

Maximize System Performance with Easy-to-Use HPLC Accessories



Tubing

Fittings

Filters

Low Adsorption Vials

HPLC Syringes

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(er) Performance Liquid Chromatography columns containing particles that are smaller than 3.5 μm creates 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(er) 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, maximize 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.

For a complete listing, refer to our website, sigma-aldrich.com/hplc-accessories

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 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
MarvelX Replacement Tubing	
MarvelX PLS, 25 μm x 150 mm	51889-U
MarvelX PLS, 100 μm x 150 mm	51890-U
MarvelX PLS, 25 μm x 350 mm	51891-U
MarvelX PLS, 100 μm x 350 mm	51893-U
MarvelX SS, 125 μm x 150 mm	51900-U
MarvelX SS, 125 μm x 350 mm	51901-U
MarvelX SS, 254 μm x 150 mm	51904-U
MarvelX SS, 254 μm x 350 mm	51906-U

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	25 µm (.010")	Orange	Pk/2	51316-U
10 cm	50 µm (.002")	Natural	Pk/2	51319-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.	Length	I.D.	O.D.	Qty.	Cat. No.
5 cm	0.005"	1/16"	1 ea.	56707	5 cm	0.007"	1/16"	1 ea.	56713
10 cm	0.005"	1/16"	1 ea.	56708	10 cm	0.007"	1/16"	1 ea.	56714
20 cm	0.005"	1/16"	1 ea.	56709	20 cm	0.007"	1/16"	1 ea.	56715-U
30 cm	0.005"	1/16"	1 ea.	56710-U	30 cm	0.007"	1/16"	1 ea.	56716
0.5 m	0.005"	1/16"	1 ea.	56711	0.5 m	0.007"	1/16"	1 ea.	56717
1.0 m	0.005"	1/16"	1 ea.	56712-U	1.0 m	0.007"	1/16"	1 ea.	56718-U

Supel™ Connect High-Performance Fittings

Key Features and Benefits

- For use with PEEK, PEEKsil, or stainless steel tubing of your choice
- Sliding ferrule design allows for use in any port
- Knurled area for hand tightening
- Strain relief cone to prevent tube kinking

Supel Connect Better Nut with PEEK Ferrule

The Supel Connect Better Nut with the PEEK ferrule is recommended for 1/16" diameter PEEK, or stainless steel tubing. Holding strength for PEEK is up to 7,500 psi, and up to 15,000 psi when used with stainless steel tubing.

Description	Qty.	Cat. No.
Supel Connect Better Nut with PEEK Ferrule	Pk/2	51365-U



Supel Connect Better Nut, XL with PEEK Ferrule

The 10-32 Supel Connect Better Nut, XL (extra long) with a PEEK ferrule provides extended reach for injector valves and ports that are difficult to reach with a standard HPLC fitting. Holding strength for PEEK ferrules is up to 7,500 psi.

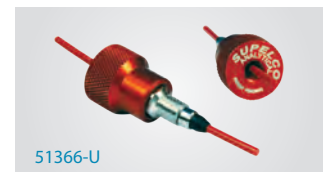
Description	Qty.	Cat. No.
Supel Connect Better Nut, XL with PEEK Ferrule	Pk/2	51380-U



Supel Connect Short High-Performance Fitting for PEEK/PEEKsil Tubing

This fitting holds PEEK and PEEKsil tubing to higher pressures than previously possible. Based on a unique 'twin symmetrical ferrule' design, its external and internal ferrules have twice the surface area to grip 1/16" tubing. It is recommended for holding PEEK and PEEKsil tubing to UHPLC pressures. Used with 0.002"-0.005" PEEK tubing, it will hold 10,000 psi minimum. PEEKsil can be held to 15,000 psi. The overall fitting is approximately the same length as standard high-performance fittings and has a generous gripping area, allowing it to be hand tightened.

Description	Qty.	Cat. No.
Supel Connect Short High-Performance Fitting for PEEK/PEEKsil Tubing	Pk/2	51366-U



Supel Connect Long High-Performance Fitting for PEEK/PEEKsil Tubing

This fitting is a long version of the 51366-U. It is operationally identical, except having the additional length to allow it to be inserted into crowded areas (such as injector valves).

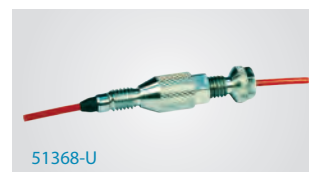
Description	Qty.	Cat. No.
Supel Connect Long High-Performance Fitting for PEEK/PEEKsil Tubing	Pk/2	51367-U



Supel Connect High-Performance Fitting for Stainless Steel Tubing

This fitting is the "OEM and field-service" version of the original UHPLC fitting found on Supelco UHPLC links. Unlike the original, the 51368-U is tightened by a 1/4" hex wrench and can be installed on customer supplied 1/16" O.D. stainless steel tubing. These fittings are supplied with two ferrules, a high-performance external PEEK ferrule, and an internal stainless steel ferrule for added holding power and elimination of dead volumes due to 'creep' of tubing. The fitting is permanently affixed to the tubing by the internal ferrule. These fittings have a generous textured area for starting into an HPLC port, and are small enough in diameter and length to be used in many situations where space is at a premium. They are tightened to final holding pressures up to 15,000 psi with a 1/4" wrench.

Description	Qty.	Cat. No.
High-Performance Fitting for Stainless Steel Tubing	1 ea.	51368-U



Supel Connect Agilent® 1100/1200 Interconnect

A special high performance interconnect designed for the Agilent 1100/1200 HPLC system. Semi-rigid 316 stainless steel tubing connects to the heater outlet with nut and ferrule (supplied), and allows use of columns by any manufacturer to be completely seated in the column inlet port. An important feature of this fitting is the 'service loop', which improves support for the column.

Length (cm)	I.D. (in.)	O.D. (in.)	Type	Suggested Application	Cat. No.
15	0.005	1/16	Rigid	HPLC column to heater outlet	53629-U



Supel Connect Replacement Ferrules

PEEK replacement ferrules for Supel Connect fittings. The Supel Connect PEEK ferrule can be used in any HPLC port.

Description	Qty.	Cat. No.
Supel Connect Ferrules	Pk/10	53690-U



PEEK Fingertight Fittings

PEEK fingertight fittings are convenient, inert, and bio-compatible. 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.
Supelco One-Piece PEEK	Pk/5	Z227250
One-Piece PEEK – (10-32)	Pk/10	55067-U



Practical Recommendations to Maximum System Performance

- Use 0.005 in. I.D. inlet and outlet tubes. 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.

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 as well as the traditional two-piece design.

Description	Qty.	Cat. No.
Ultra-High Pressure Fitting, PEEK		
Fingertight I Nut (Black)	Pk/10	51262-U
SealTight® Short Fitting (Black)	Pk/10	51263-U
LiteTouch® Nut (Black) (51256-U requires ferrule 51258-U)	Pk/10	51256-U



Upchurch UHPLC Stainless Steel Fittings

With new column technology pushing the pressure limits of standard HPLC fittings, Upchurch Scientific has specially designed UHPLC stainless steel that can withstand much higher pressures than standard HPLC analysis.

Description	Qty.	Cat. No.
Ultra-High Pressure Fitting, Stainless Steel		
With Ferrule for 1/16" Tubing	Pk/10	51264-U
With Ferrule for 1/32" Tubing	Pk/10	51265-U



Upchurch UHPLC Unions and Adapters

The design of the UHPLC unions, 51274-U and 51277-U, allows a convenient connection between 1/32" O.D. tubing and 360 µm tubing. The union contains a stainless steel body and capsule, both with excellent chemical compatibility. It is coupled with a direct-connect ferrule made from a proprietary PEEK polymer blend allowing for tubing connections up to 15,000 psi and temperatures of 100 °C or below.

The adapters, 51279-U and 51281-U, have internal threaded ports that feature a zero-dead volume (ZDV) connection between both ends of the tube. The one-piece Ultra High Performance Fingertight fitting allows them to be used in temperature applications up to 200 °C and pressures to 6,000 psi and at room temperatures up to 15,000 psi.

Description	Qty.	Cat. No.
UHPLC Micro Union		
For 1/32" Tubing	1 ea.	51274-U
For 360 µm Tubing	1 ea.	51277-U
For 1/32" Tubing (Fingertight Fittings)	1 ea.	51279-U
UHPLC Adapter		
For 1/32" and 1/16" Tubing (Fingertight Fittings)	1 ea.	51281-U



Optimize Technologies EXP Fitting System

The EXP Fitting System is the premier adjustable nut and ferrule compression fitting for extreme high-pressure connections between 1/16" tubing and any 10-32 port. The Titanium Hybrid ferrule provides a perfect seal with every connection, yet can be released without tools to adjust to the different port depths of various hardware. There is no longer the need to clip off and replace ferrules from tubing.

Description	Qty.	Cat. No.
EXP Hand Tight Nut and Titanium Ferrule 10-32	1 ea.	51384-U
EXP Hand Tight Nut and Titanium Ferrule 10-32	Pk/10	51385-U
Titanium Hybrid Ferrule	Pk/10	51391-U



Ascentis Express Guard Columns

Key Features and Benefits

- High efficiency, low dead volume
- Hand tighten to 9,000 psi
- Direct connection, suitable for all columns and instruments



53500-U

Ascentis® Express Guard Columns provide physical (filtration) and chemical protection for costly analytical columns without compromising the very high performance of modern columns. These Ascentis Express guard columns are capable of continuous use at pressures up to 9,000 psi (600 bar) with only hand-tightening. Guard cartridges are easily replaced without removing the guard column holder from the flow path. The cartridges are packed with Ascentis Express Fused-Core® particles.

Ascentis Express Guard Cartridge, Pack of 3

Particle Size	I.D.	Length	C18	C8	RP-Amide	Phenyl Hexyl	HILIC (Si)	F5	ES-Cyano	OH5
2.0 µm	2.1 mm	0.5 cm	50822-U	51676-U	51594-U	51619-U	51430-U	50884-U	51736-U	50969-U
2.0 µm	3.0 mm	0.5 cm	50823-U	51679-U	51595-U	51623-U	51433-U	50886-U	51739-U	50973-U
2.7 µm	2.1 mm	0.5 cm	53501-U	53509-U	53514-U	53524-U	53520-U	53594-U	53495-U	53780-U
2.7 µm	3.0 mm	0.5 cm	53504-U	53511-U	53516-U	53526-U	53521-U	53597-U	53496-U	53781-U
2.7 µm	4.6 mm	0.5 cm	53508-U	53512-U	53519-U	53531-U	53523-U	53599-U	53497-U	53782-U
5 µm	2.1 mm	0.5 cm	50539-U	50395-U	50776-U	50496-U	50295-U	50633-U	50592-U	50349-U
5 µm	3.0 mm	0.5 cm	50541-U	50396-U	50777-U	50497-U	50297-U	50634-U	50593-U	50350-U
5 µm	4.6 mm	0.5 cm	50542-U	50399-U	50779-U	50498-U	50298-U	50635-U	50597-U	50355-U

The ferrule is resistant to damage from excessive tightening; however, the PEEK end will deform from repeated excessive tightening. For best results, tighten a maximum of 1/4-turn past hand-tight.

How the Cartridge Works

The hybrid ferrule forms a leak-tight seal onto the 1/16-inch tubing when tightened into the column inlet port. The ferrule then releases when the unit is unthreaded from the inlet. The ferrule and the holder threads are designed to be robust and are intended to be used for repeat connections.

Universal Guard Holder and Ferrule

Description	Qty.	Cat. No.
Holder w/EXP Titanium Hybrid Ferrule (cartridge not included)	1 ea.	53500-U
Replacement Titanium Hybrid Ferrule	Pk/10	51391-U

ASI UltraShield Pre-Column UHPLC Waters Compatible Filter

The UltraShield direct connect precolumn 0.5 micron filter provides economical protection from harmful effects of sample and mobile phase particulates on modern UHPLC and high resolution HPLC columns. It maintains efficiency of high performance columns assuring no loss of critical resolution. With its simple design, UltraShield installs into the Waters compatible analytical column in seconds and is leak tight to 15,000 psi.



56656-U

Description	Cat. No.
UltraShield Pre-column Waters Compatible Filter Assembly	56656-U

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. It 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

I.D.	Qty.	Cat. No.
0.5 µm	Pk/5	51164-U
0.5 µm	Pk/10	51165-U
0.2 µm	Pk/5	51166-U
0.2 µm	Pk/10	51167-U

OPTI-GUARD® 1 mm Guard Columns

Manufactured from a proprietary PEEK blend, the Upchurch Scientific® UHPLC Fingertight fittings can be used at temperatures up to 200 °C and higher pressure (to 23,000 psi/1,585 bar in some cases) than more traditional HPLC fittings. These fittings are available in one piece 10–32 as well as the traditional two-piece design.

Description	Qty.	Cat. No.
OPTI-GUARD C18 (Violet Label)	5 ea.	51177-U
OPTI-GUARD Silica (Orange Label)	5 ea.	51178-U
OPTI-GUARD CN (Blue Label)	5 ea.	51179-U
OPTI-GUARD Anion Exchange (Black Label)	5 ea.	51180-U
OPTI-GUARD Cation Exchange (White Label)	5 ea.	51181-U
OPTI-GUARD C18, Biocompatible	5 ea.	51183-U
OPTI-GUARD C8	5 ea.	51184-U
OPTI-GUARD Phenyl	5 ea.	51185-U
OPTI-GUARD Amino, NH ₂	5 ea.	51187-U



OPTI-SOLV® Filter

The OPTI-SOLV filter provides low-impact filtering with a zero dead volume connection. Use the OPTI-SOLV 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
OPTI-SOLV Mini Filter 5 µm	5 ea.	51171-U
OPTI-SOLV Nano Filter 0.5 µm	5 ea.	51176-U



Supelco Solvent Filtration Systems

Protect your instrument and columns by removing particles and gases from solvents with the Supelco Mobile Phase Filtration systems. Each system comes with Nylon 66 membrane filters compatible with all solvents commonly used in HPLC.

Apparatus 1 Includes:

- 250 mL glass reservoir
- Funnel base and stopper
- Clamp
- Stainless steel holder and screen
- 10 PTFE gaskets
- 50 Nylon 66 membrane filters (47 mm, 0.45 µm pores)
- Flask not included

Description	Qty.	Cat. No.
Connects to 1000 mL sidearm flask	1 ea.	58061



Apparatus 2 Includes:

- 250 mL glass reservoir
- 3/4 34/45 funnel base
- 3/4 34/45 1000 mL flask and glass top
- Clamp
- Stainless steel holder and screen
- 10 PTFE gaskets
- 50 Nylon 66 membrane filters (47 mm, 0.45 µm pores)

Description	Qty.	Cat. No.
Connects to aspiration line	1 ea.	58062-U



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. 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.	53156-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 allow split flow ratios to remain stable and reproducible, and not 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 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. The fluid resistors can be purchased separately and are interchangeable so changes in split ratios can be made quickly and accurately.



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
Mounting Bracket for HPLC Post Column Flow Splitters - Fixed	56630-U

Description	Cat. No.
HPLC Post Column Flow Splitter – Adjustable	
Split Ratio = 1:1 to 20:1	56629-U
HPLC Post Column Resistor Sets – Binary	
Split Ratio = 20:1	56631-U
Split Ratio = 10:1	56632-U
Split Ratio = 5:1	56633-U
Split Ratio = 3:1	56634-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 In-Line Mixer Assembly	
50 µL	56642-U
150 µL	56644-U
250 µL	56645-U
350 µL	56646-U

Description	Cat. No.
High Pressure Binary Tee Mixer Assembly	
50 µL	56648-U
150 µL	56649-U
250 µL	56651-U
350 µL	56653-U



Low Adsorption HPLC Vials

Supelco's 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

Sigma-Aldrich carries the best syringe selection and the top brands you use every day. Whether you need a liquid or gastight, a 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.

Sigma-Aldrich® Worldwide Offices

Argentina

Free Tel: 0810 888 7446
Tel: (+54) 11 4556 1472
Fax: (+54) 11 4552 1698

Australia

Free Tel: 1800 800 097
Free Fax: 1800 800 096
Tel: (+61) 2 9841 0555
Fax: (+61) 2 9841 0500

Austria

Tel: (+43) 1 605 81 10
Fax: (+43) 1 605 81 20

Belgium

Tel: (+32) 3 899 13 01
Fax: (+32) 3 899 13 11

Brazil

Free Tel: 0800 701 7425
Tel: (+55) 11 3732 3100
Fax: (+55) 11 5522 9895

Canada

Free Tel: 1800 565 1400
Free Fax: 1800 265 3858
Tel: (+1) 905 829 9500
Fax: (+1) 905 829 9292

Chile

Tel: (+56) 2 495 7395
Fax: (+56) 2 495 7396

People's Republic of China

Free Tel: 800 819 3336
Tel: (+86) 21 6141 5566
Fax: (+86) 21 6141 5567

Czech Republic

Tel: (+420) 246 003 200
Fax: (+420) 246 003 291

Denmark

Tel: (+45) 43 56 59 00
Fax: (+45) 43 56 59 05

Finland

Tel: (+358) 9 350 9250
Fax: (+358) 9 350 92555

France

Free Tel: 0800 211 408
Free Fax: 0800 031 052
Tel: (+33) 474 82 28 88
Fax: (+33) 474 95 68 08

Germany

Free Tel: 0800 51 55 000
Free Fax: 0800 64 90 000
Tel: (+49) 89 6513 0
Fax: (+49) 89 6513 1169

Hungary

Tel: (+36) 1 235 9055
Fax: (+36) 1 235 9068

India

Telephone

Bangalore: (+91) 80 6621 9400
New Delhi: (+91) 11 4358 8000
Mumbai: (+91) 22 4087 2364
Pune: (+91) 20 4146 4700
Hyderabad: (+91) 40 3067 7450
Kolkata: (+91) 33 4013 8000

Fax

Bangalore: (+91) 80 6621 9550
New Delhi: (+91) 11 4358 8001
Mumbai: (+91) 22 2579 7589
Pune: (+91) 20 4146 4777
Hyderabad: (+91) 40 3067 7451
Kolkata: (+91) 33 4013 8016

Ireland

Free Tel: 1800 200 888
Free Fax: 1800 600 222
Tel: +353 (0) 402 20370
Fax: +353 (0) 402 20375

Israel

Free Tel: 1 800 70 2222
Tel: (+972) 8 948 4222
Fax: (+972) 8 948 4200

Italy

Free Tel: 800 827 018
Tel: (+39) 02 3341 7310
Fax: (+39) 02 3801 0737

Japan

Tel: (+81) 3 5796 7300
Fax: (+81) 3 5796 7315

Korea

Free Tel: (+82) 80 023 7111
Free Fax: (+82) 80 023 8111
Tel: (+82) 31 329 9000
Fax: (+82) 31 329 9090

Luxembourg

Tel: (+32) 3 899 1301
Fax: (+32) 3 899 1311

Malaysia

Tel: (+60) 3 5635 3321
Fax: (+60) 3 5635 4116

Mexico

Free Tel: 01 800 007 5300
Free Fax: 01 800 712 9920
Tel: (+52) 722 276 1600
Fax: (+52) 722 276 1601

The Netherlands

Tel: (+31) 78 620 5411
Fax: (+31) 78 620 5421

New Zealand

Free Tel: 0800 936 666
Free Fax: 0800 937 777
Tel: (+61) 2 9841 0555
Fax: (+61) 2 9841 0500

Norway

Tel: (+47) 23 17 60 00
Fax: (+47) 23 17 60 10

Poland

Tel: (+48) 61 829 01 00
Fax: (+48) 61 829 01 20

Portugal

Free Tel: 800 202 180
Free Fax: 800 202 178
Tel: (+351) 21 924 2555
Fax: (+351) 21 924 2610

Russia
Free Tel: 8 800 100 7425
Tel: (+7) 495 621 5828
Fax: (+7) 495 621 6037

Singapore

Tel: (+65) 6779 1200
Fax: (+65) 6779 1822

Slovakia

Tel: (+421) 255 571 562
Fax: (+421) 255 571 564

South Africa

Free Tel: 0800 1100 75
Free Fax: 0800 1100 79
Tel: (+27) 11 979 1188
Fax: (+27) 11 979 1119

Spain

Free Tel: 900 101 376
Free Fax: 900 102 028
Tel: (+34) 91 661 99 77
Fax: (+34) 91 661 96 42

Sweden

Tel: (+46) 8 742 4200
Fax: (+46) 8 742 4243

Switzerland

Free Tel: 0800 80 00 80
Free Fax: 0800 80 00 81
Tel: (+41) 81 755 2511
Fax: (+41) 81 756 5449

Thailand

Tel: (+66) 2 126 8141
Fax: (+66) 2 126 8080

United Kingdom

Free Tel: 0800 717 181
Free Fax: 0800 378 785
Tel: (+44) 01747 833 000
Fax: (+44) 01747 833 574

United States

Toll-Free: 800 325 3010
Toll-Free Fax: 800 325 5052
Tel: (+1) 314 771 5765
Fax: (+1) 314 771 5757

Vietnam

Tel: (+84) 8 3516 2810
Fax: (+84) 8 6258 4238

Internet

sigma-aldrich.com

Enabling Science to
Improve the Quality of Life

Order/Customer Service (800) 325-3010 • Fax (800) 325-5052
Technical Service (800) 325-5832 • sigma-aldrich.com/techservice
Development/Custom Manufacturing Inquiries **SAFC**® (800) 244-1173
Safety-related Information sigma-aldrich.com/safetycenter

World Headquarters
3050 Spruce St.
St. Louis, MO 63103
(314) 771-5765
sigma-aldrich.com

©2015 Sigma-Aldrich Co. LLC. All rights reserved. SAFC, SIGMA-ALDRICH and SUPELCO are trademarks of Sigma-Aldrich Co. LLC, registered in the US and other countries. Solutions within is a trademark of Sigma-Aldrich Co. LLC. Ascensis is a registered trademark of Sigma-Aldrich Co. LLC. Agilent is a registered trademark of Agilent Technologies, Inc. Fused-Core is a registered trademark of Advanced Materials Technology, Inc. LiteTouch and Rheodyne are registered trademarks of IDEX Health & Science, LLC. OPTI-GUARD, OPTI-SOLV and EXP are registered trademarks of Optimize Technologies, Inc. Hamilton is a registered trademark of Hamilton Co. Valco is a registered trademark of Valco Instruments Co. Inc. Supel is a trademark of Sigma-Aldrich Co. LLC. PEEKSil is a trademark of SGE Analytical Science Pty Ltd. QSerVial and CD are trademarks of QIS, Inc. Sealight is a trademark of IDEX Health & Science, LLC. Super Clean is a trademark of Scientific Glass Technology B.V. MarvelX is a trademark of IDEX Health and Science, LLC. Altex is a trademark of Beckman Coulter, Inc. SSI is a trademark of Scientific Systems, Inc. Supelco brand products are sold through Sigma-Aldrich, Inc. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see product information on the Sigma-Aldrich website at www.sigmaaldrich.com and/or on the reverse side of the invoice or packing slip. Sigma-Aldrich Corp. is a subsidiary of Merck KGaA, Darmstadt, Germany.

NNX
12200 / T411058C
1045