

Supercritical Fluid Chromatography



Sepax Technologies

SFC



Better Surface Chemistry for Better Separation

Analytical and Preparative SFC Columns

Best Performance for Supercritical Fluid Chromatography



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Sepax Technologies, Inc.

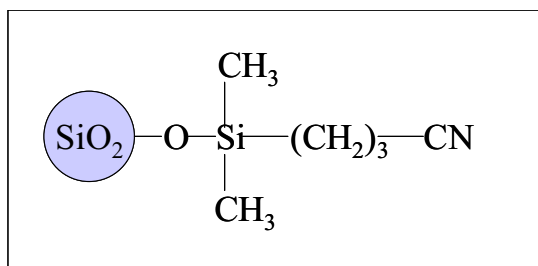
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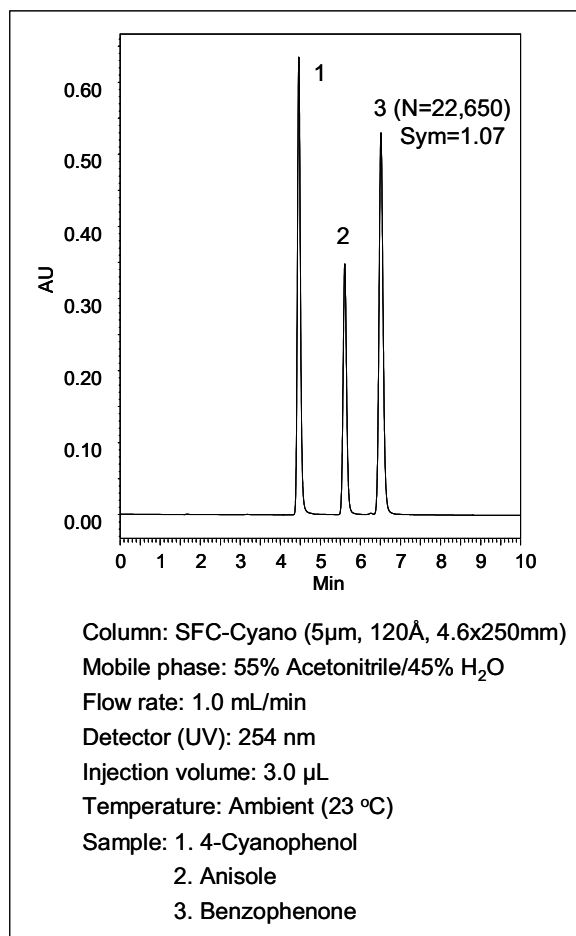
www.sepax-tech.com

Sepax SFC-Cyano



Silica: Spherical, high purity (<10 ppm metals)
 Pore size: 120 Å
 Particle size: 3, 5, 7 and 10 µm
 Pore volume: 1.0 mL/g
 Surface area: 300 m²/g
 Phase structure: Monomeric and fully endcapped
 % Carbon: 7.0%
 Coverage: ~3.5 µmol/m²

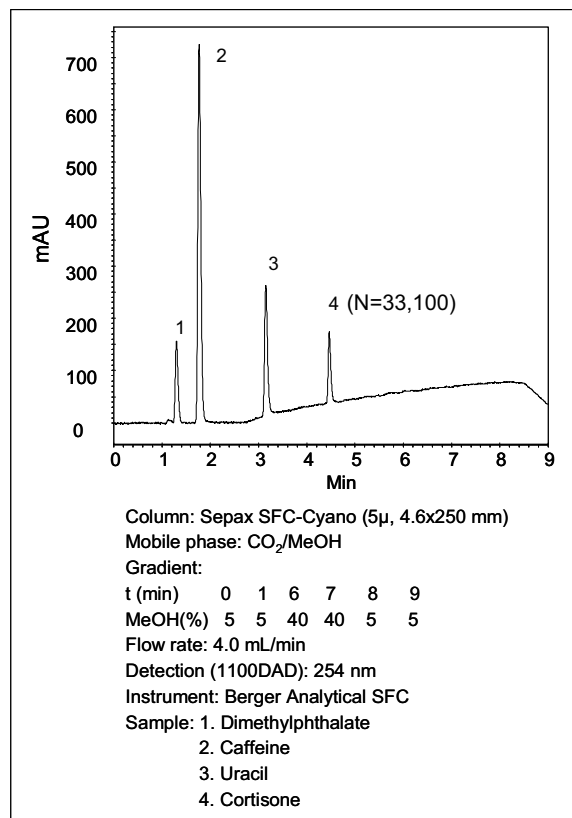
LC test chromatogram



The SFC-Cyano packing materials are bonded with propyl cyano functional groups that enable special interaction with

polar compounds. The monomeric bonding chemistry produces very high efficiency and high resolution separations.

SFC test chromatogram



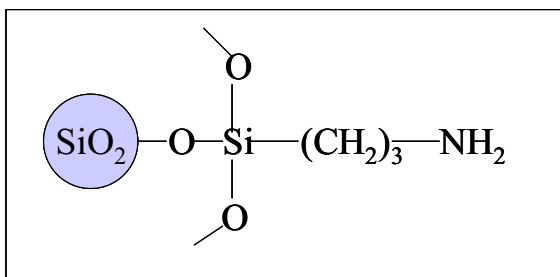
Characteristics

- Highly controlled chemistry of monolayer formation and end-capping
- Extremely high column-to-column reproducibility
- High selectivity and efficiency for separations
- Suitable for separations of acidic, neutral and basic organic compounds, and pharmaceuticals

Sepax SFC-Cyano Products

Sepax SFC-Cyano	Pore size	P/N
5µm, 4.6x250mm	120Å	SEP613315-4625
5µm, 4.6x150mm	120Å	SEP613315-4615
5µm, 4.6x50mm	120Å	SEP613315-4605
5µm, 21.2x250mm	120Å	SEP613315-21225
5µm, 21.2x150mm	120Å	SEP613315-21215
5µm, 21.2x50mm	120Å	SEP613315-21205
5µm, 30x250mm	120Å	SEP613315-30025
5µm, 30x150mm	120Å	SEP613315-30015
5µm, 30x50mm	120Å	SEP613315-30005

Sepax SFC-Amino



Silica: Spherical, high purity (<10 ppm metals)

Pore size: 120 Å

Particle size: 3, 5, 7 and 10 µm

Pore volume: 1.0 mL/g

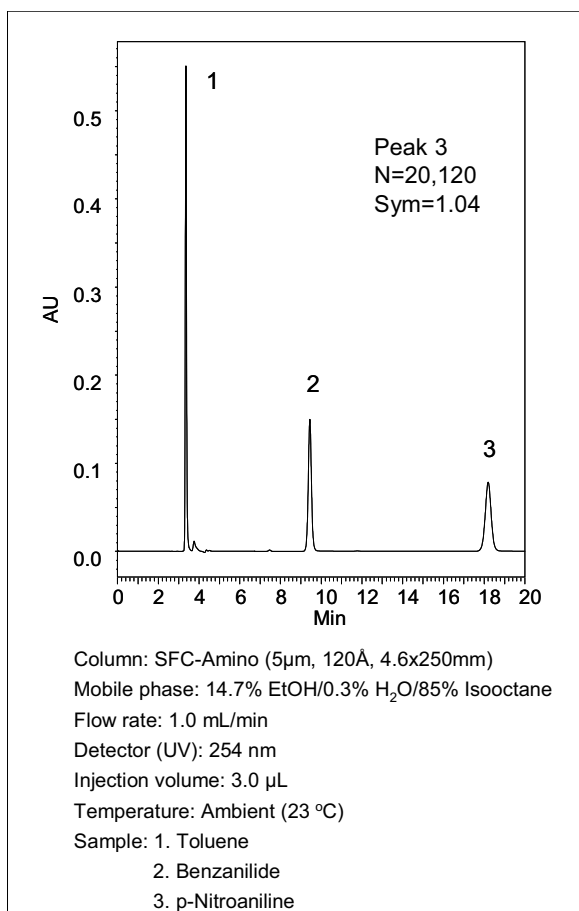
Surface area: 300 m²/g

Phase structure: Polymeric and no endcapping

% Carbon: 4.0%

Coverage: ~3.6 µmol/m²

LC test chromatogram



Characteristics

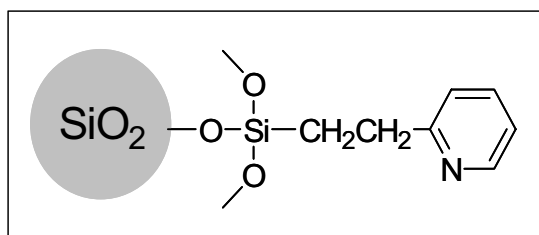
- Well controlled chemistry of polymeric monolayer
- High column-to-column reproducibility
- Utilized as both SFC and LC phases
- Versatile mobile phases: non-aqueous solvents, such as hexane/ethyl acetate and chloroform/methanol, and aqueous solutions
- Recommended for separations of pharmaceuticals, saccharides, nucleotides, and basic organic compounds

Sepax SFC-Amino Products

Sepax SFC-Amino	Pore size	P/N
5µm, 4.6x250mm	120Å	SEP615305-4625
5µm, 4.6x150mm	120Å	SEP615305-4615
5µm, 4.6x50mm	120Å	SEP615305-4605
5µm, 21.2x250mm	120Å	SEP615305-21225
5µm, 21.2x150mm	120Å	SEP615305-21215
5µm, 21.2x100mm	120Å	SEP615305-21210
5µm, 21.2x50mm	120Å	SEP615305-21205
5µm, 30x250mm	120Å	SEP615305-30025
5µm, 30x150mm	120Å	SEP615305-30015
5µm, 30x100mm	120Å	SEP615305-30010
5µm, 30x50mm	120Å	SEP615305-30005



Sepax SFC-Pyridine



Silica: Spherical, high purity (<10 ppm metals)

Pore size: 120 Å

Particle size: 3, 5, 7, and 10 µm

Pore volume: 1.0 mL/g

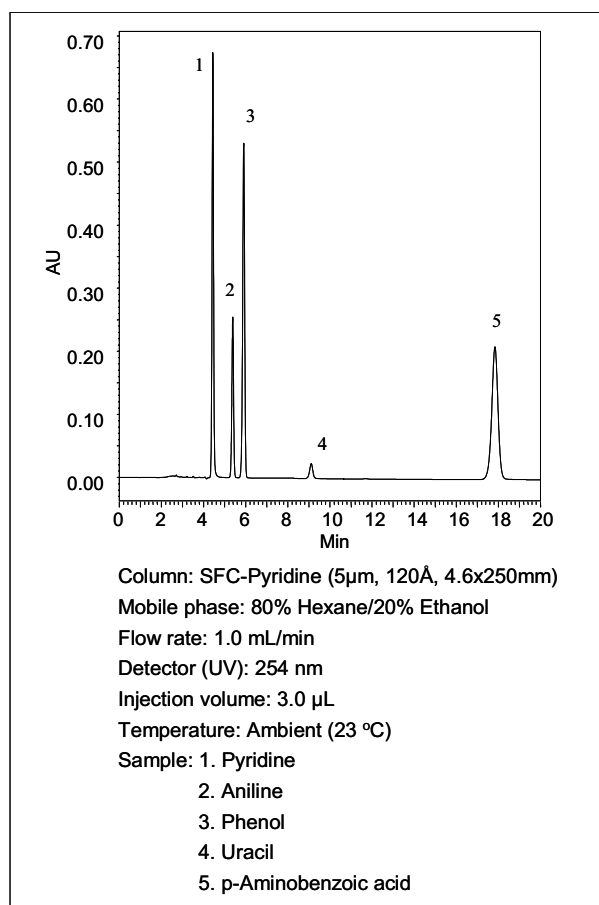
Surface area: 300 m²/g

Phase structure: Polymeric and no endcapping

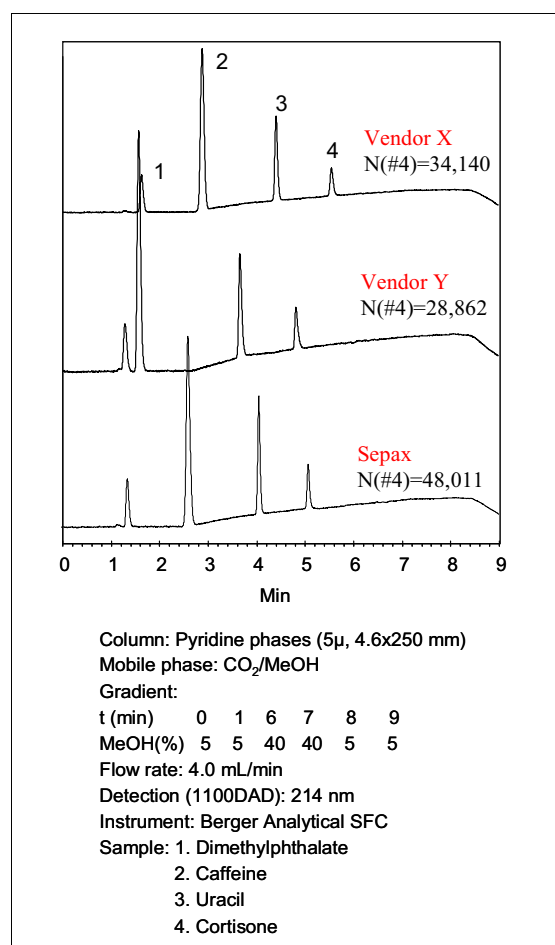
% Carbon: 8.0%

Coverage: ~3.3 µmol/m²

LC test chromatogram



SFC test chromatogram



Characteristics

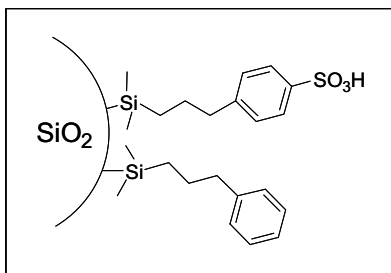
- Well controlled chemistry of polymeric monolayer
- High column-to-column reproducibility
- Recommended for separations of acidic, neutral and basic organic compounds, as well as the pharmaceuticals

Sepax SFC-Pyridine Products

SFC-Pyridine	Pore size	P/N
5µm, 4.6x250mm	120Å	SEP619255-4625
5µm, 4.6x150mm	120Å	SEP619255-4615
5µm, 4.6x50mm	120Å	SEP619255-4605
5µm, 21.2x250mm	120Å	SEP619255-21225
5µm, 21.2x150mm	120Å	SEP619255-21215
5µm, 21.2x100mm	120Å	SEP619255-21210
5µm, 30x250mm	120Å	SEP619255-30025
5µm, 30x150mm	120Å	SEP619255-30015
5µm, 30x100mm	120Å	SEP619255-30010

Sepax SFC-SCX

Phase Structure



Technical Specifications

Silica: Spherical, high purity (<10 ppm metals)

Pore size: 120 Å

Particle size: 3, 5 µm

Pore volume: 1.0 mL/g

Surface area: 300 m²/g

Phase structure: Polymeric and mixed mode

% Carbon: 11.0%

Coverage: 3.0 µmol/m²

Description

Sepax *SFC-SCX* is a silica based mixed-mode strong cation exchange phase. Its phase has a mixed chemical structure of sulfonic acid and phenyl group. This mixed mode of strong cation-exchange and hydrophobicity offers high selectivity and high resolution separation for cationic/basic and nitrogen containing compounds as well as desirable retention for a variety of weak cationic and neutral organic compounds. A uniform, polymeric bonding of Sepax *SFC-SCX* enhances its stability under various separation conditions.

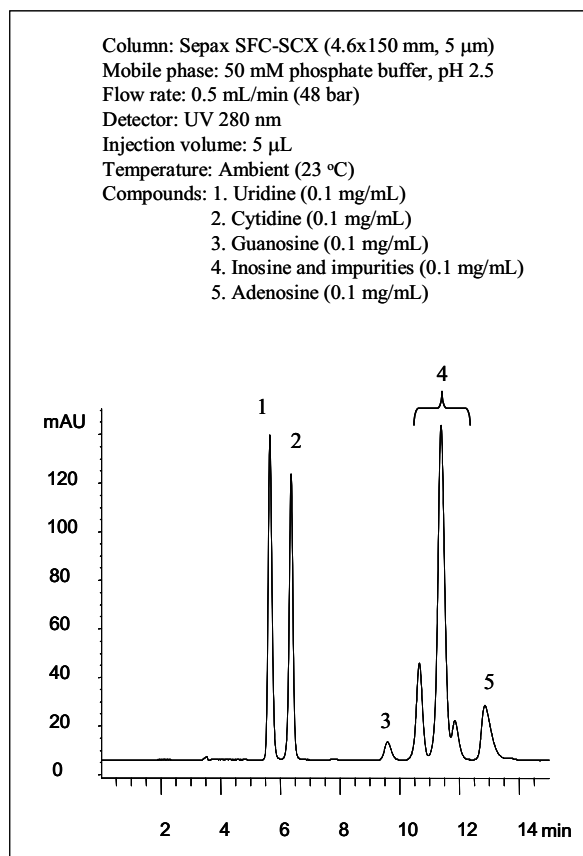
Sepax *SFC-SCX* has expanded its applications from the traditional SCX separation of cationic and nitrogen containing compounds to weak cationic and neutral organic molecules. Examples include separation of analytes of amines and polyamines, such as alkaloids, peptides, codeine, cough and cold ingredients.

Characteristics

- Highly controlled chemistry of polymeric monolayer formation and end-capping
- Mixed chemical structure of sulfonic acid and phenyl group

- Mixed-mode of ion-exchange and hydrophobic interaction enabling high selectivity and appropriate retention for a variety of compounds
- Polymeric bonding and end-capping to achieve the exceptionally high stability
- pH stability: 1.5-8.0
- Suitable for separations of a complex of cationic, nitrogen containing, and neutral compounds

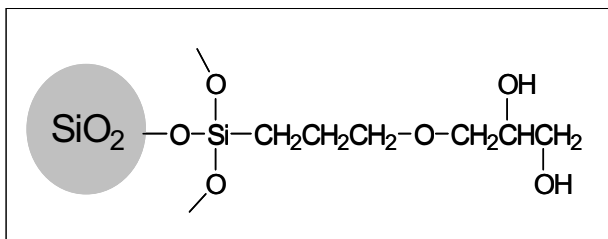
LC test chromatogram



Sepax SFC-SCX Products

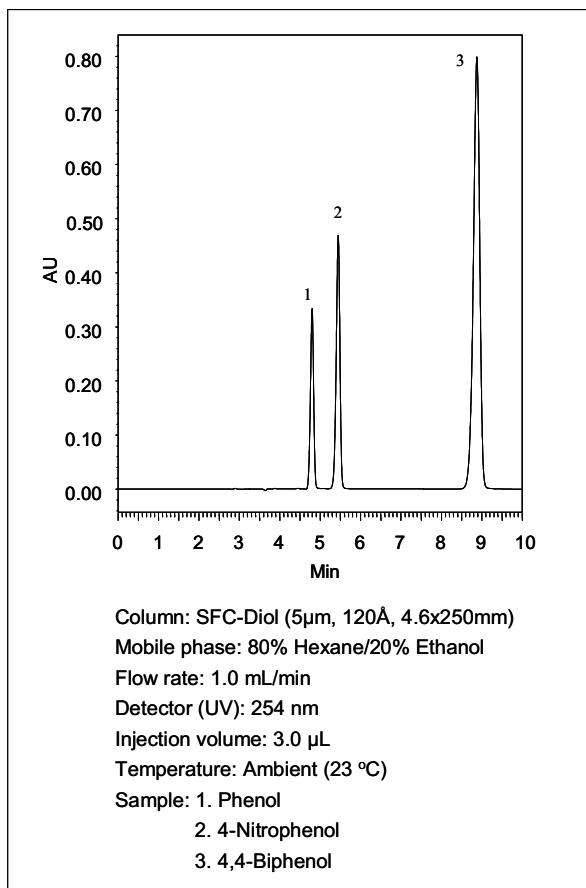
Sepax SFC-SCX	Pore size	P/N
5µm, 4.6x250mm	120Å	SEP620365-4625
5µm, 4.6x150mm	120Å	SEP620365-4615
5µm, 4.6x50mm	120Å	SEP620365-4605
5µm, 21.2x250mm	120Å	SEP620365-21225
5µm, 21.2x150mm	120Å	SEP620365-21215
5µm, 21.2x100mm	120Å	SEP620365-21210
5µm, 30x250mm	120Å	SEP620365-30025
5µm, 30x150mm	120Å	SEP620365-30015
5µm, 30x100mm	120Å	SEP620365-30010

Sepax SFC-Diol

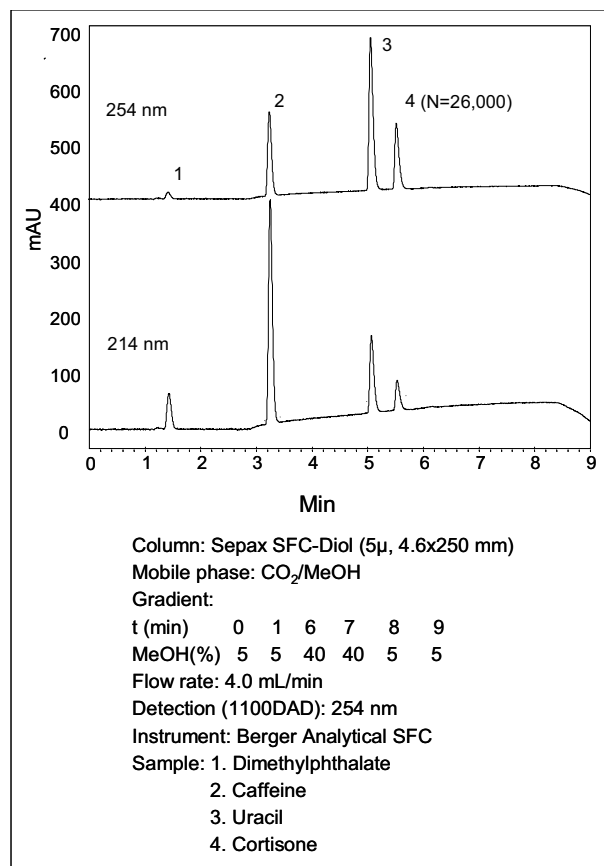


Silica: Spherical, high purity (<10 ppm metals)
 Pore size: 80, 120 Å
 Particle size: 3, 5, 7 and 10 µm
 Pore volume: 1.0 mL/g
 Surface area: 300 m²/g
 Phase structure: Monomeric and fully endcapped
 % Carbon: 8.8%
 Coverage: ~4.0 µmol/m²

LC test chromatogram



SFC test chromatogram



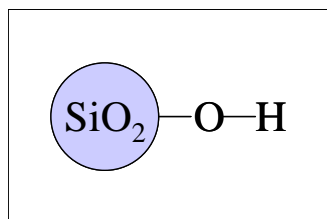
Characteristics

- Well controlled chemistry of polymeric monolayer
- High column-to-column reproducibility
- Polar phase for separations of acidic, neutral and basic organic compounds, as well as the pharmaceuticals
- High selectivity and efficiency for separations

Sepax SFC-Diol Products

Sepax SFC-Diol	Pore size	P/N
5µm, 4.6x250mm	120Å	SEP616425-4625
5µm, 4.6x150mm	120Å	SEP616425-4615
5µm, 4.6x50mm	120Å	SEP616425-4605
5µm, 21.2x250mm	120Å	SEP616425-21225
5µm, 21.2x150mm	120Å	SEP616425-21215
5µm, 21.2x100mm	120Å	SEP616425-21210
5µm, 300x250mm	120Å	SEP616425-30025
5µm, 300x150mm	120Å	SEP616425-30015
5µm, 300x50mm	120Å	SEP616425-30005

Sepax SFC-Silica



Silica: Spherical, high purity (<10 ppm metals)

Pore size: 120 Å

Particle size: 3, 5, 7 and 10 µm

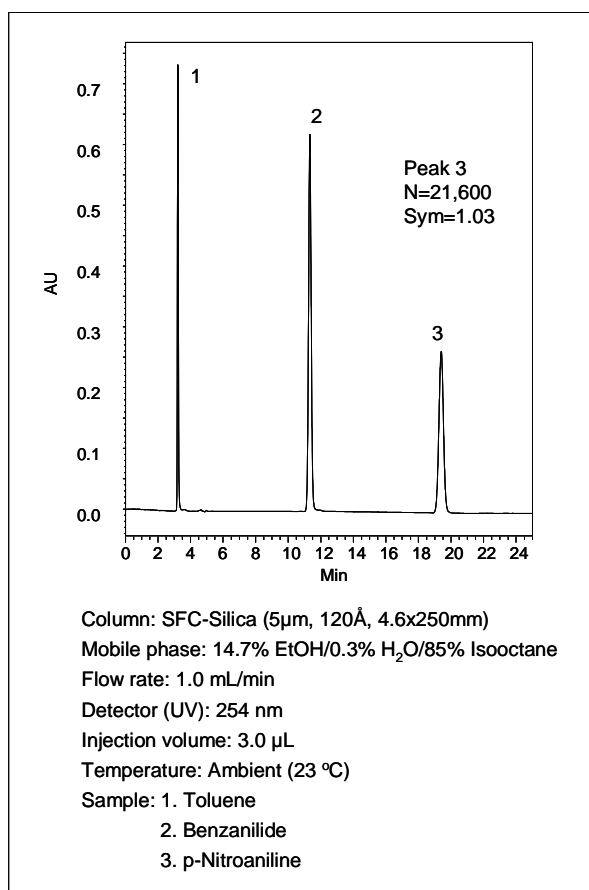
Pore volume: 1.0 mL/g

Surface area: 300 m²/g

Phase structure: activated hydroxyl (-OH)

% Carbon: 0%

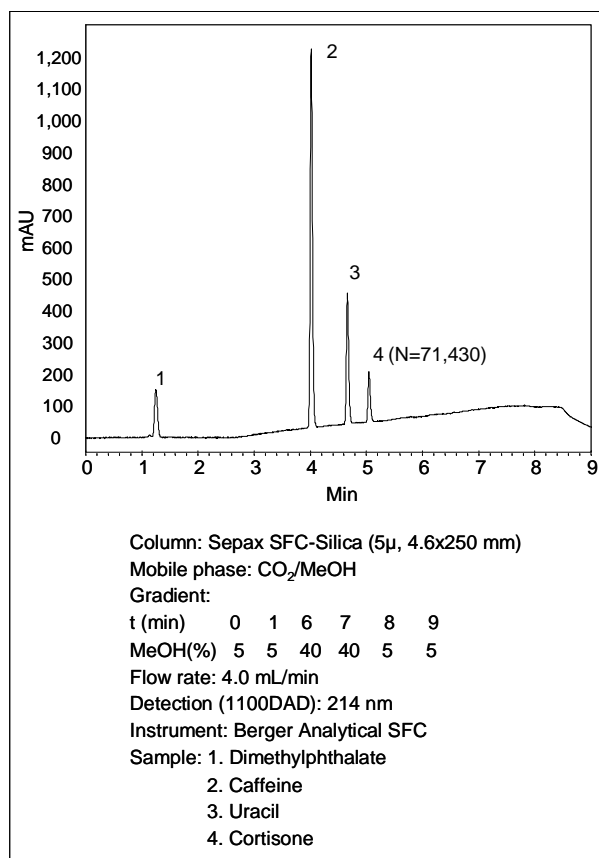
LC test chromatogram



- Suitable for separations in aqueous and non-aqueous mobile phases

- Suitable for separations of polar and basic organic compounds, such as vitamins, steroids, as well as pharmaceuticals

SFC test chromatogram



Sepax SFC-Diol Products

Sepax SFC-Silica	Pore size	P/N
5µm, 4.6x250mm	120Å	SEP617005-4625
5µm, 4.6x150mm	120Å	SEP617005-4615
5µm, 4.6x50mm	120Å	SEP617005-4605
5µm, 21.2x250mm	120Å	SEP617005-21225
5µm, 21.2x150mm	120Å	SEP617005-21215
5µm, 21.2x100mm	120Å	SEP617005-21210
5µm, 300x250mm	120Å	SEP617005-30025
5µm, 300x150mm	120Å	SEP617005-30015
5µm, 300x50mm	120Å	SEP617005-30005

Characteristics

- Activated silica surface
- Ultra high purity
- Enhanced mechanical stability

SFC Analytical and Preparative Column Products

Ordering Information:

3 µm Analytical Columns (length x ID mm)

	30x2.1	50x2.1	100x2.1	150x2.1	250x2.1	Guard column 10x2.0*
Phases						
SFC-Cyano (120 Å)	SEP613313-2103	SEP613313-2105	SEP613313-2110	SEP613313-2115	SEP613313-2125	SEP613313-2001
SFC-NH ₂ (120 Å)	SEP615303-2103	SEP615303-2105	SEP615303-2110	SEP615303-2115	SEP615303-2125	SEP615303-2001
SFC-SCX (120 Å)	SEP620363-2103	SEP620363-2105	SEP620363-2110	SEP620363-2115	SEP620363-2125	SEP620363-2001
SFC-Pyridine (120Å)	SEP619253-2103	SEP619253-2105	SEP619253-2110	SEP619253-2115	SEP619253-2125	SEP619253-2001
SFC-Diol (80 Å)	SEP615333-2103	SEP615333-2105	SEP615333-2110	SEP615333-2115	SEP615333-2125	SEP615333-2001
SFC-Diol (120 Å)	SEP616333-2103	SEP616333-2105	SEP616333-2110	SEP616333-2115	SEP616333-2125	SEP616333-2001
SFC-Silica (120 Å)	SEP617003-2103	SEP617003-2105	SEP617003-2110	SEP617003-2115	SEP617003-2125	SEP617003-2001

* Guard column cartridge does not include the cartridge holder

3 µm Analytical Columns (length x ID mm)

	30x4.6	50x4.6	100x4.6	150x4.6	250x4.6	Guard column 10x4.0*
Phases						
SFC-Cyano (120 Å)	SEP613313-4603	SEP613313-4605	SEP613313-4610	SEP613313-4615	SEP613313-4625	SEP613313-4001
SFC-NH ₂ (120 Å)	SEP615303-4603	SEP615303-4605	SEP615303-4610	SEP615303-4615	SEP615303-4625	SEP615303-4001
SFC-SCX (120 Å)	SEP620363-4603	SEP620363-4605	SEP620363-4610	SEP620363-4615	SEP620363-4625	SEP620363-4001
SFC-Pyridine (120Å)	SEP619253-4603	SEP619253-4605	SEP619253-4610	SEP619253-4615	SEP619253-4625	SEP619253-4001
SFC-Diol (80 Å)	SEP615333-4603	SEP615333-4605	SEP615333-4610	SEP615333-4615	SEP615333-4625	SEP615333-4001
SFC-Diol (120 Å)	SEP616333-4603	SEP616333-4605	SEP616333-4610	SEP616333-4615	SEP616333-4625	SEP616333-4001
SFC-Silica (120 Å)	SEP617003-4603	SEP617003-4605	SEP617003-4610	SEP617003-4615	SEP617003-4625	SEP617003-4001

* Guard column cartridge does not include the cartridge holder

5 µm Analytical Columns (length x ID mm)

	30x2.1	50x2.1	100x2.1	150x2.1	250x2.1	Guard column 10x2.0*
Phases						
SFC-Cyano (120 Å)	SEP613315-2103	SEP613315-2105	SEP613315-2110	SEP613315-2115	SEP613315-2125	SEP613315-2001
SFC-NH ₂ (120 Å)	SEP615305-2103	SEP615305-2105	SEP615305-2110	SEP615305-2115	SEP615305-2125	SEP615305-2001
SFC-SCX (120 Å)	SEP620365-2103	SEP620365-2105	SEP620365-2110	SEP620365-2115	SEP620365-2125	SEP620365-2001
SFC-Pyridine (120Å)	SEP619255-2103	SEP619255-2105	SEP619255-2110	SEP619255-2115	SEP619255-2125	SEP619255-2001
SFC-Diol (80 Å)	SEP615335-2103	SEP615335-2105	SEP615335-2110	SEP615335-2115	SEP615335-2125	SEP615335-2001
SFC-Diol (120 Å)	SEP616335-2103	SEP616335-2105	SEP616335-2110	SEP616335-2115	SEP616335-2125	SEP616335-2001
SFC-Silica (120 Å)	SEP617005-2103	SEP617005-2105	SEP617005-2110	SEP617005-2115	SEP617005-2125	SEP617005-2001

* Guard column cartridge does not include the cartridge holder

Ordering Information:

5 µm Analytical Columns (length x ID mm)

	30x4.6	50x4.6	100x4.6	150x4.6	250x4.6	Guard column 10x4.0*
Phases						
SFC-Cyano (120 Å)	SEP613315-4603	SEP613315-4605	SEP613315-4610	SEP613315-4615	SEP613315-4625	SEP613315-4001
SFC-NH ₂ (120 Å)	SEP615305-4603	SEP615305-4605	SEP615305-4610	SEP615305-4615	SEP615305-4625	SEP615305-4001
SFC-SCX (120 Å)	SEP620365-4603	SEP620365-4605	SEP620365-4610	SEP620365-4615	SEP620365-4625	SEP620365-4001
SFC-Pyridine (120Å)	SEP619255-4603	SEP619255-4605	SEP619255-4610	SEP619255-4615	SEP619255-4625	SEP619255-4001
SFC-Diol (80 Å)	SEP615335-4603	SEP615335-4605	SEP615335-4610	SEP615335-4615	SEP615335-4625	SEP615335-4001
SFC-Diol (120 Å)	SEP616335-4603	SEP616335-4605	SEP616335-4610	SEP616335-4615	SEP616335-4625	SEP616335-4001
SFC-Silica (120 Å)	SEP617005-4603	SEP617005-4605	SEP617005-4610	SEP617005-4615	SEP617005-4625	SEP617005-4001

* Guard column cartridge does not include the cartridge holder

5 µm Preparative and Semi-preparative Columns (length x ID mm)

	150x7.8	250x7.8	150x10	250x10	Guard column 10x4.0*
Phases					
SFC-Cyano (120 Å)	SEP613315-7815	SEP613315-7825	SEP613315-10015	SEP613315-10025	SEP613315-4001
SFC-NH ₂ (120 Å)	SEP615305-7815	SEP615305-7825	SEP615305-10015	SEP615305-10025	SEP615305-4001
SFC-SCX (120 Å)	SEP620365-7815	SEP620365-7825	SEP620365-10015	SEP620365-10025	SEP620365-4001
SFC-Pyridine (120 Å)	SEP619255-7815	SEP619255-7825	SEP619255-10015	SEP619255-10025	SEP619255-4001
SFC-Diol (80 Å)	SEP615335-7815	SEP615335-7825	SEP615335-10015	SEP615335-10025	SEP615335-4001
SFC-Diol (120 Å)	SEP616335-7815	SEP616335-7825	SEP616335-10015	SEP616335-10025	SEP616335-4001
SFC-Silica (120 Å)	SEP617005-7815	SEP617005-7825	SEP617005-10015	SEP617005-10025	SEP617005-4001

* Guard column cartridge does not include the cartridge holder

5 µm Preparative and Semi-Preparative Columns (length x ID mm)

	50x21.2	100x21.2	150x21.2	250x21.2	300x21.2	Guard column 10x21.2**
Phases						
SFC-Cyano (120 Å)	SEP613315-21205	SEP613315-21210	SEP613315-21215	SEP613315-21225	SEP613315-21230	SEP613315-21201
SFC-NH ₂ (120 Å)	SEP615305-21205	SEP615305-21210	SEP615305-21215	SEP615305-21225	SEP615305-21230	SEP615305-21201
SFC-SCX (120 Å)	SEP620365-21205	SEP620365-21210	SEP620365-21215	SEP620365-21225	SEP620365-21230	SEP620365-21201
SFC-Pyridine (120Å)	SEP619255-21205	SEP619255-21210	SEP619255-21215	SEP619255-21225	SEP619255-21230	SEP619255-21201
SFC-Diol (80 Å)	SEP615335-21205	SEP615335-21210	SEP615335-21215	SEP615335-21225	SEP615335-21230	SEP615335-21201
SFC-Diol (120 Å)	SEP616335-21205	SEP616335-21210	SEP616335-21215	SEP616335-21225	SEP616335-21230	SEP616335-21201
SFC-Silica (120 Å)	SEP617005-21205	SEP617005-21210	SEP617005-21215	SEP617005-21225	SEP617005-21230	SEP617005-21201

** Guard column cartridge does not include the cartridge holder

Ordering Information:

5 µm Preparative and Semi-Preparative Columns (length x ID mm)						Guard column
	50x30	100x30	150x30	250x30	250x50	10x21.2**
Phases						
SFC-Cyano (120 Å)	SEP613315-30005	SEP613315-30010	SEP613315-30015	SEP613315-30025	SEP613315-50025	SEP613315-21201
SFC-NH ₂ (120 Å)	SEP615305-30005	SEP615305-30010	SEP615305-30015	SEP615305-30025	SEP615305-50025	SEP615305-21201
SFC-SCX (120 Å)	SEP620365-30005	SEP620365-30010	SEP620365-30015	SEP620365-30025	SEP620365-50025	SEP620365-21201
SFC-Pyridine (120Å)	SEP619255-30005	SEP619255-30010	SEP619255-30015	SEP619255-30025	SEP619255-50025	SEP619255-21201
SFC-Diol (80 Å)	SEP615335-30005	SEP615335-30010	SEP615335-30015	SEP615335-30025	SEP615335-50025	SEP615335-21201
SFC-Diol (120 Å)	SEP616335-30005	SEP616335-30010	SEP616335-30015	SEP616335-30025	SEP616335-50025	SEP616335-21201
SFC-Silica (120 Å)	SEP617005-30005	SEP617005-30010	SEP617005-30015	SEP617005-30025	SEP617005-50025	SEP617005-21201

** Guard column cartridge does not include the cartridge holder

10 µm Preparative and Semi-preparative Columns (length x ID mm)					Guard column
	250x7.8	100x10	150x10	250x10	10x4.0*
Phases					
SFC-Cyano (120 Å)	SEP613319-7825	SEP613319-10010	SEP613319-10015	SEP613319-10025	SEP613319-4001
SFC-NH ₂ (120 Å)	SEP615309-7825	SEP615309-10010	SEP615309-10015	SEP615309-10025	SEP615309-4001
SFC-SCX (120 Å)	SEP620369-7825	SEP620369-10010	SEP620369-10015	SEP620369-10025	SEP620369-4001
SFC-Pyridine (120 Å)	SEP619259-7825	SEP619259-10010	SEP619259-10015	SEP619259-10025	SEP619259-4001
SFC-Diol (80 Å)	SEP615339-7825	SEP615339-10010	SEP615339-10015	SEP615339-10025	SEP615339-4001
SFC-Diol (120 Å)	SEP616339-7825	SEP616339-10010	SEP616339-10015	SEP616339-10025	SEP616339-4001
SFC-Silica (120 Å)	SEP617009-7825	SEP617009-10010	SEP617009-10015	SEP617009-10025	SEP617009-4001

* Guard column cartridge does not include the cartridge holder

10 µm Preparative and Semi-preparative Columns (length x ID mm)						Guard column
	50x21.2	100x21.2	150x21.2	250x21.2	300x21.2	10x21.2**
Phases						
SFC-Cyano (120 Å)	SEP613319-21205	SEP613319-21210	SEP613319-21215	SEP613319-21225	SEP613319-21230	SEP613319-21201
SFC-NH ₂ (120 Å)	SEP615309-21205	SEP615309-21210	SEP615309-21215	SEP615309-21225	SEP615309-21230	SEP615309-21201
SFC-SCX (120 Å)	SEP620369-21205	SEP620369-21210	SEP620369-21215	SEP620369-21225	SEP620369-21230	SEP620369-21201
SFC-Pyridine (120Å)	SEP619259-21205	SEP619259-21210	SEP619259-21215	SEP619259-21225	SEP619259-21230	SEP619259-21201
SFC-Diol (80 Å)	SEP615339-21205	SEP615339-21210	SEP615339-21215	SEP615339-21225	SEP615339-21230	SEP615339-21201
SFC-Diol (120 Å)	SEP616339-21205	SEP616339-21210	SEP616339-21215	SEP616339-21225	SEP616339-21230	SEP616339-21201
SFC-Silica (120 Å)	SEP617009-21205	SEP617009-21210	SEP617009-21215	SEP617009-21225	SEP617009-21230	SEP617009-21201

** Guard column cartridge does not include the cartridge holder

Ordering Information:

10 µm Preparative and Semi-preparative Columns (length x ID mm)						Guard column
	50x30	100x30	150x30	250x30	250x50	10x21.2**
Phases						
SFC-Cyano (120 Å)	SEP613319-30005	SEP613319-30010	SEP613319-30015	SEP613319-30025	SEP613319-50025	SEP613319-21201
SFC-NH ₂ (120 Å)	SEP615309-30005	SEP615309-30010	SEP615309-30015	SEP615309-30025	SEP615309-50025	SEP615309-21201
SFC-SCX (120 Å)	SEP620369-30005	SEP620369-30010	SEP620369-30015	SEP620369-30025	SEP620369-50025	SEP620369-21201
SFC-Pyridine (120Å)	SEP619259-30005	SEP619259-30010	SEP619259-30015	SEP619259-30025	SEP619259-50025	SEP619259-21201
SFC-Diol (80 Å)	SEP615339-30005	SEP615339-30010	SEP615339-30015	SEP615339-30025	SEP615339-50025	SEP615339-21201
SFC-Diol (120 Å)	SEP616339-30005	SEP616339-30010	SEP616339-30015	SEP616339-30025	SEP616339-50025	SEP616339-21201
SFC-Silica (120 Å)	SEP617009-30005	SEP617009-30010	SEP617009-30015	SEP617009-30025	SEP617009-50025	SEP617009-21201

** Guard column cartridge does not include the cartridge holder

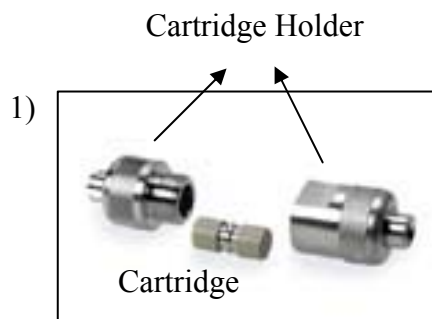
1) * Cartridge holder

P/N# SEP102000-2001, for 10x20 mm guard cartridge

P/N# SEP102000-4001, for 10x40 mm guard cartridge

2) ** Cartridge holder

P/N# SEP102000-21201, for 10x21.2 mm guard cartridge



3) P/N# SEP102020-21200 21.2 mm in-line filter for prep columns



Ordering Information

How to Order

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Our general terms and conditions of sale apply.
Please refer to www.dichrom.com/downloads/AGB