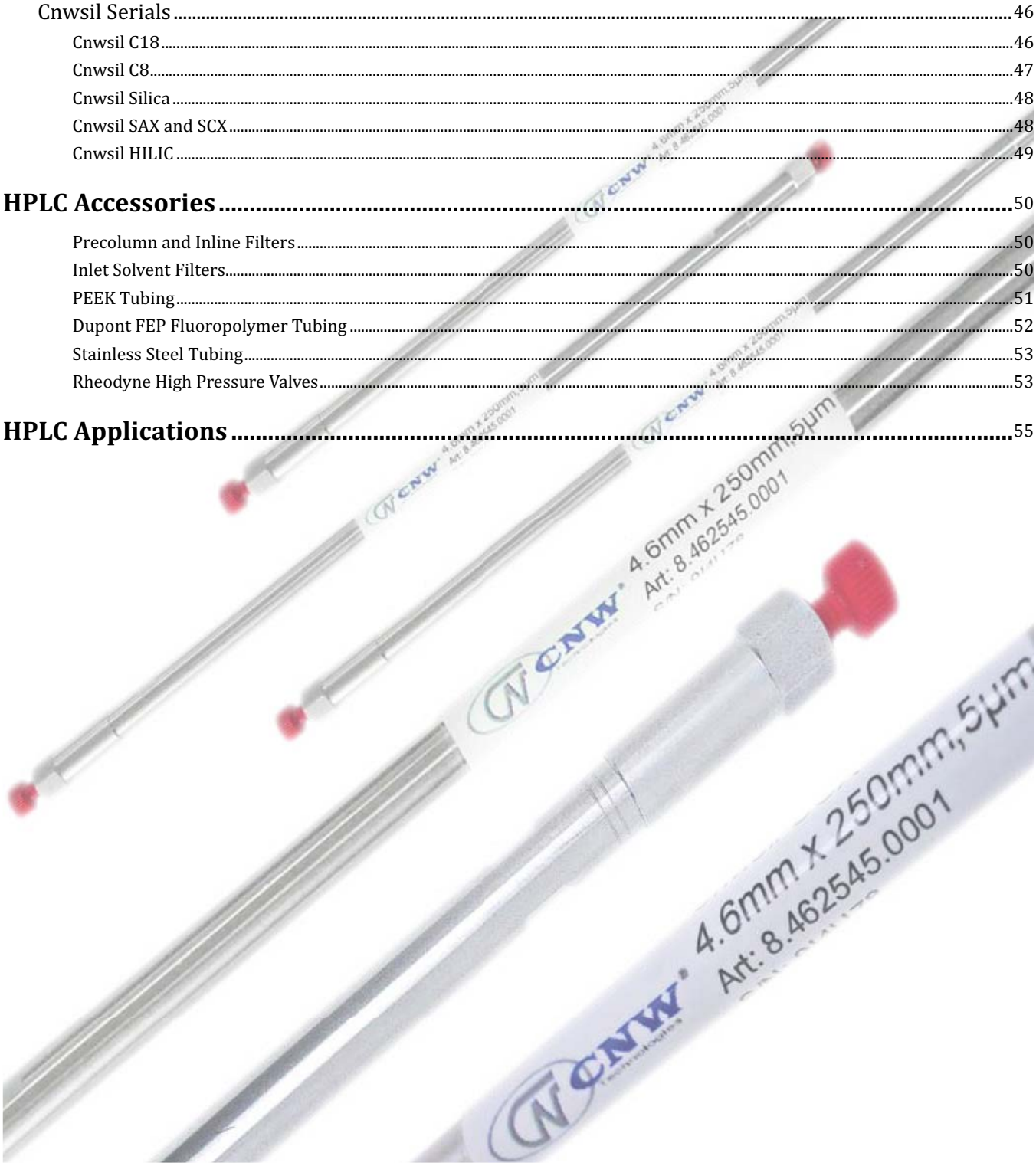
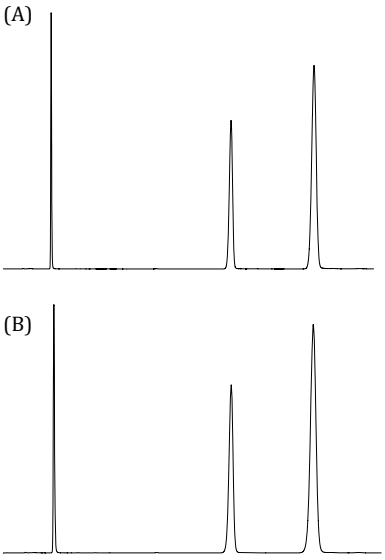
HPLC



HPLC Columns

GC Columns

For more information about this product, please refer to pages 58 - 73.



Dewetting Test
A= Before flow stop
B= After flow stop.

HPLC Columns

HPLC is widely used in chemistry, life science, and pharmaceutical research. Compared with chromatographic supports such as polymeric and graphitic carbon materials, silica-based columns are chosen by most chemist for the selectivity and higher efficiencies.

To select the appropriate column for your application, you should choose the phase type, particle size, and column size.

Athena Serials

Athena HPLC columns are based on high purity spherical silica with low metal residues, providing excellent peak shape for acidic, basic and neutral compounds. The strong mechanical stability and tight quality control guarantee the long lifetime and reproducibility. Seven bonded phases provide broad selectivity for method development.

Athena C18-WP

- Bonded with octadecyl groups
- Excellent symmetrical peak shape for basic compounds
- Compatible with 100% aqueous mobile phase
- High surface area leads to high loadability
- Stable with mobile phase at pH 1.5 - 10

The special bond technology of Athena C18-WP column enables the use of 100% aqueous mobile phase, which is necessary for some polar analytes. The pH stability allows the mobile phase at pH 1.5 - 10 with long lifetime. The high pH mobile phase can provide good peak symmetry for basic compounds.

Specification:

Bonded phase	Athena C18-WP
Particle size (µm)	3 and 5
Pore size (Å)	100
Pore volume (mL/g)	1.1
Endcapped	Yes
Surface area (m^2/g)	450
Metals content (ppm)	<10
Carbon load	17%
pH range	1.5-10
Temperature (˚C)	20-60

Aqueous Compatibility

Dewetting

When working with low organic mobile phases, complete loss of retention can be observed. The phenomenon of dewetting is a shortcoming of conventional reverse phase columns.

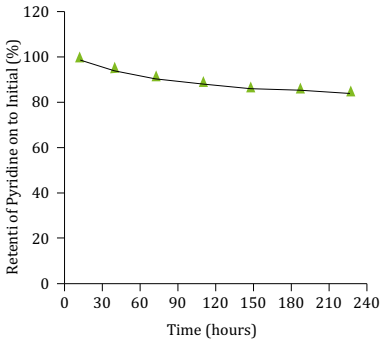
Dewetting test

Some reversed phase columns show durability in 100% aqueous eluent, but when the flow is stopped and restarted, the retention lose.

Athena C18-WP column shows superior durability in this test. Retention time and efficiency keeps 90% above after flow stop.

Column:	Athena C18-WP, 4.6 x 150 mm, 5µm
Eluent:	Methanol : Water (70/30)
Flow Rate:	1.0 mL/min
Det.:	UV 254 nm
Temp.:	30 °C
Sample:	1. Uracil 2. Toluene 3. Naphthalene

After the initial injection, the mobile phase was changed to 100% water. After 2 hours, the flow was reduced from 1.0 mL/min to 0.0 mL/min over 10 minutes. The pump consequently stopped for 1 hour. After the stoppage period the flow was restarted again smoothly. Within 10 minutes the flow was increased from 0.0 mL/min to 1.0 mL/min, and then changed to test condition for next injection.



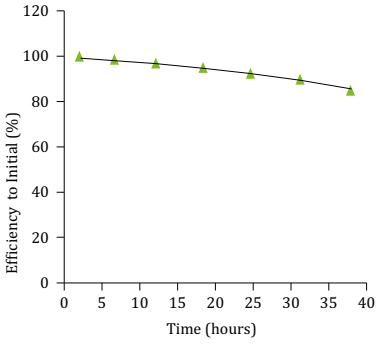
Athena C18-WP Stability at pH 1.0

pH Stability

Common silica packings are limilted to working between pH 2 and pH 7, because low pH (<2) causes hydrolysis of the siloxane bonds destroying bonded layer and high pH (>7) causes silica dissolution.

Acidic Resistance at pH 1.0

Column:	Athena C18-WP, 4.6 x 150 mm, 5µm
Eluent:	Acetonitrile : 0.1% TFA (pH 1.5) (50/50)
Flow Rate:	1.0 mL/min
Det.:	UV 254 nm
Temp.:	30 °C
Sample:	Toluene



Athena C18-WP Stability at pH 11.0

Alkalic Resistance at pH 11.0

Column:	Athena C18-WP, 4.6 x 150 mm, 5µm
Eluent:	Methanol : 0.5% Ammonium hydroxide (pH 11.0) (20/80)
Flow Rate:	1.0 mL/min
Det.:	UV 254 nm
Temp.:	30 °C
Sample:	Dipropyl phthalate

Athena C18-WP columns can work with eluents from pH 1.5 to 10. Wide pH range makes it possible for special analytes.

Art.	Phase	Particle size	Length	ID
8.460572.0001	Athena C18-WP	5µm	50mm	4.6mm
8.461072.0001	Athena C18-WP	5µm	100mm	4.6mm
8.461572.0001	Athena C18-WP	5µm	150mm	4.6mm
8.462072.0001	Athena C18-WP	5µm	200mm	4.6mm
8.462572.0001	Athena C18-WP	5µm	250mm	4.6mm
8.210572.0001	Athena C18-WP	5µm	50mm	2.1mm
8.211072.0001	Athena C18-WP	5µm	100mm	2.1mm
8.211572.0001	Athena C18-WP	5µm	150mm	2.1mm
8.212072.0001	Athena C18-WP	5µm	200mm	2.1mm
8.212572.0001	Athena C18-WP	5µm	250mm	2.1mm
8.460573.0001	Athena C18-WP	10µm	50mm	4.6mm
8.461073.0001	Athena C18-WP	10µm	100mm	4.6mm
8.461573.0001	Athena C18-WP	10µm	150mm	4.6mm
8.462073.0001	Athena C18-WP	10µm	200mm	4.6mm
8.462573.0001	Athena C18-WP	10µm	250mm	4.6mm
8.210573.0001	Athena C18-WP	10µm	50mm	2.1mm
8.211073.0001	Athena C18-WP	10µm	100mm	2.1mm
8.211573.0001	Athena C18-WP	10µm	150mm	2.1mm
8.212073.0001	Athena C18-WP	10µm	200mm	2.1mm
8.212573.0001	Athena C18-WP	10µm	250mm	2.1mm

Athena C18

- Bonded with octadecyl groups
- High purity silica with metal residue < 10 ppm provides excellent peak shape
- Suitable for most method where a C18 column is needed
- Strong retention for polar compounds

When a common commercial C18 column is needed for your analysis or method development, an Athena C18 column can be a good choice. The high purity silica with low metal residue leads to the symmetrical peak shape and high efficiency. Strong retention for polar compounds offers high selectivity for polar analytes.

Specification:

Bonded phase	Athena C18
Particle size (µm)	5 and 10
Pore size (Å)	120
Pore volume (mL/g)	1.0
Endcapped	Yes
Surface area (m^2/g)	300
Metals content (ppm)	<10
Carbon load	17%
pH range	2-8
Temperature (˚C)	20-60

Art.	Phase	Particle size	Length	ID
8.460571.0001	Athena C18	5µm	50mm	4.6mm
8.461071.0001	Athena C18	5µm	100mm	4.6mm
8.461571.0001	Athena C18	5µm	150mm	4.6mm
8.462071.0001	Athena C18	5µm	200mm	4.6mm
8.462571.0001	Athena C18	5µm	250mm	4.6mm
8.210571.0001	Athena C18	5µm	50mm	2.1mm
8.211071.0001	Athena C18	5µm	100mm	2.1mm
8.211571.0001	Athena C18	5µm	150mm	2.1mm
8.212071.0001	Athena C18	5µm	200mm	2.1mm
8.212571.0001	Athena C18	5µm	250mm	2.1mm
8.461574.0001	Athena C18	10µm	150mm	4.6mm
8.462574.0001	Athena C18	10µm	250mm	4.6mm

Athena C18-BIO

- Bonded with octadecyl groups
- 300Å pore size particle for large molecular like peptides
- High efficiency and long lifetime
- Stable in a wide pH range - from 1.5 to 11

300Å pore size, improved high density bonding and full endcapping make it suitable to separate high molecular weight compounds, especially peptides and proteins. And it is stable with acidic or alkali mobile phase, which is sometimes necessary in method development.

PEEK Fittings
For more information about this product, please refer to page 51.

Specification:

Bonded phase	Athena C18-BIO
Particle size (µm)	5
Pore size (Å)	300
Pore volume (mL/g)	0.9
Endcapped	Yes
Surface area (m^2/g)	100
Metals content (ppm)	<10

Carbon load	8%
pH range	1.5-11
Temperature (˚C)	20-60

Art.	Phase	Particle size	Length	ID
8.460578.0001	Athena C18-BIO	5µm	50mm	4.6mm
8.461078.0001	Athena C18-BIO	5µm	100mm	4.6mm
8.461578.0001	Athena C18-BIO	5µm	150mm	4.6mm
8.462078.0001	Athena C18-BIO	5µm	200mm	4.6mm
8.462578.0001	Athena C18-BIO	5µm	250mm	4.6mm
8.210578.0001	Athena C18-BIO	5µm	50mm	2.1mm
8.211078.0001	Athena C18-BIO	5µm	100mm	2.1mm
8.211578.0001	Athena C18-BIO	5µm	150mm	2.1mm
8.212078.0001	Athena C18-BIO	5µm	200mm	2.1mm
8.212578.0001	Athena C18-BIO	5µm	250mm	2.1mm

Athena C8

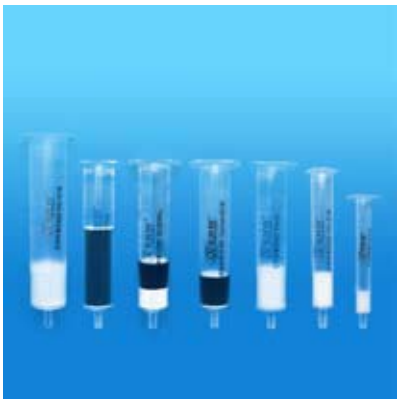
- Bonded with octyl groups
- Faster separation than C18 phase, less retention for hydrophobic analytes
- Exceptional peak shape for basic, acidic and neutral compounds
- Long lifetime and excellent reproducibility

Athena C8 column has less retention of compounds. It is a better choice when faster analysis is needed than C18 columns. The high quality packings provide excellent peak shape and long lifetime.

Specification:

Bonded phase	Athena C8
Particle size (µm)	5
Pore size (Å)	120
Pore volume (mL/g)	1.0
Endcapped	Yes
Surface area (m^2/g)	300
Metals content (ppm)	<10
Carbon load	10%
pH range	1.5-10
Temperature (˚C)	20-60

Art.	Phase	Particle size	Length	ID
8.460575.0001	Athena C8	5µm	50mm	4.6mm
8.461075.0001	Athena C8	5µm	100mm	4.6mm
8.461575.0001	Athena C8	5µm	150mm	4.6mm
8.462075.0001	Athena C8	5µm	200mm	4.6mm
8.462575.0001	Athena C8	5µm	250mm	4.6mm
8.210575.0001	Athena C8	5µm	50mm	2.1mm
8.211075.0001	Athena C8	5µm	100mm	2.1mm
8.211575.0001	Athena C8	5µm	150mm	2.1mm
8.212075.0001	Athena C8	5µm	200mm	2.1mm
8.212575.0001	Athena C8	5µm	250mm	2.1mm



SPE Columns

For more information about this product, please refer to pages 4 - 25.

Athena C4

- Bonded with butyl groups
- 300Å pore size particle for large molecular
- C4 bonded phase with fast separation
- High efficiency and excellent peak shape

Athena C4 column has less retention of compounds. It is a better choice when faster analysis is needed than C8 or C18 columns. The high quality packings provide excellent peak shape and long lifetime. And the 300Å pore size makes it suitable for analysis of large molecuar compounds.

Specification:

Bonded phase	Athena C4
Particle size (µm)	5
Pore size (Å)	300
Pore volume (mL/g)	0.9
Endcapped	Yes
Surface area (m^2/g)	100
Metals content (ppm)	<10
Carbon load	3%
pH range	1.5-10
Temperature (˚C)	20-60

HPLC Injector

For more information about this product, please refer to page 53.

Art.	Phase	Particle size	Length	ID
8.461579.0001	Athena C4	5µm	150mm	4.6mm
8.462579.0001	Athena C4	5µm	250mm	4.6mm
8.211579.0001	Athena C4	5µm	150mm	2.1mm

Athena Silica

- Spherical silica packing, non-bonded phase
- Metal impurities less than 10 ppm
- Outstanding peak shape

Specification:

Bonded phase	Silica
Particle size (µm)	5
Pore size (Å)	120
Pore volume (mL/g)	1.0
Surface area (m^2/g)	300
Metals content (ppm)	<10
pH range	2-8
Temperature (˚C)	20-60

Art.	Phase	Particle size	Length	ID
8.460576.0001	Athena Silica	5µm	50mm	4.6mm
8.461076.0001	Athena Silica	5µm	100mm	4.6mm
8.461576.0001	Athena Silica	5µm	150mm	4.6mm
8.462076.0001	Athena Silica	5µm	200mm	4.6mm
8.462576.0001	Athena Silica	5µm	250mm	4.6mm
8.210576.0001	Athena Silica	5µm	50mm	2.1mm
8.211076.0001	Athena Silica	5µm	100mm	2.1mm
8.211576.0001	Athena Silica	5µm	150mm	2.1mm
8.212076.0001	Athena Silica	5µm	200mm	2.1mm
8.212576.0001	Athena Silica	5µm	250mm	2.1mm

Athena NH_2

- Bonded with amino-propyl groups
- Applicable for both reversed and normal phase
- Carbohydrates and sugars are separated in the reversed phase method

Specification:

Bonded phase	Athena NH_2
Particle size (µm)	5
Pore size (Å)	120
Pore volume (mL/g)	1.0
Endcapped	No
Surface area (m^2/g)	300
Metals content (ppm)	<10
Carbon load	4%
pH range	2-8
Temperature (˚C)	20-60

Art.	Phase	Particle size	Length	ID
8.460577.0001	Athena NH_2	5µm	50mm	4.6mm
8.461077.0001	Athena NH_2	5µm	100mm	4.6mm
8.461577.0001	Athena NH_2	5µm	150mm	4.6mm
8.462077.0001	Athena NH_2	5µm	200mm	4.6mm
8.462577.0001	Athena NH_2	5µm	250mm	4.6mm
8.210577.0001	Athena NH_2	5µm	50mm	2.1mm
8.211077.0001	Athena NH_2	5µm	100mm	2.1mm
8.211577.0001	Athena NH_2	5µm	150mm	2.1mm
8.212077.0001	Athena NH_2	5µm	200mm	2.1mm
8.212577.0001	Athena NH_2	5µm	250mm	2.1mm

Cnwsil Serials

Based on spherical porous silica, Cnwsil HPLC columns provide superior performance and high resolution separation, representing enhanced chemical stability, excellent peak shape with basic compounds. Column to column reproducibility meets the demands in analysis. The bonding and endcapping chemistries help achieve an extraordinary resistance and column lifetime when running at extreme pH levels.

Cnwsil C18

Sample Loop

For more information about this product, please refer to pages 54.

- Bonded with octadecyl groups
- Providing excellent peak shapes for basic, acidic and neutral compounds
- High hydrophobicity phases
- Good batch to batch, column to column reproducibility
- Stable at pH from 1.5 to 10
- Compatible with 100% aqueous mobile phases

Cnwsil C18 reversed phase columns, packed with high-purity spherical silica, providing superior performance in terms of efficiency and inertness. The low metal content and low residual silanols level help obtain excellent peak shapes for basic, acidic and neutral analyst. High hydrophobicity results in better rentensin for non-polar analytes. High density bonding and double endcapping extend the operating pH range from 1.5 to 10. The columns can be used with 100% aqueous mobile phase compatible C18 without phase collapse.

Specification:

Bonded phase	Cnwsil C18
Particle size (µm)	3.5 and 5

Pore size (Å)	90
Pore volume (mL/g)	1.0
Endcapped	Yes
Surface area (m^2/g)	380
Metals content (ppm)	<10
Carbon load	18%
pH range	1.5-10
Temperature (˚C)	20-60

Art.	Phase	Particle size	Length	ID
8.460549.0001	Cnwsil C18	3.5µm	4.6mm	50mm
8.461049.0001	Cnwsil C18	3.5µm	4.6mm	100mm
8.461549.0001	Cnwsil C18	3.5µm	4.6mm	150mm
8.210549.0001	Cnwsil C18	3.5µm	2.1mm	50mm
8.211049.0001	Cnwsil C18	3.5µm	2.1mm	100mm
8.211549.0001	Cnwsil C18	3.5µm	2.1mm	150mm
8.460550.0001	Cnwsil C18	5µm	4.6mm	50mm
8.461050.0001	Cnwsil C18	5µm	4.6mm	100mm
8.461550.0001	Cnwsil C18	5µm	4.6mm	150mm
8.462050.0001	Cnwsil C18	5µm	4.6mm	200mm
8.462050.0001	Cnwsil C18	5µm	4.6mm	250mm
8.210550.0001	Cnwsil C18	5µm	2.1mm	50mm
8.211050.0001	Cnwsil C18	5µm	2.1mm	100mm
8.211550.0001	Cnwsil C18	5µm	2.1mm	150mm

Cnwsil C8

- Bonded with octyl groups
- Providing excellent peak shapes for basic, acidic and neutral compounds
- Less hydrophobicity than C18 phase, fast analysis for polar analytes
- Good batch to batch, column to column reproducibility
- Stable at pH from 1.5 to 10
- Compatible with 100% aqueous mobile phases

Specification:

Bonded phase	Cnwsil C8
Particle size (µm)	3.5 and 5
Pore size (Å)	90
Pore volume (mL/g)	1.0
Endcapped	Yes
Surface area (m^2/g)	380
Metals content (ppm)	<10
Carbon load	13%
pH range	1.5-10
Temperature (˚C)	20-60

PEEK Tubing

For more information about this product, please refer to page 51.

Art.	Phase	Particle size	Length	ID
8.460510.0001	Cnwsil C8	5µm	4.6mm	50mm
8.461010.0001	Cnwsil C8	5µm	4.6mm	100mm
8.461510.0001	Cnwsil C8	5µm	4.6mm	150mm
8.462010.0001	Cnwsil C8	5µm	4.6mm	200mm
8.462510.0001	Cnwsil C8	5µm	4.6mm	250mm
8.210510.0001	Cnwsil C8	5µm	2.1mm	50mm
8.211010.0001	Cnwsil C8	5µm	2.1mm	100mm
8.211510.0001	Cnwsil C8	5µm	2.1mm	150mm
8.460509.0001	Cnwsil C8	3.5µm	4.6mm	50mm

Art.	Phase	Particle size	Length	ID
8.461009.0001	Cnwsil C8	3.5μm	4.6mm	100mm
8.461509.0001	Cnwsil C8	3.5μm	4.6mm	150mm
8.210509.0001	Cnwsil C8	3.5μm	2.1mm	50mm
8.211009.0001	Cnwsil C8	3.5μm	2.1mm	100mm
8.211509.0001	Cnwsil C8	3.5μm	2.1mm	150mm

Cnwsil Silica

- High purity spherical silica
- Excellent batch to batch, column to column reproducibility
- Stable at pH from 2 to 7

Specification:

Bonded phase	Cnwsil Silica
Particle size (μm)	3.5 and 5
Pore size (Å)	90
Pore volume (mL/g)	1.0
Surface area (m^2/g)	380
Metals content (ppm)	<10
pH range	2-7
Temperature (˚C)	20-60

Art.	Phase	Particle size	Length	ID
8.460505.0001	Cnwsil Silica	5μm	4.6mm	50mm
8.461005.0001	Cnwsil Silica	5μm	4.6mm	100mm
8.461505.0001	Cnwsil Silica	5μm	4.6mm	150mm
8.462005.0001	Cnwsil Silica	5μm	4.6mm	200mm
8.462505.0001	Cnwsil Silica	5μm	4.6mm	250mm
8.210505.0001	Cnwsil Silica	5μm	2.1mm	50mm
8.211005.0001	Cnwsil Silica	5μm	2.1mm	100mm
8.211505.0001	Cnwsil Silica	5μm	2.1mm	150mm
8.460504.0001	Cnwsil Silica	3.5μm	4.6mm	50mm
8.461004.0001	Cnwsil Silica	3.5μm	4.6mm	100mm
8.461504.0001	Cnwsil Silica	3.5μm	4.6mm	150mm
8.210504.0001	Cnwsil Silica	3.5μm	2.1mm	50mm
8.211004.0001	Cnwsil Silica	3.5μm	2.1mm	100mm
8.211504.0001	Cnwsil Silica	3.5μm	2.1mm	150mm

Cnwsil SAX and SCX

Cnwsil SAX columns are strong anion exchange columns, designed for the separation of small organic molecules and organic acids, especially for nucleic acids. Stable from pH 2.0 to pH 7.0 Provided to obtain high anion exchange efficiencies and resolution.

Cnwsil SCX columns are strong cation exchange columns, designed for the separation of nucleic acids, amino acids, polyamines, drugs and other cationic species. Stable from pH 2.0 to pH 7.0.

Specification:

Bonded phase	Cnwsil SAX	Cnwsil SCX
Particle size (μm)	5	5
Pore volume (mL/g)	300	300
Surface area (m^2/g)	100	100
Metals content (ppm)	<10	<10
Carbon load	3%	3%
pH range	2-7	2-7
Temperature (˚C)	20-60	20-60

Syringe Filters

For more information about this product, please refer to pages 36 - 37.

Art.	Phase	Particle size	Length	ID
8.461540.0001	Cnwsil SAX	5µm	4.6mm	150mm
8.462540.0001	Cnwsil SAX	5µm	4.6mm	250mm
8.461545.0001	Cnwsil SCX	5µm	4.6mm	150mm
8.462545.0001	Cnwsil SCX	5µm	4.6mm	250mm

Cnwsil HILIC

Cnwsil HILIC (hydrophilic interaction liquid chromatography) columns are designed for the analysis of polar and hydrophilic compounds, e.g., amino acids, pyrimidine bases and nucleotides/oligonucleotides, alkaloids, carbohydrates and other small polar or ionizable compounds.

The strong solvent in HILIC is either water, formic acid/formate buffer or acetic acid/acetate. In HILIC, water from the mobile phase forms a layer on the surface of the polar stationary phase that facilitates the transfer of polar compounds into the stationary phase for increased retention.

Specification:

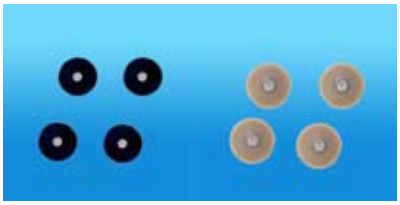
Bonded phase	Cnwsil HILIC
Particle size (µm)	3.5 and 5
Pore size (Å)	90
Pore volume (mL/g)	1.0
Surface area (m^2/g)	380
Metals content (ppm)	<10
pH range	1.5-8
Temperature (˚C)	20-60

Art.	Phase	Particle size	Length	ID
8.460560.0001	Cnwsil HILIC	5µm	4.6mm	50mm
8.461060.0001	Cnwsil HILIC	5µm	4.6mm	100mm
8.461560.0001	Cnwsil HILIC	5µm	4.6mm	150mm
8.462060.0001	Cnwsil HILIC	5µm	4.6mm	200mm
8.462560.0001	Cnwsil HILIC	5µm	4.6mm	250mm
8.210560.0001	Cnwsil HILIC	5µm	2.1mm	50mm
8.211060.0001	Cnwsil HILIC	5µm	2.1mm	100mm
8.211560.0001	Cnwsil HILIC	5µm	2.1mm	150mm
8.460559.0001	Cnwsil HILIC	3.5µm	4.6mm	50mm
8.461059.0001	Cnwsil HILIC	3.5µm	4.6mm	100mm
8.461559.0001	Cnwsil HILIC	3.5µm	4.6mm	150mm
8.210559.0001	Cnwsil HILIC	3.5µm	2.1mm	50mm
8.211059.0001	Cnwsil HILIC	3.5µm	2.1mm	100mm
8.211559.0001	Cnwsil HILIC	3.5µm	2.1mm	150mm

A-315 A-316

A-356 M-560

A-410



A-102 A-101

OC-802 A-735

A-302A A-310

HPLC Accessories

Precolumn and Inline Filters

Precolumn filters have very small thru-holes for minimal band spreading and mixing. They feature stainless steel or biocompatible PEEK polymer bodies, and pressure rated to 9000 psi (620 bar) or 5000 psi (345 bar) and both accept 1/16" OD tubing and standard 10-32 threaded high pressure fittings. Choose either the 0.5 µm or 2 µm version to filter particulates from your flow path.

Precolumn Filters

Art.	Description	Package	Upchurch Art.
8.00315A.0001	Precolumn Filter Assy 2µm, with A-101 Frit	1 pcs	A-315
8.00316A.0001	Precolumn Filter Assy 0.5µm, with A-102 Frit	1 pcs	A-316
8.00355A.0001	Filter PreColumn PEEK 2µm, with A-700 Frit	1 pcs	A-355
8.00356A.0001	Filter PreColumn PEEK 0.5µm, with A-701 Frit	1 pcs	A-356
8.00560M.0001	Precolumn MicroFilter Assy PEEK 0.5µm, with A-735 Frit	1 pcs	M-560
8.00410A.0001	Semi-Prep Filter 2µm, with OC-802 Frit	1 pcs	A-410

Frits for Precolumn Filters

Art.	Description	Package	Upchurch Art.
8.00101A.0001	Frit SS Nat 2µm Ø.062 x .065 x Ø.2485	1 pcs	A-101
8.00102A.0001	Frit SS Blk 0.5µm Ø.062 x .065 x Ø.2485	1 pcs	A-102
8.00700A.0001	Frit PEEK Grn 2µm Ø.062 x .065 x Ø.250	1 pcs	A-700
8.00701A.0001	Frit PEEK Blu 0.5µm Ø.062 x .065 x Ø.250	1 pcs	A-701
8.00735A.0001	Frit MicroFilter PEEK 0.5µm	1 pcs	A-735
8.00802C.0001	Mega Frit w/Ring 2µm PCTFE Green	1 pcs	OC-802

Placed between the pump and sample injection valve, Inline Solvent Filters trap particles released through normal piston seal wear.

Inline Solvent Filters and Frits

Art.	Description	Package	Upchurch Art.
8.00314A.0001	2 µm Solvent Filter – Inline, with A-100 Frit	1 pcs	A-314
8.00430A.0001	2µm Biocompatible Filter – Inline, with A-429 Frit	1 pcs	A-430
8.00100A.0001	Frit SS Nat 2µm Ø.094 x .065 x Ø.2485	10 pcs	A-100X
8.00429A.0001	Filter End Fitting 2µm PEEK	10 pcs	A-429X

Inlet Solvent Filters

General use Inlet Solvent Filter is good practice to filter your solvents to prevent pump damage. The large surface areas mean longer life without pump cavitation.

Inlet Solvent Filter

Art.	Description	Package	Upchurch Art.
8.00302A.0001	Solvent Filter Inlet with stem 10µm for 1/16" ID tubing	1 pcs	A-302
8.0A302A.0001	Solvent Filter Inlet General 1/4-28 10µm for 1/16" ID tubing	1 pcs	A-302A
8.00310A.0001	Solvent Filter Inlet with stem 10µm for 1/8" ID tubing, Waters Type	1 pcs	A-310
8.0A225A.0001	Solvent Filter Inlet 20µm for 1/8" ID tubing	1 pcs	A-225A

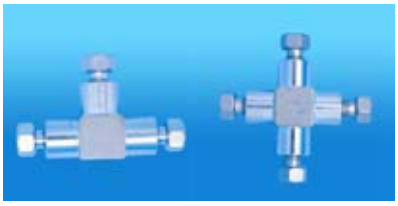
HPLC Accessories

6000-254 F-120

F-130 F-300

P-704 P-727

P-729 U-402



U-428 U-430

1531BXL 1535

1535XL 1536XL

High Pressure FingerTight Fittings, 10-32, for 1/16" OD tubing

Art.	Description	Package	Upchurch Art.
8.00120F.0001	1-Piece FingerTight Fitting PEEK Natural	1 pcs	F-120
8.00127F.0001	1-Piece Short FingerTight Fitting PEEK Natural	1 pcs	F-127
8.00130F.0001	1-Piece Long FingerTight Fitting PEEK Natural	1 pcs	F-130
8.006082.0001	1-Piece RheFlex FingerTight Fitting PEEK Natural	10 pcs	6000-282
8.00300F.0001	2-Piece FingerTight Fitting PEEK Nut Natural, with F-142 Ferrules	1 pcs	F-300
8.006054.0001	2-Piece RheFlex FingerTight Fitting PEEK Natural, with 6000-251 Ferrules	10 pcs	6000-254
8.00142F.0001	PEEK Ferrules, Natural	10 pcs	F-142
8.006051.0001	PEEK Ferrules, Natural	10 pcs	6000-251

Stainless Steel Fittings, 10-32, for 1/16" OD tubing

Art.	Description	Package	Upchurch Art.
8.00400U.0001	Standard Nut	1 pcs	U-400
8.00401U.0001	Ferrule	1 pcs	U-401
8.006011.0001	RheFlex Long Nut, with 6000-210 Ferrules	10 pcs	6000-211
8.006010.0001	RheFlex Ferrules	10 pcs	6000-210

Column Plug

Art.	Description	Package	Upchurch Art.
8.00467U.0001	Column Plug Delrin Black, for 10-32 coned ports	10 pcs	U-467BLKX

High Pressure Connectors

Art.	Description	Package	Upchurch Art.
8.00P704.0001	Union PEEK .02" 10-32 Threads	1 pcs	P-704
8.00727P.0001	Tee PEEK .02" thru hole	1 pcs	P-727
8.00729P.0001	Cross Assy PEEK .02" thru	1 pcs	P-729
8.00402U.0001	Union ZDV SS .02" thru	1 pcs	U-402
8.00428U.0001	Tee Assy SS .02" thru	1 pcs	U-428
8.00430U.0001	Cross Assy SS .02" thru	1 pcs	U-430

PEEK Tubing

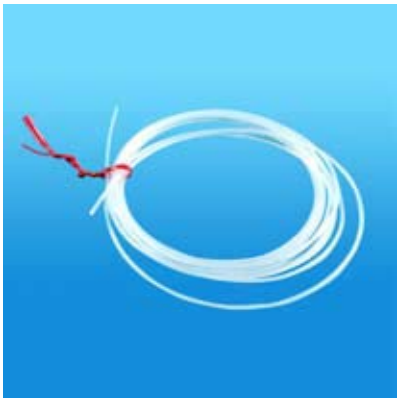
PEEK (polyetheretherketone) polymer tubing is biocompatible, chemically inert to most solvents, and can be used to replace stainless steel tubing in most liquid analytical systems. PEEK tubing can be used with stainless steel or polymer fittings and be used in high pressure rating (up to 7000 psi in many cases) or high temperature rating (maximum continuous use temperature of 100 °C).

PEEK Tubing, 1/16" OD

Art.	Description	Package	Upchurch Art.
8.001531.0001	Tub PEEK Blu 1/16 x .010 x 5ft	1 pcs	1531B
8.XL1531.0001	Tub PEEK Blu 1/16 x .010 x 100ft	1 pcs	1531BXL
8.001532.0001	Tub PEEK Ora 1/16 x .020 x 5ft	1 pcs	1532
8.001533.0001	Tub PEEK Grn 1/16 x .030 x 5ft	1 pcs	1533
8.001535.0001	Tub PEEK Red 1/16 x .005 x 5ft	1 pcs	1535
8.XL1535.0001	Tub PEEK Red 1/16 x .005 x 100ft	1 pcs	1535XL
8.001536.0001	Tub PEEK Yel 1/16 x .007 x 5ft	1 pcs	1536
8.XL1536.0001	Tub PEEK Yel 1/16 x .007 x 100ft	1 pcs	1536XL
8.001537.0001	Tub PEEK Nat 1/16 x .055 x 5ft	1 pcs	1537
8.001538.0001	Tub PEEK Nat 1/16 x .040 x 5ft	1 pcs	1538
8.001559.0001	Tub PEEK Nat 1/16 x 25µm x 5ft	1 pcs	1559
8.001560.0001	Tub PEEK Nat 1/16 x .0025 x 5ft	1 pcs	1560
8.001561.0001	Tub PEEK Blk 1/16 x .004 x 5ft	1 pcs	1561

HPLC Accessories

1521XL



1523

8.000010.0001

A-620

Art.	Description	Package	Upchurch Art.
8.001562.0001	Tub PEEK Pur 1/16 x .006 x 5ft	1 pcs	1562
8.001565.0001	Tub PEEK Gry 1/16 x .015 x 5ft	1 pcs	1565

PEEK Tubing, 1/8" OD

Art.	Description	Package	Upchurch Art.
8.001544.0001	Tub PEEK Nat 1/8 x .080 x 5ft	1 pcs	1544
8.001534.0001	Tub PEEK Nat 1/8 x .062 x 5ft	1 pcs	1534

Capillary PEEK Tubing, 360 µm, 510 µm, 1/32" OD

Art.	Description	Package	Upchurch Art.
8.001570.0001	Tub PEEK Nat 360µm x 50µm x 5ft	1 pcs	1570
8.001541.0001	Tub PEEK Nat 510µm x 125µm x 5ft	1 pcs	1541
8.001542.0001	Tub PEEK Nat 510µm x 255µm x 5ft	1 pcs	1542
8.001568.0001	Tub PEEK Nat 1/32 x .015 x 5ft	1 pcs	1568
8.001569.0001	Tub PEEK Ora 1/32 x .020 x 5ft	1 pcs	1569
8.001575.0001	Tub PEEK Nat 1/32 x .008 x 5ft	1 pcs	1575
8.001576.0001	Tub PEEK Red 1/32 x .005 x 5ft	1 pcs	1576
8.001577.0001	Tub PEEK Yel 1/32 x .007 x 5ft	1 pcs	1577
8.001578.0001	Tub PEEK Blk 1/32 x .0035 x 5ft	1 pcs	1578
8.001579.0001	Tub PEEK Nat 1/32 x .0025 x 5ft	1 pcs	1579
8.001580.0001	Tub PEEK Gry 1/32 x .009 x 5ft	1 pcs	1580
8.001581.0001	Tub PEEK Blu 1/32 x .010 x 5ft	1 pcs	1581

Dupont FEP Fluoropolymer Tubing

With virtually identical chemical resistance to PFA at a lower price, FEP tubing is great for general, low pressure applications. Compared to PTFE, FEP (fluorinated ethylene propylene) tubing is held to tighter tolerances and has lower gas permeability. Much of FEP tubing is translucent, making it possible to watch fluid flow.

FEP Tubing

Art.	Description	Package	Upchurch Art.
8.001521.0001	Tub FEP Nat 1/8 x .062 x 20ft	1 pcs	1521
8.0L1521.0001	Tub FEP Nat 1/8 x .062 x 50ft	1 pcs	1521L
8.XL1521.0001	Tub FEP Nat 1/8 x .062 x 100ft	1 pcs	1521XL
8.001522.0001	Tub FEP Nat 1/16 x .030 x 10ft	1 pcs	1522
8.001523.0001	Tub FEP Nat 1/8 x .062 x 10ft	1 pcs	1523
8.001524.0001	Tub FEP Nat 3/16 x .125 x 20ft	1 pcs	1524
8.001525.0001	Tub FEP Nat 3/16 x .125 x 10ft	1 pcs	1525
8.001526.0001	Tub FEP Nat 1/16 x .010 x 10ft	1 pcs	1526
8.001548.0001	Tub FEP Nat 1/16 x .020 x 20ft	1 pcs	1548
8.XL1548.0001	Tub FEP Nat 1/16 x .020 x 100ft	1 pcs	1548XL

PEEK Tubing Cutter

Art.	Description	Package	Upchurch Art.
8.000010.0001	PEEK tubing cutter	1 pcs	N/A

Bottle Caps

Art.	Description	Package	Upchurch Art.
8.00620A.0001	Bottle Cap Assy for GL-45, 1 L bottles, for 1/8" OD tubing, Red	1 pcs	A-620
8.00622A.0001	Bottle Cap Assy for GL-38, 4 L bottles, for 1/8" OD tubing, Black	1 pcs	A-622
8.00626A.0001	Bottle Cap Plug for luer hole, UHMWPE	1 pcs	A-626

U-115

7725I

7125-047 7215

7725-026 7725-999

3725i-038

Stainless Steel Tubing

We provide seamless, precut 316 stainless steel tubing to meet the exacting requirements of today's analyses.

Stainless Steel Tubing

Art.	Description	Package	Upchurch Art.
8.00111U.0001	Tub SS 1/16 x .010 x 5cm	1 pcs	U-111
8.00113U.0001	Tub SS 1/16 x .010 x 20cm	1 pcs	U-113
8.00101U.0001	Tub SS 1/16 x .020 x 5cm	1 pcs	U-101
8.00103U.0001	Tub SS 1/16 x .020 x 20cm	1 pcs	U-103
8.00115U.0001	Tub SS 1/16 x .030 x 5cm	1 pcs	U-115
8.00117U.0001	Tub SS 1/16 x .030 x 20cm	1 pcs	U-117

Rheodyne High Pressure Valves

Analytical Injectors

The 316 stainless steel models 7725 and 7725i, and PEEK models 9725 and 9725i are Rheodyne's most advanced manual sample injectors for analytical HPLC.

A simple, three-step operation involves inserting the syringe into the needle port while in the LOAD position and turning the handle to INJECT. The sample is on its way through your system and when the handle returns to LOAD, the injector is ready for the next injection.

7725 & 7725i Analytical-Scale Sample Injectors

Art.	Description	Package	Rheodyne Art.
8.007725.0001	2/6 Syr Load Inj, w/MBB, SS	1 pcs	7725
8.0I7725.0001	2/6,MAN,SYR,SS,W/Pos Sensor	1 pcs	7725I
8.007108.0001	Needle Guide	1 pcs	7125-008
8.007147.0001	Vespel Rotor Seal	1 pcs	7125-047
8.007154.0001	Needle Port Cleaner	1 pcs	7125-054
8.007179.0001	TZ Rotor Seal for 7125	1 pcs	7125-079
8.007215.0001	Needle, 22Ga Luer Tip	1 pcs	7215
8.002526.0001	CER,Stator Face, Assy for 7725	1 pcs	7725-026
8.002599.0001	RheBuild Kit for 7725(I)	1 pcs	7725-999

9725 & 9725i Analytical-Scale Sample Injectors

Art.	Description	Package	Rheodyne Art.
8.009725.0001	2/6 Syr Load Inj, w/MBB, PK	1 pcs	9725
8.0I9725.0001	2/6 Syr Load Inj w/ Pos Sensor, PK	1 pcs	9725I
8.009799.0001	RheBuild Kit for 9725/9725I	1 pcs	9725-999

Preparative-Scale Injectors

Models 3725-038 and 3725i-038 (316 stainless steel) and 3725 and 3725i (bio-compatible PEEK) are the most suitable manual valves to use with large sample volumes, high flow rates and preparative columns.

3725-038 & 3725i-038 and 3725 & 3725i Preparative-Scale Sample Injectors

Art.	Description	Package	Rheodyne Art.
8.003738.0001	2/6,SYR,SS	1 pcs	3725-038
8.003703.0001	2/6,MAN,SYR P,SS, w/Switch	1 pcs	3725I-038
8.003725.0001	2/6,Manual,SYR P, Peek	1 pcs	3725

HPLC Accessories

7755-020 7755-021

7755-022 7755-023

7755-024 7755-025

7755-026 7755-028

PEEK Sample Loops

Art.	Description	Package	Rheodyne Art.
8.003751.0001	2/6,MAN,SYR P,PK, w/Switch	1 pcs	3725I
8.003718.0001	PK Rotor Seal for 3725/3725i	1 pcs	3725-018
8.003739.0001	PK Stator Face Seal for 3725	1 pcs	3725-039
8.003756.0001	Needle,16GA,Peek	1 pcs	3725-056
8.003786.0001	Needle,16GA,SS	1 pcs	3725-086
8.003799.0001	RheBuild Kit for 3725/3725-038	1 pcs	3725-999

Rheodyne Stainless Steel Sample Loops for 7725, 7725i Injectors

Art.	Description	Package	Rheodyne Art.
8.007720.0001	5uL,SS,Sample Loop,30 Degree	1 pcs	7755-020
8.007721.0001	10uL,SS,Sample Loop,30 Degree	1 pcs	7755-021
8.007722.0001	20uL,SS,Sample Loop,30 Degree	1 pcs	7755-022
8.007723.0001	50uL,SS,Sample Loop,30 Degree	1 pcs	7755-023
8.007724.0001	100uL,SS,Sample Loop,30 Degree	1 pcs	7755-024
8.007725.0001	200uL,SS,Sample Loop,30 Degree	1 pcs	7755-025
8.007726.0001	500uL,SS,Sample Loop,30 Degree	1 pcs	7755-026
8.007727.0001	1mL,SS,Sample Loop,30 Degree	1 pcs	7755-027
8.007728.0001	2mL,SS,Sample Loop,30 Degree	1 pcs	7755-028
8.007729.0001	5mL,SS,Sample Loop,30 Degree	1 pcs	7755-029

Rheodyne Stainless Steel Sample Loops for 3725-038, 3725i-038 Injectors

Art.	Description	Package	Rheodyne Art.
8.006518.0001	2mL Prep Sample Loop SS	1 pcs	3065-018
8.006519.0001	5mL Prep Sample Loop SS	1 pcs	3065-019
8.006523.0001	10mL Prep Sample Loop SS	1 pcs	3065-023
8.006525.0001	20mL Prep Sample Loop SS	1 pcs	3065-025

Rheodyne PEEK Sample Loops for 9725, 9725i Injectors

Art.	Description	Package	Rheodyne Art.
8.007715.0001	2uL PEEK Sample Loop (9725 only)	1 pcs	7755-015
8.009020.0001	5uL PEEK Sample Loop	1 pcs	9055-020
8.009021.0001	10uL PEEK Sample Loop	1 pcs	9055-021
8.009022.0001	20uL PEEK Sample Loop	1 pcs	9055-022
8.009023.0001	50uL PEEK Sample Loop	1 pcs	9055-023
8.009024.0001	100uL PEEK Sample Loop	1 pcs	9055-024
8.009025.0001	200uL PEEK Sample Loop	1 pcs	9055-025
8.009026.0001	500uL PEEK Sample Loop	1 pcs	9055-026
8.009027.0001	1mL PEEK Sample Loop	1 pcs	9055-027
8.009028.0001	2mL PEEK Sample Loop	1 pcs	9055-028
8.009029.0001	5mL PEEK Sample Loop	1 pcs	9055-029
8.009033.0001	10mL PEEK Sample Loop	1 pcs	9055-033

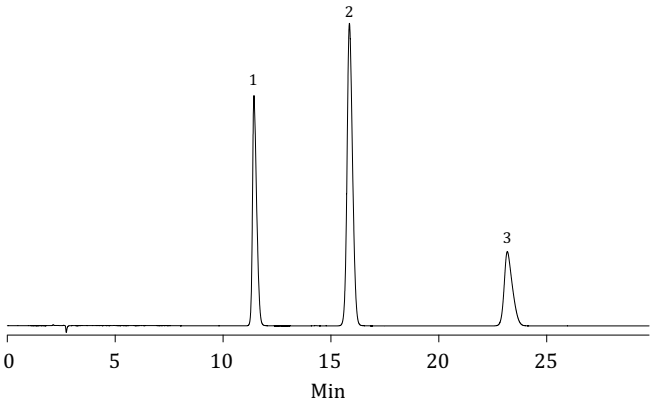
Rheodyne PEEK Sample Loops for 3725, 3725i Injectors

Art.	Description	Package	Rheodyne Art.
8.005518.0001	2mL Prep Sample Loop PEEK	1 pcs	3055-018
8.005519.0001	5mL Prep Sample Loop PEEK	1 pcs	3055-019
8.005523.0001	10mL Prep Sample Loop PEEK	1 pcs	3055-023
8.005525.0001	20mL Prep Sample Loop PEEK	1 pcs	3055-025

HPLC Applications

Food additives

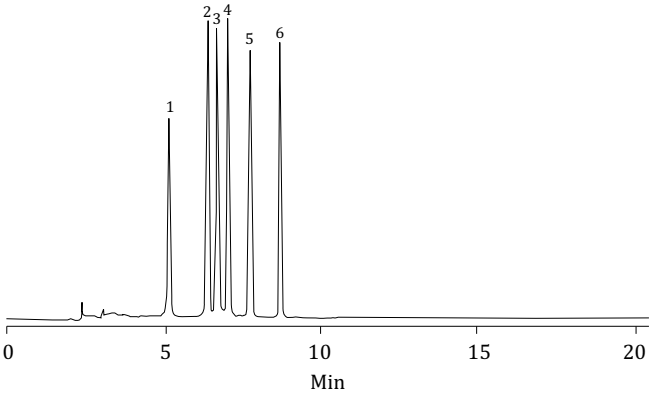
1.Benzoic acid
2.Sorbic acid
3.Sodium saccharin



Column:	Athena C18, 4.6 x 250 mm, 5µm (8.462571.0001)
Eluent:	20mM Ammonium acetate : Methanol (5/95)
Flow Rate:	1.0 mL/min
Det.:	UV 254nm
Temp.:	30 ˚C

Oligonucleotides

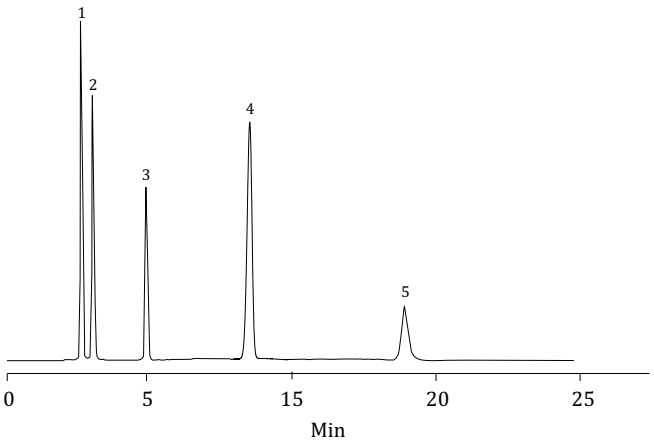
1.CAAGACGCAA
2.CAACCAACGT
3.GGTGATCAAC
4.CCCTGAACAA
5.CGTGTATTGG
6.GGTCCTATAC



Column:	Athena C18-BIO, 4.6 x 150 mm, 5µm(8.461578.0001)
Eluent:	10mM Phosphoric acid : Acetonitrile (90/10)
Flow Rate:	1.0 mL/min
Det.:	UV 260nm
Temp.:	25 ˚C

Sulfonamides

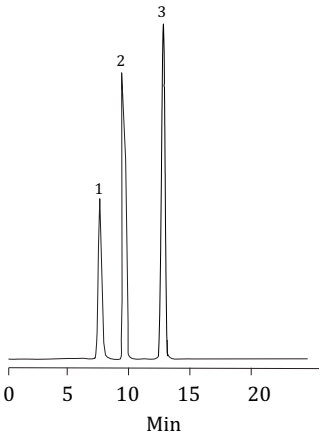
1.Sulfanilamide
2.Sulfisomidine
3.Sulfadiazine
4.Sulfamethazine
5.Sulfamonomethoxine



Column:	Athena C18-WP, 4.6 x 150 mm, 5µm (8.461572.0001)
Eluent:	10mM Phosphoric acid : Acetonitrile (85/15)
Flow Rate:	1.0 mL/min
Det.:	UV 254nm
Temp.:	40 ˚C

Tricyclic antidepressants

1.Protriptyline
2.Nortriptyline
3.Amitriptyline

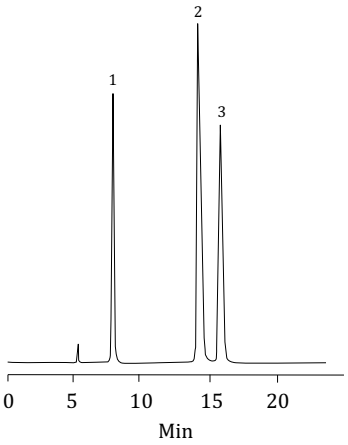


Column:	Athena C8, 4.6 x 150 mm, 5µm(8.461575.0001)
Eluent:	Methanol : 20mM Potassium phosphate (pH 7.0) (20/80)
Flow Rate:	1.0 mL/min
Det.:	UV 254nm
Temp.:	40 ˚C

HPLC Applications

Nitroanilines

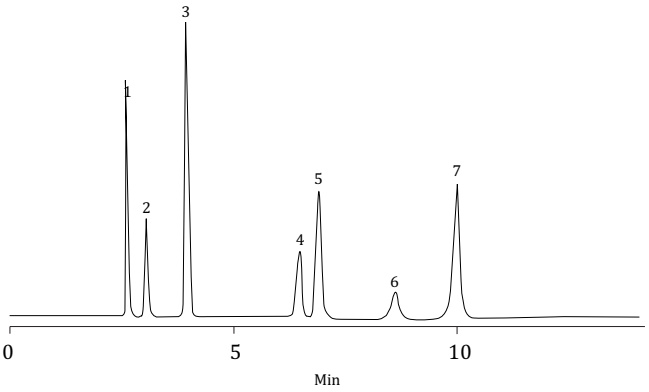
1.o-Nitroaniline
2.m-Nitroaniline
3.p-Nitroaniline



Column:	Athena Silica, 4.6 x 150 mm, 5μm (8.461576.0001)
Eluent:	Chloroform : n-Hexane (60/40)
Flow Rate:	0.8 mL/min
Det.:	UV 254 nm
Temp.:	Ambient

Nucleosides

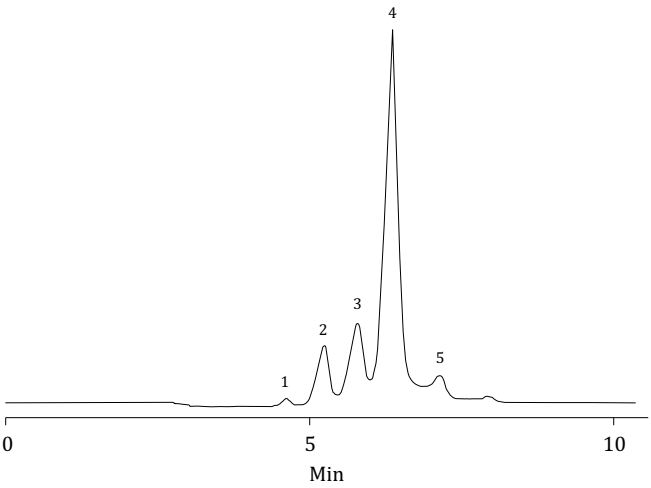
1.Cytidine
2.Deoxycytidine
3.Uridine
4.Inosine
5.Guanosine
6.Deoxyguanosine
7.Adenosine



Column:	Cnwsil C18, 4.6 x 150 mm, 5μm (8.461550.0001)
Eluent:	20mM KH_2PO_4-H_3PO_4(pH 3.2) : Acetonitrile(97/3)
Flow Rate:	1.0 mL/min
Det.:	UV 254 nm
Temp.:	30 ˚C

Malto-oligosaccharides

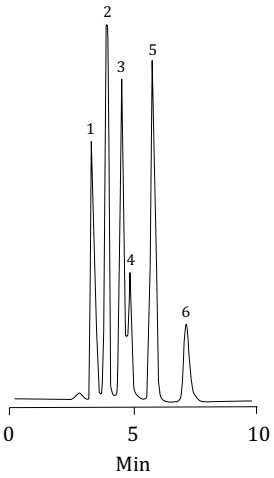
1.Glucose
2.Maltose
3.Maltotriose
4.Maltotetraose
5.Maltopentaose



Column:	Athena NH_2, 4.6 x 150 mm, 5μm (8.461577.0001)
Eluent:	Acetonitrile : Water(50/50)
Flow Rate:	1.0 mL/min
Det.:	RID
Temp.:	40 ˚C

Organic Acids

1.Malonic acid
2.Nortriptylline
3.Acetic acid
4.Lactic acid
5.Citric acid
6.Succinic acid



Column:	Athena C18, 4.6 x 150 mm, 5μm (8.461571.0001)
Eluent:	30mM Sodium Phosphate(pH 2.5 with H_3PO_4)
Flow Rate:	1.0 mL/min
Det.:	UV 210 nm
Temp.:	40 ˚C