500 µL Syringe with Removable Needle | 22 ga, blunt tip | 500 µL | 1750 RNR | 1 | 20890-U |

* The nominal I.D. of the needle is 0.413 mm for a 22 gauge needle and 0.168 mm for 22s gauge.

Supelco®

Analytical Products

MilliporeSigma
400 Summit Drive
Burlington, MA 01803

SigmaAldrich.com

To place an order or receive technical assistance

Order/Customer Service: SigmaAldrich.com/order

Technical Service: SigmaAldrich.com/techservice

Safety-related Information: SigmaAldrich.com/safetycenter

SigmaAldrich.com

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