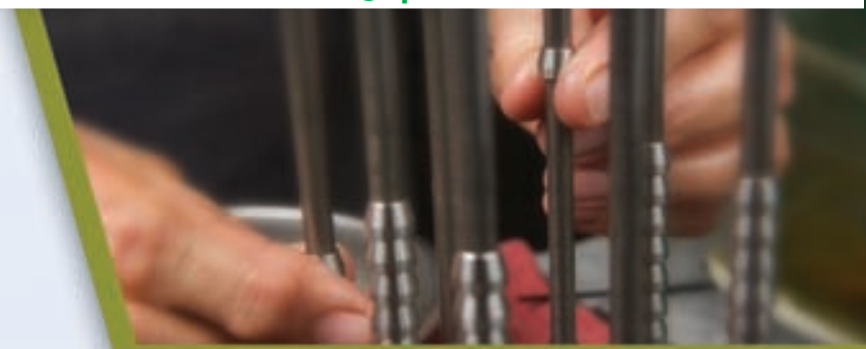
Column Hardware



Inspecting Isolation Technologies™ compression ferrules for imperfections from the machining process in Middleboro, MA.

IsoBar

- Ultra-high performance liquid chromatography (UHPLC) compatible
- Proven format for <2 µm stationary phases
- Rated to 20,000 psi (1,379 bar)

UHPLC decreases the time and cost associated with analytical separations, but to consistently maintain these technology advantages, you need column hardware that ensures the speed and precision of your processes. The Isolation Technologies'™ IsoBar column platform delivers a leak-proof, reliable all-metal design with high strength threaded end fittings to meet critical system operating requirements.

Few column hardware formats are more aptly suited for the rigors of ultra-high pressure operations than IsoBar. IsoBar features a unique Isobore™ internal surface finish. This extremely smooth, flat and ultra-clean finish reduces the wall effect and significantly improves column efficiency.

IsoBar offers the stability, high pressure, and high reliability critical to the optimum performance of UHPLC systems.

Dimensions

ID	2.1, 3.0 and 4.6 mm
Length	2.0, 3.0, 5.0, 10.0 and 15.0 cm

Part No.	Description
ISOBAR 4.6 mm	
5030IP-05046-002-05	IsoBar Column System, 4.6 mm x 2 cm, 0.5 µm
5030IP-05046-0025-05	IsoBar Column System, 4.6 mm x 2.5 cm, 0.5 µm
5030IP-05046-003-05	IsoBar Column System, 4.6 mm x 3 cm, 0.5 µm
5030IP-05046-005-05	IsoBar Column System, 4.6 mm x 5 cm, 0.5 µm
5030IP-05046-010-05	IsoBar Column System, 4.6 mm x 10 cm, 0.5 µm
5030IP-05046-015-05	IsoBar Column System, 4.6 mm x 15 cm, 0.5 µm
5030IP-05046-025-05	IsoBar Column System, 4.6 mm x 25 cm, 0.5 µm
2009-05046-002EP	IsoBar Column Tube, 4.6 mm x 2 cm
2009-05046-0025EP	IsoBar Column Tube, 4.6 mm x 2.5 cm
2009-05046-003EP	IsoBar Column Tube, 4.6 mm x 3 cm
2009-05046-005EP	IsoBar Column Tube, 4.6 mm x 5 cm
2009-05046-010EP	IsoBar Column Tube, 4.6 mm x 10 cm
2009-05046-015EP	IsoBar Column Tube, 4.6 mm x 15 cm
2009-05046-025EP	IsoBar Column Tube, 4.6 mm x 25 cm
907946-P-05	Assembly Frit Retainer, 4.6 mm Tapered, 0.5 µm
907946-P-10	Assembly Frit Retainer, 4.6 mm Tapered, 1.0 µm
907946-P-20	Assembly Frit Retainer, 4.6 mm Tapered, 2.0 µm
9096	End Fitting, IsoBar 5/16"
ISOBAR 3.0 mm	
5030IP-05030-002-05	IsoBar Column System, 3.0 mm x 2 cm, 0.5 µm
5030IP-05030-0025-05	IsoBar Column System, 3.0 mm x 2.5 cm, 0.5 µm
5030IP-05030-003-05	IsoBar Column System, 3.0 mm x 3 cm, 0.5 µm
5030IP-05030-005-05	IsoBar Column System, 3.0 mm x 5 cm, 0.5 µm
5030IP-05030-010-05	IsoBar Column System, 3.0 mm x 10 cm, 0.5 µm
5030IP-05030-015-05	IsoBar Column System, 3.0 mm x 15 cm, 0.5 µm
5030IP-05030-025-05	IsoBar Column System, 3.0 mm x 25 cm, 0.5 µm
2009-05030-002EP	IsoBar Column Tube, 3.0 mm x 2 cm
2009-05030-0025EP	IsoBar Column Tube, 3.0 mm x 2.5 cm
2009-05030-003EP	IsoBar Column Tube, 3.0 mm x 3 cm
2009-05030-005EP	IsoBar Column Tube, 3.0 mm x 5 cm
2009-05030-010EP	IsoBar Column Tube, 3.0 mm x 10 cm
2009-05030-015EP	IsoBar Column Tube, 3.0 mm x 15 cm
2009-05030-025EP	IsoBar Column Tube, 3.0 mm x 25 cm
907930-P-05	Assembly Frit Retainer, 3.0 mm Tapered, 0.5 µm
907930-P-10	Assembly Frit Retainer, 3.0 mm Tapered, 1.0 µm
907930-P-20	Assembly Frit Retainer, 3.0 mm Tapered, 2.0 µm
9096	IsoBar End Fitting, 5/16"
ISOBAR 2.1 mm	
5030IP-04021-002-05	IsoBar Column System, 2.1 mm x 2 cm, 0.5 µm
5030IP-04021-003-05	IsoBar Column System, 2.1 mm x 3 cm, 0.5 µm
5030IP-04021-005-05	IsoBar Column System, 2.1 mm x 5 cm, 0.5 µm
5030IP-04021-010-05	IsoBar Column System, 2.1 mm x 10 cm, 0.5 µm
5030IP-04021-015-05	IsoBar Column System, 2.1 mm x 15 cm, 0.5 µm
5030IP-04021-025-05	IsoBar Column System,, 2.1 mm x 25 cm, 0.5 µm
2009-04021-002EP	IsoBar Column Tube, 2.1 mm x 2 cm
2009-04021-003EP	IsoBar Column Tube, 2.1 mm x 3 cm
2009-04021-005EP	IsoBar Column Tube, 2.1 mm x 5 cm
2009-04021-010EP	IsoBar Column Tube, 2.1 mm x 10 cm
2009-04021-015EP	IsoBar Column Tube, 2.1 mm x 15 cm
2009-04021-025EP	IsoBar Column Tube, 2.1 mm x 25 cm
907921-P-05	Assembly Frit Retainer, 2.1 mm Tapered, 0.5 µm
907921-P-10	Assembly Frit Retainer, 2.1 mm Tapered, 1.0 µm
907921-P-20	Assembly Frit Retainer, 2.1 mm Tapered, 2.0 µm
9097	IsoBar End Fitting, 1/4"
PACKING ADAPTER	
3160-05-46	IsoBar Assembly Packing Adapter, 4.6 mm
3160-005	Seal IsoBar Packing System, 4.6 mm
3160-05-30	IsoBar Assembly Packing Adapter, 3 mm
3160-004	Seal IsoBar Packing System, 3 mm
3160-04-21	IsoBar Assembly Packing Adapter, 2.1 mm
3160-007	Seal IsoBar Packing System, 2.1 mm

Modular Column Systems

- Precision machined from high purity LC grade 316 stainless steel
- Modern high performance configuration
- Safer and easier to pack than compression columns

Modular hardware guarantees a high pressure seal between the tubing and end fitting, as well as ensures proper seating of the frit. The frit is contained in a cap that slides over the column, forming a leak-free and gap-free seal.

All stainless steel modular columns use our exclusive Isobore™ internal surface finish. This unique finish reduces drag at the column wall and improves column efficiency and performance by providing an extremely smooth, flat, and clean surface. (The Isobore surface finish is <15 µinches, with typical values around 8 µinches.)

Modular column hardware is supplied with the following components:

- One 316 stainless steel column body
- Two one-piece end fittings
- Two frit caps containing 316 stainless steel frits in a PEEK™ cap

Internal Diameters (mm): 1.0, 2.1, 3.0, 4.0, 4.6, 7.8, 10.0, 21.2, 30.0, 50.0
Lengths (mm): 20, 33, 50, 75, 100, 125, 150, 200, 250, 300, 500

Please Note: Modular Systems are available in custom IDs and lengths — almost any size is possible. Contact us for more details.

Modular Column Packing Adapters

Isolation Technologies™ modular packing adapters are used to connect modular style column hardware to high pressure column packing reservoirs. The adapters feature a three-piece threaded design for safety and easy removal and replacement of the PEEK sealing ring. Modular packing adapters are available for inner diameters from 2.1 mm to 21.2 mm.

Compression Column Systems

- Multiple port configurations
- Leak-free frits

Isolation Technologies compression systems ensure that the ferrule is properly seated on the tube and locked in place so that it does not slip off during the high-pressure packing process. Proper assembly of the tube and frit within the end fitting ensures the integrity of the flow path. Improper assembly can lead to poor chromatography or loss of packing material.

Compression column tubing is available in Isobore grade. Featuring a surface finish (Ra) of <15 µinch with typical values around 8 µinch. This highly polished tubing is recommended for use with 5 µm packing materials (and smaller) and with small internal diameter columns (<3.0 mm inner diameter).

Isolation Technologies compression systems come with a PEEK encapsulated frit, reducing the potential for leaks and silica bypass.

Internal Diameters (mm): 1.0, 2.1, 3.0, 4.0, 4.6, 7.8, 9.4, 10.0
Lengths (mm): 33, 50, 75, 100, 125, 150, 200, 250, 300

Please Note: Compression Systems are available in custom IDs and lengths — almost any size is possible. Contact us for more details.

Part No.	Description
MODULAR COLUMN HARDWARE	
5041IV-04021-025-20	2.1 x 250.0 mm Modular Assembly with 2 µm SST Frit
5041IV-05046-025-20	4.6 x 250.0 mm Modular Assembly with 2 µm SST Frit
5041IP-10100-025-20	10.0 x 250.0 mm Modular Assembly with 2 µm SST Frit
5041IP-19212-025-20ED	21.2 x 250.0 mm Modular Assembly with 2 µm SST Frit
5041IP-24300-025-20	30.0 x 250.0 mm Iso-Prep™ Assembly with 2 µm SST Frit
5060IP-56500-025-20	50.0 x 250.0 mm Iso-Prep Assembly with 2 µm SST Frit
MODULAR COLUMN PACKING ADAPTERS	
3118-21	2.0–2.1 mm Modular Packing Adapter with Seal
3118-46	4.6 mm Modular Packing Adapter with Seal
3108	10.0 mm Modular x 0.5" Compression with Seal
3107	21.2 mm Modular x 1.0" Compression with Seal
7050-RT	Frit Cap Removal Tool 1.0 – 4.6 mm ID
COMPRESSION COLUMN HARDWARE	
101-04021-025EP	2.1 x 250 mm x 1/4" Isobore Compression Tube
101-04046-025EP	4.6 x 250 mm x 1/4" Isobore Compression Tube
7020-20	4.6 mm x 0.032", 2 µm PEEK Encapsulated Frit
7021-20	2.1 mm x 0.032", 2 µm PEEK Encapsulated Frit
4-1V	0.250" Compression, 4.6 mm Distribution Cone
4-1V2.1	0.250" Compression, 2.1 mm Distribution Cone
9012S	Compression Packing Adapter, 0.25" OD, 1.0 – 4.6 mm ID

SST = Stainless Steel

Iso-Prep™ Guard

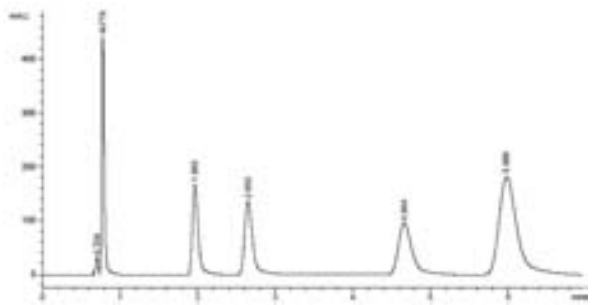
- 21.2 mm and larger ID column protection
- Improves plate count and symmetry
- Simple manufacturing technique

Application Note

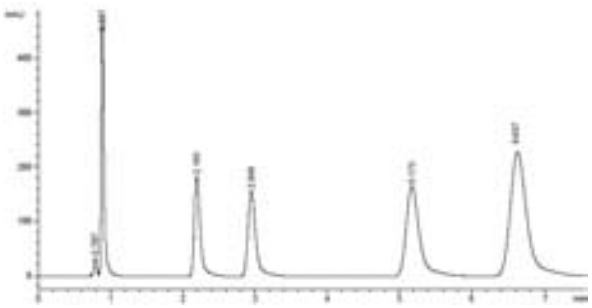
Low Pressure Drop

- 60:40 Acetonitrile : Water
- 50 mL/min
- Kromasil 10 µm C18
- Backpressure: 100 psi

10 µ C18 100 x 21.2 mm, 60:40 Acetonitrile:Water, 20 mL/min



Without Iso-Prep Guard — 38,150 Plates/M 1.24 As



With Iso-Prep Guard — 41,920 Plates/M 1.20 As

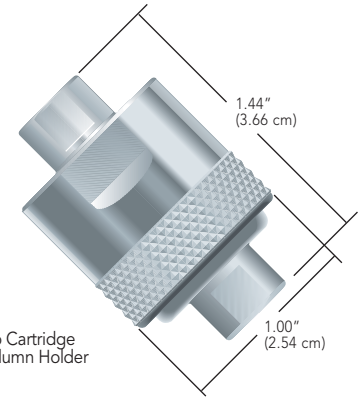
Unpacked Semi-Prep Guard Column

- 10 mm ID column protection
- Convenient cartridge system
- Easy to pack

The internal volume of this Upchurch Scientific® semi-prep guard column is just 780 µL, which only requires approximately 1.50 g of packing material — ideally the same material used in your semi-prep column. The C-1000 Holder will hold to high pressures, and is specially treated to prevent galling.* Use standard 10-32 coned fittings (not included) to connect your 1/16" OD tubing.

** Galling is a form of "cold welding." When two fittings manufactured from the same metal are wrench-tightened too tightly, they can "weld" together, making it virtually impossible to separate the two components.*

C-1000 Semi-Prep Guard Column
Fittings, tubing and column shown are not included.



C-1000
Semi-Prep Cartridge
Guard Column Holder

Application Note

Why use guard columns?

Columns damaged by strong or irreversible adsorption include changes in retention time and selectivity, offset baseline (bleed) and peak shape deterioration. Columns damaged by particulates (from the sample matrix, mobile phase, etc.) commonly exhibit peak splitting and increased back pressure. Guard columns protect your column in two ways. First, they act as filters trapping particles in their frits or packed bed, or both. Second, when the guard column is packed with the same material as in the analytical column, it removes compounds that irreversibly or strongly bind to the packing material. By either approach, guard columns can increase your column life considerably.

Part No.	Description
ISO-PREP GUARD ORDERING INFORMATION	
9197-P	Iso-Prep Guard Holder
9197-20	Iso-Prep Guard Cartridge, 21.2 mm x 1 cm, 1 Frit
8056	Iso-Prep Guard, 21.2 mm Frit
9197-S	Iso-Prep Guard Finishing Tool
SEMI-PREP GUARD COLUMN	
10 mm ID x 1 cm	
C-1000	Semi-Prep Cartridge Guard Column Holder
C-1033	Dry Packing Funnel
C-1035	Semi-Prep Cartridge
REPLACEABLE CARTRIDGE GUARD COLUMN FRIT CAPS	
C-1030	Threaded Frit Cap with 2 µm Stainless Steel Frit
C-1031	Threaded Frit Cap with 2 µm Titanium Frit

Cartridge Guard Columns

- 100% biocompatible flow path
- Pressure rated to 4,000 psi (276 bar)
- Wetted materials are Titanium and PEEK™
- Reusable holder complete with fingertight fittings

Insert one of these Upchurch Scientific® analytical guard columns between the injection valve and column of your HPLC system to extend the life of your column and help ensure reproducible results. Convenient, prepacked PEEK polymer cartridges complete the system and are available in a variety of bonded phases to match your column chemistry held in place by Titanium frits.

The C-270 Stainless Steel Guard Column Holder is engineered for high-pressure applications to 4,000 psi (276 bar). Each of these holders is surface treated to prevent galling*, a potential problem with threaded metal parts.

The flow path of the C-270 Guard Column Holder is biocompatible. Each comes complete with fittings for 1/16" OD tubing, and can be used with any of the C-28X or C-7XX guard column cartridges listed on this page.

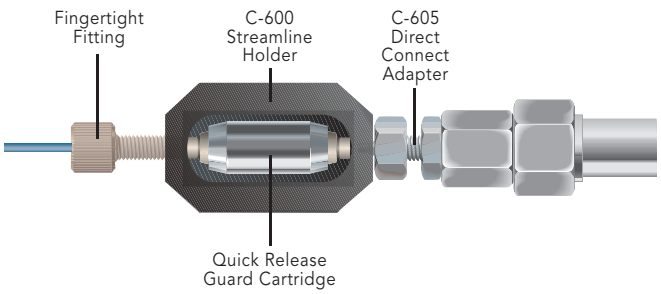
** Galling is a form of "cold welding." When two fittings manufactured from the same metal are wrench-tightened too tightly, they can "weld" together, making it virtually impossible to separate the two components.*

Quick Release™ Cartridge Guard Column System

- Changing guard column cartridges was never this easy
- 100% biocompatible flow path
- Pressure rated to 6,000 psi (414 bar)

The simple design of the patented Quick Release Guard Cartridges and Streamline Cartridge Holder makes installing and changing guard columns quick and easy. Simply thread one end of the Direct Connect Adapter (included) into the end of your column and the other end into the C-600 Cartridge Holder. Insert a Quick Release Guard Cartridge into the holder. Then use the supplied F-130 Fingertight Fitting with your 1/16" OD tubing to create a Zero Dead Volume (ZDV) connection.

All hardware in contact with the mobile phase is constructed of 100% biocompatible PEEK polymer including the frits.



Part No.	Description	Qty.
CARTRIDGE GUARD COLUMN KITS		
C-281	2.0 mm ID C18 Cartridges (6-pk) with (1) C-270 Assembly	
C-751	4.3 mm ID C18 Cartridges (6-pk) with (1) C-270 Assembly	
GUARD COLUMN CARTRIDGE HOLDERS, BIOCOMPATIBLE		
C-270	High Pressure, Stainless Steel, with (2) F-200 Fittings	
GUARD COLUMN CARTRIDGES, BIOCOMPATIBLE		
2.0 mm ID x 1 cm, 10 µm Silica		**Qty.**
C-280	Reversed Phase C18	3-pk
★ **C-282**	Reversed Phase C18	10-pk
C-753	Adsorption Silica	3-pk
4.3 mm ID x 1 cm, 5 µm Silica		
C-750	Reversed Phase C18	3-pk
★ **C-752**	Reversed Phase C18	10-pk
C-759	Adsorption Silica	3-pk
C-760	Adsorption Silica	10-pk
C-763	Cyano Phase CN	3-pk
C-764	Cyano Phase CN	10-pk
QUICK RELEASE/STREAMLINE CARTRIDGE HOLDER, BIOCOMPATIBLE		
C-600	Streamline Cartridge Holder comes complete with (2) F-130 and (1) C-605	
C-600W	Waters®-compatible Streamline Cartridge Holder comes complete with (2) F-130 and (1) C-605W	
QUICK RELEASE/STREAMLINE REPLACEMENT PARTS		
C-605	Direct Connect Column Adapter	
C-605W	Direct Connect Column Adapter, Waters-compatible	
F-130x	Long One-Piece PEEK Fingertight Nuts	10-pk
QUICK RELEASE GUARD CARTRIDGES, BIOCOMPATIBLE		
4.6 mm ID x 1 cm, 5 µm		
C-620	Reversed Phase C18	3-pk
3.0 mm ID x 1 cm, 5 µm		
C-623	Reversed Phase C18	3-pk

Application Note

Why Use A Guard Column?

A guard column can increase the life of your analytical column up to five-fold[1]. Use a guard column with the same packing as your column — it will act as a chemical filter, removing strongly retained materials in your sample that might otherwise contaminate your analytical column. And, it is more economical to replace a guard column cartridge than to buy a new analytical column.

[1]Uwe D. Neue, HPLC Troubleshooting – Column Durability, American Laboratory, 1999; 22:44-7

Note

Packing material specifications: the cartridges on this page are packed with 5 µm or 10 µm base-deactivated 80 Å spherical silica.

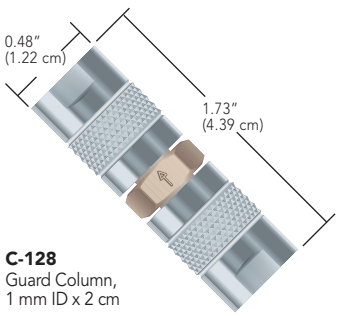
★ Top Seller SEE STARRED PRODUCTS

Microbore Guard Columns

- Ideal for Microbore HPLC
- Easily dry packed (or slurry packed with adapter)
- Made of PEEK™ polymer and stainless steel

This Upchurch Scientific® ultralow volume guard column (1.0 mm ID x 2 cm length) is ideal for narrow-bore chromatography. The unpacked guard column allows you to exactly match the chemistry of your column, resulting in optimum column protection. The total packing volume of 16.2 µL ensures maximum column efficiency and analytical column protection. The column can be easily dry packed using the specially designed funnel (C-128-20). A 3 g bottle of our C18 packing material will pack this column more than 120 times.

Frits often become plugged before a guard column is contaminated. The two 0.5 µm frits included with this guard column can be changed in minutes. Optional 2 µm frits may be purchased separately (C-408).



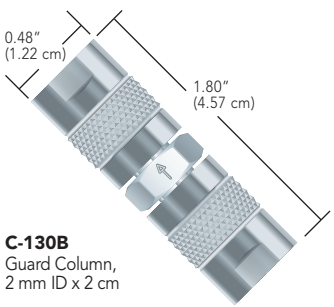
C-128
Guard Column,
1 mm ID x 2 cm

Analytical Guard Columns

- Easy to pack
- Available as a kit with funnel and extra frits

The C-130B is our most popular guard column. HPLC users find this column easy to pack and extremely economical. This narrow-bore short column (2.0 mm ID x 2 cm length) creates only a slight pressure increase with virtually no detectable theoretical plate loss when used with a 3 mm ID or larger column. The 2 µm frits are easy to change, prolonging the life of the guard column. With only 62 µL packing volume per guard column, a 3 g bottle of packing material will pack about 30 guard columns.

For convenience, we offer the C-135B kit with two unpacked guard columns and a ten pack of frits. With two guard columns, there is always a back-up available to help eliminate downtime.



C-130B
Guard Column,
2 mm ID x 2 cm

Analytical Guard Column Kits

For complete convenience, try the Upchurch Scientific guard column kit with packing material. This kit contains 10 replacement frits, a packing funnel and 3 g of C18 reversed phase.

Related Products

All Guard Columns featured on this page include 10-32 Coned threads. Use any of the 10-32 coned fittings on pages 9 – 17 to connect tubing to these guard columns.

Application Note

Signs your Guard Column Needs to be Changed

- System pressure build-up
- Faster than usual retention times
- Reduced resolution

Part No.	Description	Includes
MICROBORE GUARD COLUMNS		
1.0 mm ID x 2 cm Unpacked		
C-128	Guard Column	(2) C-128-31
C-128-20	Packing Funnel	
C-128-31	0.5 µm Stainless Steel Replacement Frit	
C-408	2 µm Stainless Steel Replacement Frit	
C-128-40	Slurry Packing Adapter	
C-128-50	Guard Column Kit	(2) C-128, (1) C-128-20, (10) C-128-31
ANALYTICAL GUARD COLUMNS		
2.0 mm ID x 2 cm Unpacked		
C-130B	Guard Column	(2) A-100
C-130-20	Packing Funnel	
A-100	2 µm Stainless Steel Replacement Frit	
A-103	0.5 µm Stainless Steel Replacement Frit	
C-130-40	Slurry Packing Adapter	
C-135B	Guard Column Kit	(2) C-130B, (1) C-130-20, (10) A-100
1602	Guard Column Kit with Reversed Phase C18	(2) C-130B, (1) C-130-20, (10) A-100, 3 g C18 packing material

PACKING MATERIAL		
Part No.	**Particle Size**	**Qty.**
C-603	Reversed Phase C18, 30–40 µm pellicular	3 g

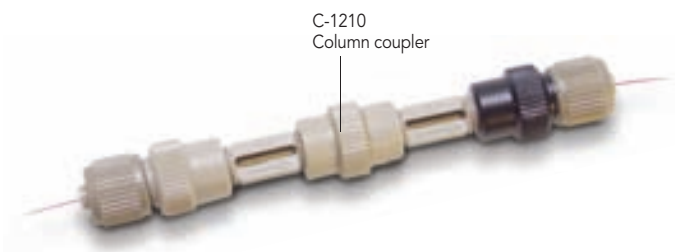
Capillary Sample Trap Columns

- Packed and unpacked columns
- Pressure rated to 5,000 psi (345 bar)
- Direct connect 360 µm OD capillary tubing

Upchurch Scientific® Capillary Sample Trap Columns are ideal for separating and concentrating and/or purifying biological samples.

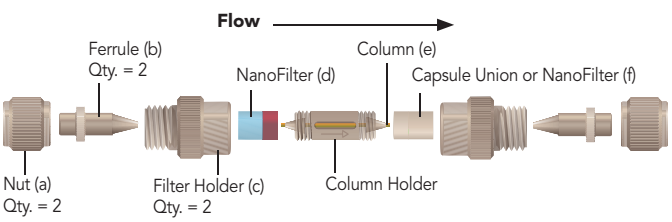
Capillary Sample Trap Column Assemblies include one or more 1 µm NanoFilter™ Capsules, each containing either a stainless steel (SST) or biocompatible titanium (Ti) frit. The swept volume of these unique filters is only 10 nL each. Connect your 360 µm OD capillary tubing directly to our Sample Trap Column Assemblies using the fittings provided. The maximum flow rate for these products is 10 µL/min; 250 nL is the optimal flow rate.

Please Note: Reversing flow in these columns can result in loss of packing material. For more information regarding the proper setup involving these Sample Trap Columns, please contact your local distributor or IDEX Health & Science customer service.



Components Chart

Please refer to the drawing and part numbers below when ordering replacement components:



Column Assembly	Nuts (a)	Ferrules (b)	Filter Holder Color(c)	NanoFilter (d)	Column (e)	Capsule Union or NanoFilter (f)
C-1200	P-416	F-152	Tan	M-125 (SST)	C-1250 (C18)	M-124NF (no frit)
C-1300	P-416BLK	F-152	Tan	M-126 (Ti)	C-1250 (C18)	M-124NF (no frit)
C-1400	P-416G	F-152	Black	M-126 (Ti)	C-1450 (SCX)	M-124NF (no frit)
C-1500	P-416	F-152	Tan	M-125 (SST)	FS-1000-25 (unpacked)	M-125 (SST)
C-1600	P-416BLK	F-152	Tan	M-126 (Ti)	FS-1000-25 (unpacked)	M-126 (Ti)

All nuts, ferrules, and column holders are made of PEEK polymer. Filter holders are made of PEEK polymer (non-conductive) or stainless steel (conductive). NanoFilter Capsule bodies are made of PEEK polymer (non-conductive) or stainless steel and PEEK (conductive). *See page 165 for NanoFilter Capsule color coding.*

Abbreviation Key: SST = stainless steel; Ti = titanium; SCX = Strong Cation Exchange

Note

- Packing material specifications: C18, high carbon load, 5 µm/300A spherical silica and SCX, 5 µm 85A material
- Maximum sample loading capacity of 0.1 µg and capillary bed volume of 0.19 µL or less

Related Products

- Use the P-116 MicroFerrule Plug on page 18 to plug a Sample Trap Column for storage
- Find 360 µm OD PEEK™ polymer and fused silica tubing on page 65

★ **Top Seller** SEE STARRED PRODUCTS

Part No.	Description	Frit Material	Includes
CAPILLARY SAMPLE TRAP COLUMNS			
Assemblies			
C-1200	C18 Column	SST	(1) 2-pk C-1250, (1) M-125, (2) P-416, (2) F-152, (1) M-124NF
C-1300	C18 Column	Ti	(1) 2-pk C-1250, (1) M-126, (2) P-416BLK, (2) F-152, (1) M-124NF
C-1400	Strong Cation Exchange (SCX) Column	Ti	(1) 2-pk C-1450, (1) M-126, (2) P-416G, (2) F-152, (1) M-124NF
C-1500	Unpacked Column	SST	(1) FS-1000-25, (2) M-125, (2) P-416, (2) F-152
★ **C-1600**	Unpacked Column	Ti	(1) FS-1000-25, (2) M-126, (2) P-416BLK, (2) F-152

Column Coupler and Replacement Parts

Part No.	Description	Swept Volume	Qty.
C-1210	Column Coupler, PEEK	—	ea.
C-1250	C18 Columns, 100 µm ID x 2.5 cm x 360 µm OD	—	2-pk
C-1450	Strong Cation Exchange (SCX) Columns 100 µm ID x 2.5 cm x 360 µm OD	—	2-pk
★ **F-152**	MicroFerrule for 360 µm OD tubing, PEEK	—	ea.
FS-1000-25	Unpacked Column, 100 µm ID x 2.5 cm x 360 µm OD	—	ea.
M-124NF	Capsule Union, no Frit, PEEK	9.5 nL	ea.
M-125	1 µm NanoFilter Capsules, with SST Frits	10 nL	2-pk
★ **M-126**	1 µm NanoFilter Capsules, with Ti Frits	10 nL	2-pk
★ **P-416**	Female Nut, Natural PEEK	—	ea.
P-416BLK	Female Nut, Black PEEK	—	ea.
P-416G	Female Nut, Green PEEK	—	ea.