## Contact Us


info@nanochrom.com

www.nanochrom.com

Building NE-37, 999 Jinjihu Avenue
Suzhou Industrial Park, Jiangsu Province, China


# NANOCHROM

NanoChrom

NanoChrom Technologies

# ChromCore LC Columns

## for separating small molecules

Website

WeChat Official Account

# Introduction

ChromCore columns, consisting of reversed-phase (RP), normal phase (NP)/hydrophilic interaction (HILIC), ion exchange (IEX) and application-specific columns, are designed for a broad range of applications in pharmaceutical, chemical, environmental, food & beverage, academia, etc.

The high performance of ChromCore columns is the result of innovative particle technology, advanced column chemistry and well-developed manufacturing processes. ChromCore separation media are based on monodispersed particles with precisely controlled particle size and pore structure, as well as high mechanical strength, providing high efficiency and consistency. Advanced column chemistry results in excellent chromatography properties with desired selectivity, making ChromCore columns suited for a broad application range. ChromCore columns are produced using well-developed manufacturing processes under strict quality control, ensuring high quality and reproducibility.

**ChromCore column family** offers a comprehensive portfolio of column chemistries with diversed column dimensions for a broad range of application coverage.

- **RP:** C18/C8/C4/C30/Polar/AQ/Phenyl/Phenyl-Hexyl/PFP/Biphenyl
- **NP:** Silica/CN/$NH_2$
- **HILIC:** Diol/Amide/Imidazole/Zwitterionic
- **IEX:** SCX/SAX
- **Application-specific**

HPLC Columns

UHPLC Columns

Preparative Columns

Guard Columns



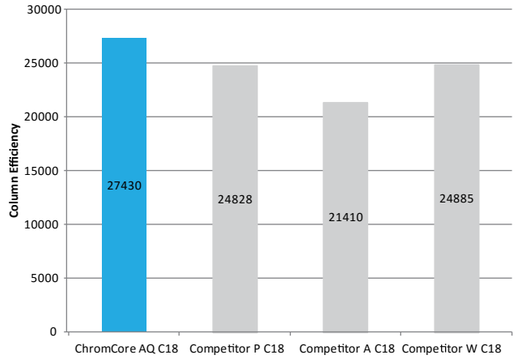
# ChromCore Reversed-Phase LC Columns

ChromCore Reversed-Phase LC columns are based on novel monodispersed particle technology that delivers excellent mechanical strength and high column efficiency. Combined with advanced column chemistry which results in desired selectivity, high resolution and good column-to-column consistency, ChromCore columns are suited for a broad range of applications, including pharmaceutical, food and beverage, clinical mass spectrometry, chemical, environmental, consumer products, and many more.

## Main Features

- Advanced monodispersed particle technology for high column efficiency and high mechanical strength
- Versatile column chemistries for a broad range of selectivity
- Excellent chromatographic peak shape for acidic, basic and neutral analytes
- Low column bleed for MS compatibility
- Good column-to-column consistency

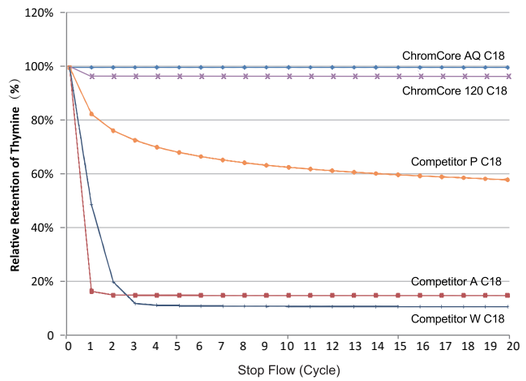
## Column Efficiency




Column: ChromCore AQ C18, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: 60/40 v/v MeCN/D.I. $H_2O$
Flow Rate: 1 mL/min
Temperature: 30 ℃
Injection: 5 µL
Detection: UV 254 nm
Analyte: Naphthalene

The combination of advanced monodispersed paticle technology and innovative chemistry leads to higher column efficiency compared to competing products in the market.

## Aqueous Compatibility



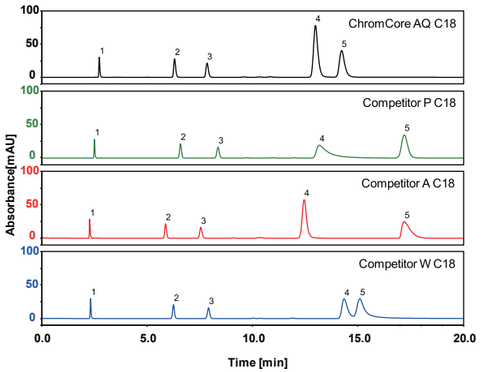

Testing Condition
Column: C18, 5 µm
Dimension: 4.6×150 mm
Mobile Phase: 10 mM ammonium acetate buffer, pH5.2
Flow Rate: 1 mL/min
Temperature: 30 ℃
Injection: 5 µL
Detection: UV 254 nm
Analyte: 1. Cytosine
2. Uracil
3. Thymine

Protocol:
1. Equilibrate column with the mobile phase for 20 min before testing for 10 min
2. Stop flow for 10 min
3. Repeat "1" and "2" for 10 cycles

The unique column chemistry ensures excellent compatibility with highly aqueous mobile phase.

## Peak Shape

The advanced bonding technology greatly minimizes silanol activity, improving peak shape for basic compounds (e.g., amitriptyline).

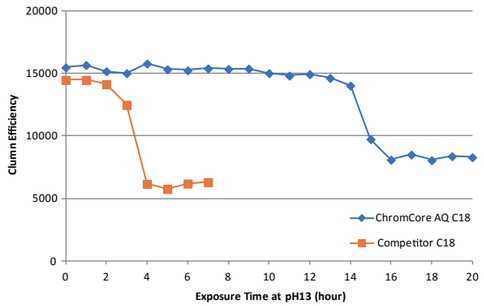



Column: ChromCore AQ C18, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: 80/20 v/v MeOH/20 mM phosphate buffer, pH7.0
Flow Rate: 1 mL/min
Temperature: 30 ℃
Injection: 5 µL
Detection: UV 254 nm
Peaks: 1. Uracil
2. Toluene
3. Ethylbenzene
4. Quinizarin
5. Amitriptyline

| Column | Amitriptyline Asymmetry (normalized) | Quinizarin Asymmetry (normalized) |
|---|---|---|
| ChromCore AQ C18 | 1.13 | 1.07 |
| Competitor P C18 | 1.11 | 3.25 |
| Competitor A C18 | 2.06 | 1.09 |
| Competitor W C18 | 1.75 | 1.25 |

## pH Stability

Compared with a brand name C18 column based on conventional silica particles, ChromCore AQ C18 demonstrates significantly enhanced chemical stability in alkaline conditions as the result of its high pH resistance nature of base particle and the protection of densely bonded surface.




Column: ChromCore AQ C18, 5 µm
Dimension: 4.6×150 mm
Mobile Phase: 10/90 v/v MeCN/10 mM ammonium acetate solution, pH5.2
Flow Rate: 1 mL/min
Temperature: 30 ℃
Injection: 5 µL
Detection: UV 225 nm
Analyte: Acetanilide (0.1 mg/mL)

Stress Condition:
Mobile Phase: 100 mM NaOH
Flow Rate: 1 mL/min
Temperature: 30 ℃

## Specification

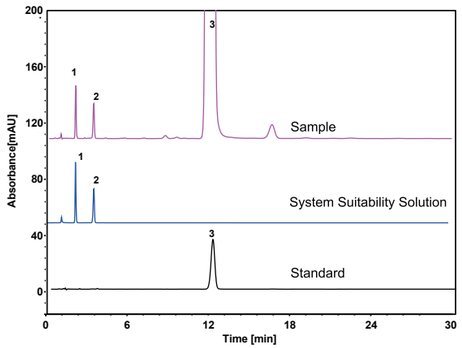
| Name | Stationary Phase | Particle Size (µm) | Pore Size (Å) | Carbon Load (%) | pH Range | Aqueous Compatibility | Pressure Limit (psi) | Temperature Limit (°C) | USP Listing |
|---|---|---|---|---|---|---|---|---|---|
| 120 C18 | | 1.8, 3, 5 | 120 | 17 | 2-10 | 95% | 12000 for 1.8 µm 6000 for 3 µm 5000 for 5 µm | 60 | L1 |
| AQ C18 | | 1.8, 3, 5 | 180 | 13 | 2-10 | 100% | | 60 | L1 |
| AR C18 | | 1.8, 3, 5 | 120 | 12 | 1-8 | 100% | | 60 | L1 |
| BR C18 | | 1.8, 3, 5 | 180 | 12 | 1.5-11 | 95% | | 60 | L1 |
| 120 C18-T | | 3, 5 | 120 | 18 | 1.5-10 | 95% | | 60 | L1 |
| Polar C18 | | 3, 5 | 120 | 18 | 2-10 | 100% | | 60 | L60 |
| 120 C8 | | 1.8, 3, 5 | 120 | 10 | 2-10 | 95% | | 60 | L7 |
| AQ C8 | | 1.8, 3, 5 | 180 | 7 | 2-10 | 100% | | 60 | L7 |
| C30 | | 3, 5 | 180 | 11 | 2-10 | 100% | | 60 | L62 |
| Phenyl | | 1.8, 3, 5 | 120 | 12 | 2-8 | 95% | | 60 | L11 |
| Phenyl-Hexyl | | 1.8, 3, 5 | 120 | 14 | 2-9 | 95% | | 60 | L11 |
| PFP | | 1.8, 3, 5 | 120 | 10 | 2-8 | 95% | | 60 | L43 |
| Biphenyl | | 1.8, 3, 5 | 120 | 12 | 2-9 | 95% | | 60 | L11 |
| 300 C18 | | 3, 5 | 300 | 9 | 2-10 | 100% | | 60 | L1 |
| 300 C8 | | 3, 5 | 300 | 4.5 | 2-10 | 100% | | 60 | L7 |
| 300 C4-T | | 3, 5 | 300 | 3 | 2-9 | 100% | | 60 | L26 |

AQ: 100% Aqueous Compatibility
AR: Acid Resistance
BR: Base Resistance

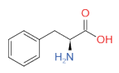
# Application

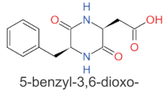
## ChromCore 120 C18

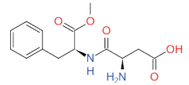
### Aspartame



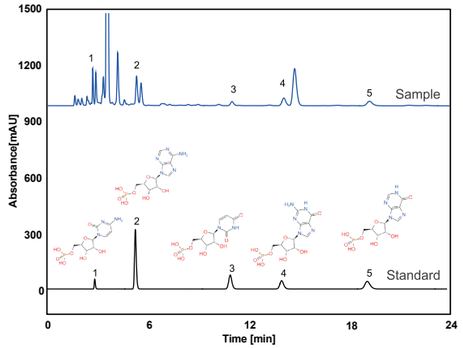

Column: ChromCore 120 C18, 5 µm
Dimension: 4.6×150 mm
Mobile Phase: 18/82 v/v MeOH/50 mM potassium phosphate buffer in $H_2O$ pH4.3 adjusted by phosphoric acid
Flow Rate: 2.0 mL/min
Temperature: 40 ℃
Injection: 20 µL
Detection: UV 210 nm
Sample: Aspartame
Peaks: 1. L-phenylalanine
2. 5-benzyl-3,6-dioxo-2-piperazineacetic Acid
3. Aspartame


L-phenylalanine


5-benzyl-3,6-dioxo-2-piperazineacetic Acid

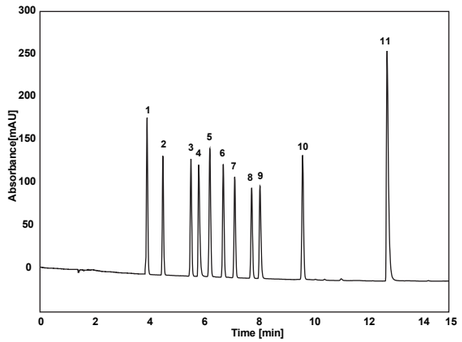

Aspartame

### Five Nucleotides in Dairy Products




Column: ChromCore 120 C18, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: 96/4 v/v 1.4 mM tetrabutyl ammonium sulfate in 10 mM potassium phosphate buffer, pH2.5/MeOH
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 10 µL
Detection: UV 254 nm
Peaks: 1. CMP
2. AMP
3. UMP
4. GMP
5. IMP

### Phenolic Compounds (U.S. EPA 604)




Column: ChromCore 120 C18, 3 µm
Dimension: 4.6×150 mm
Mobile Phase: A) MeCN
B) 0.1% phosphoric acid in $H_2O$
Gradient:

| t(min) | %A | %B |
|---|---|---|
| -5 | 30 | 70 |
| 0 | 30 | 70 |
| 15 | 90 | 10 |

Flow Rate: 1.0 mL/min
Temperature: 40 ℃
Injection: 5 µL
Detection: UV 214 nm
Peaks: 1. Phenol
2. 4-Nitrophenol
3. 2-Chlorophenol
4. 2-Nitrophenol
5. 2,4-Dimethylphenol
6. 2,4-Dinitrophenol
7. 4-Chloro-3-Methylphenol
8. 2,4-Dichlorophenol
9. 2-Methyl-4,6-Dichlorophenol
10. 2,4,6-Trichlorophenol
11. Pentachlorophenol

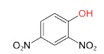

Phenol


4-Nitrophenol


2-Chlorophenol


2-Nitrophenol


2,4-Dimethylphenol


2,4-Dinitrophenol


4-Chloro-3-Methylphenol

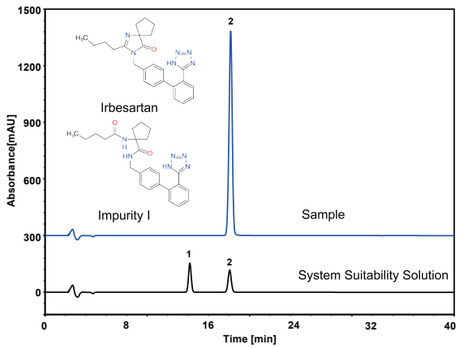

2,4-Dichlorophenol


2-Methyl-4,6-Dichlorophenol


2,4,6-Trichlorophenol


Pentachlorophenol

### Irbesartan

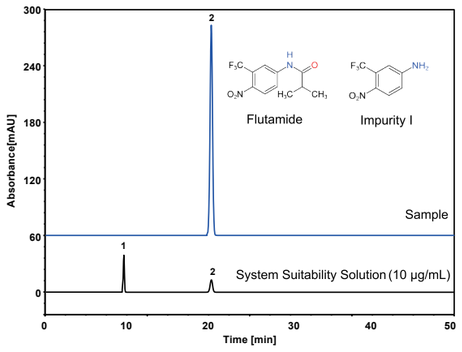



Column: ChromCore 120 C18, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: 38/62 v/v MeCN/10 mM phosphoric acid solution, pH3.2 adjusted by triethylamine
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 10 µL
Detection: UV 220 nm
Peaks: 1. Impurity I
2. Irbesartan

| | R.T. (min) | Theoretical Plate (USP) | Tailing Factor (USP) | Resolution (USP) | Signal to Noise (S/N) |
|---|---|---|---|---|---|
| Impurity I | 14.133 | 13244 | 1.02 | / | / |
| Irbesartan | 18.033 | 15549 | 1.02 | 7.29 | 12.1 |

## ChromCore AQ C18

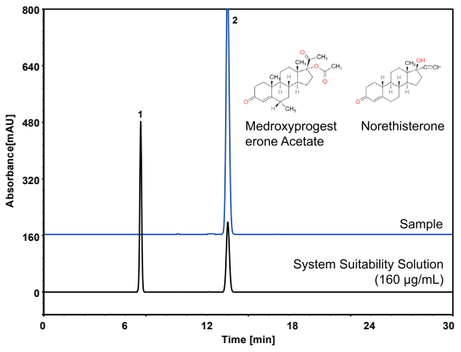
### Flutamide




Column: ChromCore AQ C18, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: 55/45 v/v $H_2O$/MeCN
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 20 µL
Detection: UV 240 nm
Peaks: 1. Impurity I
2. Flutamide

| | R.T. (min) | Theoretical Plate (USP) | Tailing Factor (USP) | Resolution (USP) | Signal to Noise (S/N) |
|---|---|---|---|---|---|
| Impurity I | 9.560 | 22823 | 0.95 | / | / |
| Flutamide | 20.264 | 20248 | 0.96 | 26.02 | 13.3 |

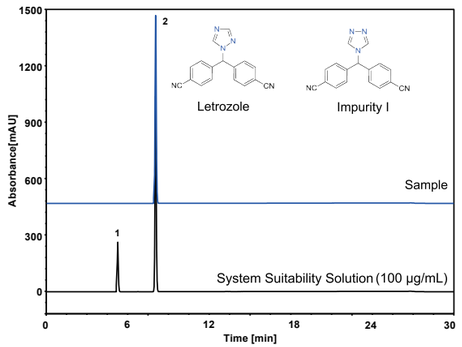
### Medroxyprogesterone Acetate




Column: ChromCore AQ C18, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: 70/30 v/v MeOH/$H_2O$
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 10 µL
Detection: UV 254 nm
Peaks: 1. Norethisterone
2. Medroxyprogesterone Acetate

| | R.T. (min) | Theoretical Plate (USP) | Tailing Factor (USP) | Resolution (USP) | Signal to Noise (S/N) |
|---|---|---|---|---|---|
| Norethisterone | 7.093 | 12521 | 1.01 | / | / |
| Medroxyprogesterone Acetate | 13.487 | 15389 | 1.04 | 18.57 | 31.5 |

### Letrozole



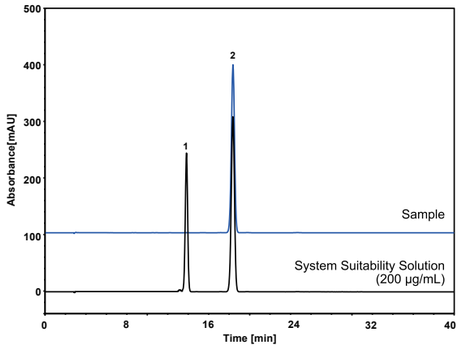

Column: ChromCore AQ C18, 5 μm
Dimension: 4.6×150 mm
Mobile Phase: A) $H_2O$
B) MeCN
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 70 | 30 |
| 25 | 30 | 70 |
| 25.1 | 70 | 30 |
| 30 | 70 | 30 |

Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 20 μL
Detection: UV 230 nm
Peaks: 1. Impurity I
2. Letrozole

| | R.T. (min) | Theoretical Plate (USP) | Tailing Factor (USP) | Resolution (USP) | Signal to Noise (S/N) |
|---|---|---|---|---|---|
| Impurity I | 5.240 | 22079 | 1.10 | / | / |
| Letrozole | 8.030 | 36020 | 1.06 | 17.98 | 15.8 |

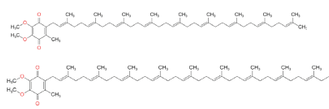
### Coenzyme $Q_9$ and Coenzyme $Q_{10}$



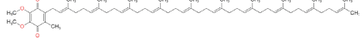

Column: ChromCore AQ C18, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 50/50 v/v MeOH/EtOH
Flow Rate: 1.0 mL/min
Temperature: 35 ℃
Injection: 20 μL
Detection: UV 275 nm
Peaks: 1. Coenzyme $Q_9$
2. Coenzyme $Q_{10}$

| | R.T. (min) | Theoretical Plate (USP) | Tailing Factor (USP) | Resolution (USP) | Signal to Noise (S/N) |
|---|---|---|---|---|---|
| Coenzyme $Q_9$ | 13.803 | 15833 | 0.98 | / | / |
| Coenzyme $Q_{10}$ | 18.350 | 15823 | 0.96 | 8.89 | 12.6 |

Coenzyme $Q_9$

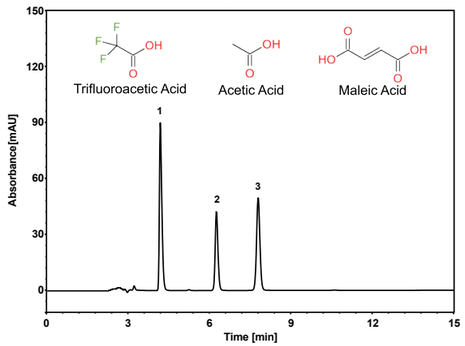


Coenzyme $Q_{10}$



## ChromCore AR C18

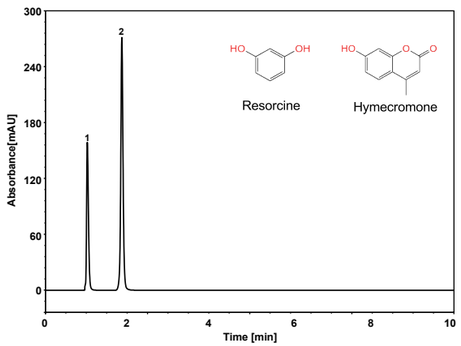
### Three Organic Acids




Column: ChromCore AR C18, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 55 mM phosphate buffer, pH2.5
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 10 μL
Detection: UV 200 nm
Peaks: 1. Trifluoroacetic Acid (1 mg/mL)
2. Acetic Acid (1 mg/mL)
3. Maleic Acid (0.008 mg/mL)

| Compoent | R.T. (min) | Theoretical Plates | Tailing Factor | Resolution |
|---|---|---|---|---|
| Trifluoroacetic Acid | 4.189 | 9337 | 1.44 | / |
| Acetic Acid | 6.255 | 17757 | 1.15 | 11.4 |
| Maleic Acid | 7.792 | 18978 | 1.06 | 7.3 |

### Hymecromone

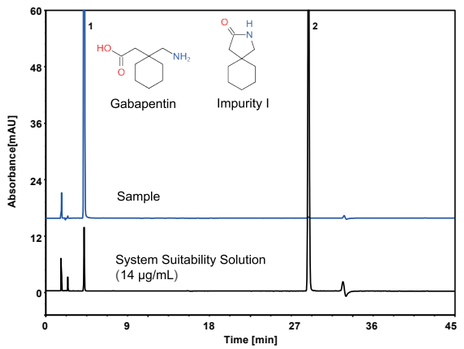



Column: ChromCore AR C18, 1.8 μm
Dimension: 2.1×100 mm
Mobile Phase: 49/51 v/v MeOH/phosphate buffer, pH7.0
Flow Rate: 0.3 mL/min
Temperature: 40 ℃
Injection: 2 μL
Detection: UV 270 nm
Instrument: Agilent Infinity II1290 quaternary system
Peaks: 1. Resorcine
2. Hymecromone

| | R.T. (min) | Theoretical Plate | Tailing Factor | Resolution |
|---|---|---|---|---|
| Resorcine | 1.027 | 2563 | 1.38 | / |
| Hymecromone | 1.873 | 5975 | 1.03 | 10.54 |

## ChromCore BR C18

### Gabapentin

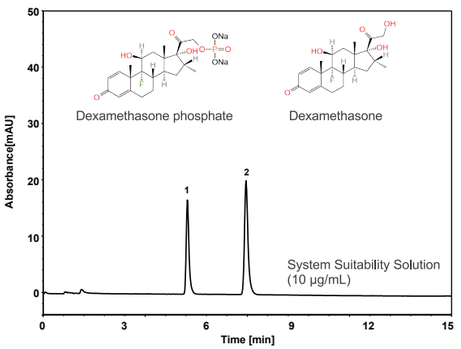



Column: ChromCore BR C18, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: A) 6/94 v/v MeCN/ 9.4 mM phosphate buffer, pH6.9 adjusted by 5 mol/L KOH solution
B) 30/70 v/v MeCN/ 9.4 mM phosphate buffer, pH6.9 adjusted by 5 mol/L KOH solution
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 100 | 0 |
| 7 | 100 | 0 |
| 45 | 0 | 100 |

Flow Rate: 1.5 mL/min
Temperature: 40 ℃
Injection: 20 μL
Detection: UV 210 nm
Peaks: 1. Gabapentin
2. Impurity I

### Dexamethasone

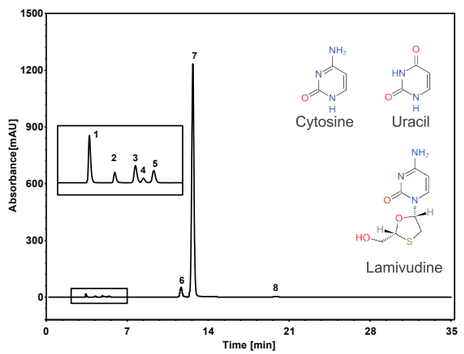



Column: ChromCore BR C18, 1.8 μm
Dimension: 2.1×100 mm
Mobile Phase: 5/40/55 v/v/v MeCN/MeOH/$Et_3N$ solution, pH3.0
Flow Rate: 0.3 mL/min
Temperature: 40 ℃
Injection: 2 μL
Detection: UV 242 nm
Instrument: Agilent Infinity II 1290
Peaks: 1. Dexamethasone Phosphate
2. Dexamethasone

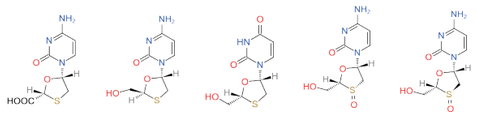
| | R.T. (min) | Theoretical Plate | Tailing Factor | Resolution |
|---|---|---|---|---|
| Dexamethasone Phosphate | 5.282 | 14043 | 1.44 | / |
| Dexamethasone | 7.439 | 17422 | 1.38 | 10.68 |

## ChromCore 120 C18-T

### Lamivudine

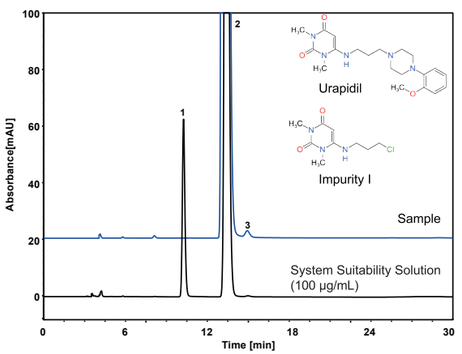



Columns: ChromCore 120 C18-T, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 5/95 v/v MeOH/25 mM ammonium acetate buffer, pH3.8
Flow Rate: 1.0 mL/min
Temperature: 35 ℃
Injection: 10 μL
Detection: UV 277 nm
Sample: System Suitability Solution
Peaks: 1. Cytosine 2. Uracil 3. Impurity I
4. Impurity IV 5. Impurity V 6. Impurity II
7. Lamivudine 8. Impurity III



Impurity I Impurity II Impurity III Impurity IV Impurity V

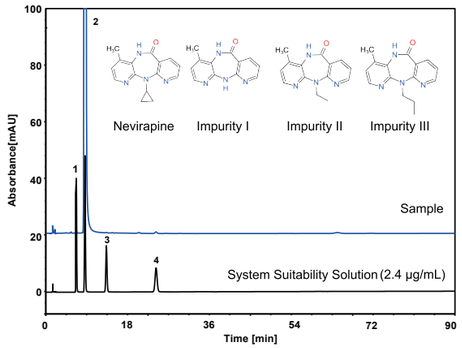
### Urapidil




Column: ChromCore 120 C18-T, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 30/70 v/v MeOH/100 mM sodium acetate solution
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 20 μL
Detection: UV 268 nm
Peaks: 1. Impurity I
2. Urapidil
3. Impurity II

## ChromCore Polar C18

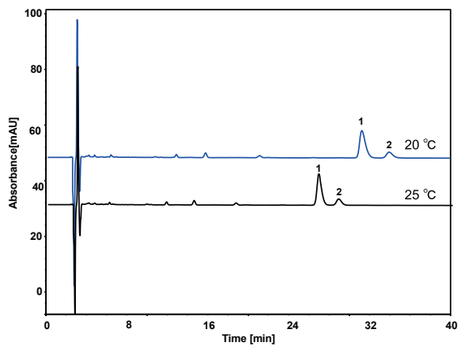
### Nevirapine




Column: ChromCore Polar C18, 5 μm
Dimension: 4.6×150 mm
Mobile Phase: 20/80 v/v MeCN/25 mM phosphate buffer, pH5.0
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection:
System Suitability Solution: 25 μL
Sample: 50 μL
Detection: UV 220 nm
Peaks: 1. Impurity I
2. Nevirapine
3. Impurity II
4. Impurity III

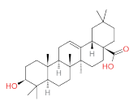
| | R.T. (min) | Theoretical Plate (USP) | Tailing Factor (USP) | Resolution (USP) | Signal to Noise (S/N) |
|---|---|---|---|---|---|
| Impurity I | 6.640 | 11345 | 1.07 | / | / |
| Nevirapine | 8.540 | 10542 | 1.08 | 6.53 | 143.4 |
| Impurity II | 13.260 | 12123 | 1.05 | 11.59 | / |
| Impurity III | 24.197 | 13057 | 1.04 | 16.46 | / |

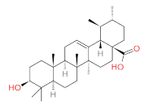
### Loquat Leaf




Column: ChromCore Polar C18, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 67/12/21 v/v/v MeCN/MeOH/0.5% ammonium acetate solution
Flow Rate: 1.0 mL/min
Temperature: 20 ℃ /25 ℃
Injection: 10 μL
Detection: UV 210 nm
Peaks: 1. Oleanolic acid
2. Ursolic acid

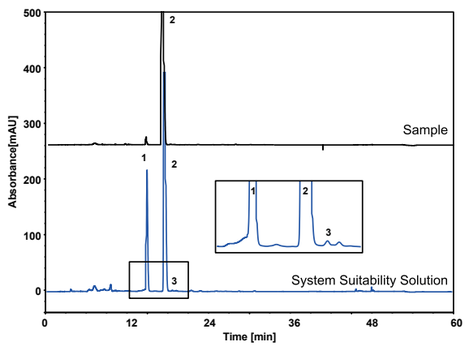
| Temperature | Resolution |
|---|---|
| 20 ℃ | 2.42 |
| 25 ℃ | 2.16 |


Oleanolic acid


Ursolic acid

## ChromCore 120 C8

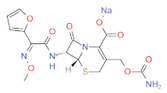
### Cefuroxime Sodium



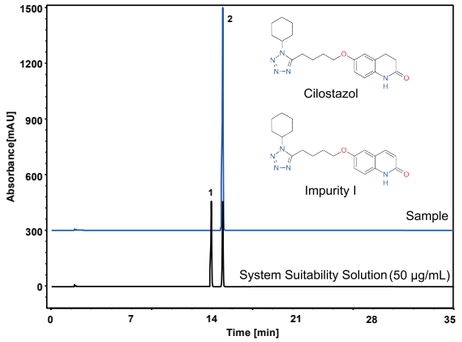

Column: ChromCore 120 C8, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: A) MeCN
B) 104.2 mM sodium acetate solution, pH3.4
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 5 | 95 |
| 40 | 20 | 80 |
| 50 | 40 | 60 |
| 51 | 5 | 95 |
| 60 | 5 | 95 |

Flow Rate: 1.5 mL/min
Temperature: 30 ℃
Injection: 20 μL
Detection: UV 273 nm
Peaks: 1. Descarbamoyl Cefuroxime
2. Cefuroxime
3. Impurity


Cefuroxime Sodium

### Cilostazol




Column: ChromCore 120 C8, 5 μm
Dimension: 4.6×150 mm
Mobile Phase: A) $H_2O$
B) MeCN
Gradient:

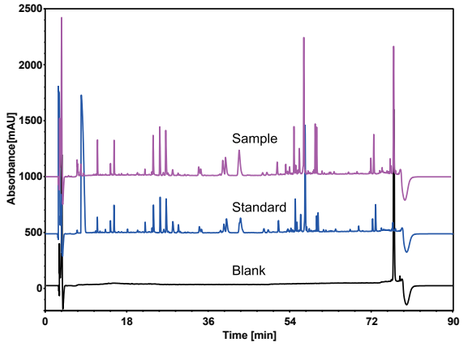
| t(min) | %A | %B |
|---|---|---|
| 0 | 80 | 20 |
| 6.5 | 70 | 30 |
| 17 | 40 | 60 |
| 27 | 40 | 60 |
| 28 | 80 | 20 |
| 35 | 80 | 20 |

Flow Rate: 1.0 mL/min
Temperature: 40 ℃
Injection: 20 μL
Detection: UV 254 nm
Peaks: 1. Impurity I
2. Cilostazol

| | R.T. (min) | Theoretical Plate (USP) | Tailing Factor (USP) | Resolution (USP) | Signal to Noise (S/N) |
|---|---|---|---|---|---|
| Impurity I | 13.900 | 167936 | 0.97 | / | / |
| Cilostazol | 14.897 | 169986 | 0.90 | 7.11 | 49.3 |

## ChromCore AQ C8

### Peptide Mapping of rhGH



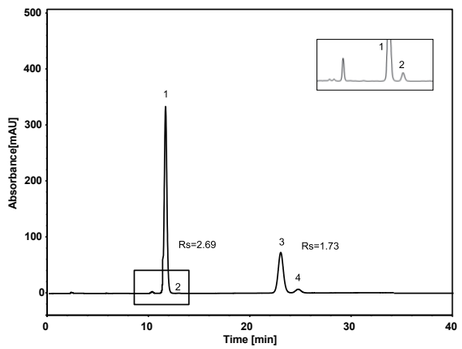

Column: ChromCore AQ C8, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: A) 0.1% TFA in $H_2O$
B) 0.1% TFA in 90% MeCN/$H_2O$
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 100 | 0 |
| 20 | 80 | 20 |
| 45 | 75 | 25 |
| 70 | 50 | 50 |
| 75 | 20 | 80 |

Flow Rate: 1.0 mL/min
Temperature: 35 ℃
Injection: 100 μL
Detection: UV 214 nm
Sample: Enzymatic hydrolysates of rhGH by trypsin

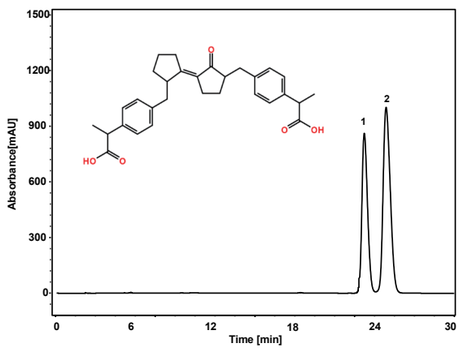
## ChromCore C30

### Isomers of Vitamin K1 and K2




Column: ChromCore C30, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 95/5 v/v MeOH/$H_2O$
Flow Rate: 1.0 mL/min
Temperature: 20 ℃
Injection: 5 μL
Detection: UV 254 nm
Sample: Vitamin K1 & K2 in MeCN
Peaks: 1. Vitamin K2
2. Isomer of Vitamin K2
3. Vitamin K1
4. Isomer of Vitamin K1

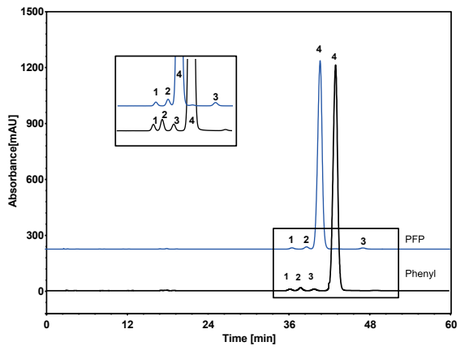
### Cis-trans Isomers



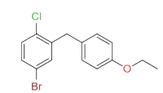

Column: ChromCore C30, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 50/50 v/v MeCN/0.1% phosphoric acid in $H_2O$
Flow Rate: 1.0 mL/min
Temperature: 40 ℃
Injection: 10 μL
Detection: UV 254 nm
Peaks: 1~2. Cis-trans Isomers

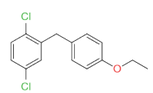
## ChromCore Phenyl

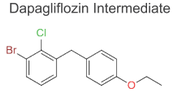
### Dapagliflozin Intermediate

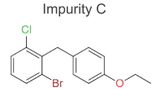



Columns: ChromCore Phenyl, 5 μm
ChromCore PFP, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 75/25 v/v MeOH/$H_2O$
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 10 μL
Detection: UV 226 nm
Peaks: 1. Impurity F (0.1 mg/mL)
2. Impurity C (0.1 mg/mL)
3. Impurity D (0.1 mg/mL)
4. Dapagliflozin Intermediate (1 mg/mL)


Dapagliflozin Intermediate


Impurity C


Impurity D

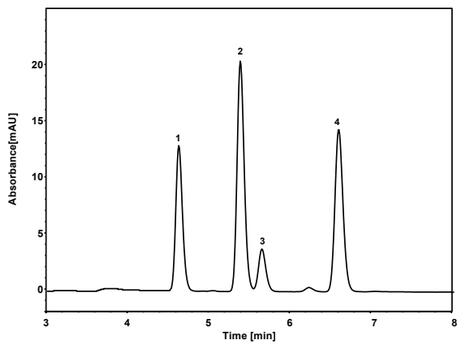

Impurity F



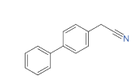


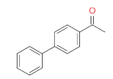
## ChromCore Phenyl-Hexyl

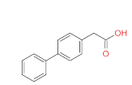
### 4-Biphenylacetic acid




Column: ChromCore Phenyl-Hexyl, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 68/15/17 v/v/v MeOH/MeCN/0.1% acetic acid in $H_2O$
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 20 μL
Detection: UV 251 nm
Sample: Standard mix (0.6 μg/mL)
Peaks: 1. 4-Biphenylacetonitrile
2. 4-Acetylbiphenyl
3. 4-Biphenylacetic Acid
4. Biphenyl


4-Biphenylacetonitrile

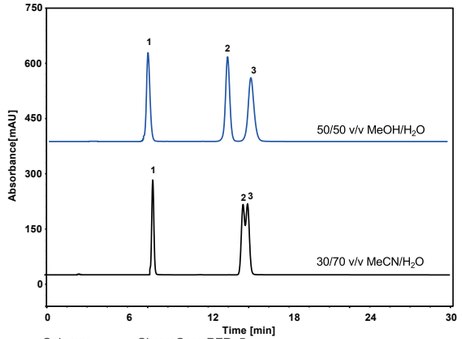

4-Acetylbiphenyl


4-Biphenylacetic acid


Biphenyl

## ChromCore PFP

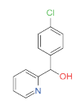
### Pharmaceutical Intermediate-PCL



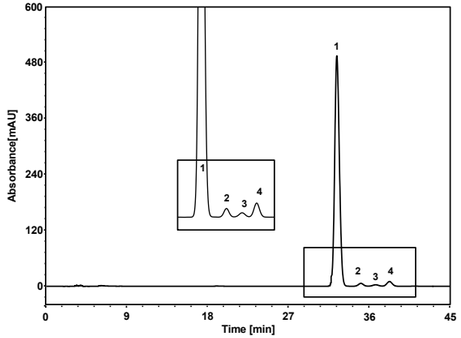

Column: ChromCore PFP, 5 μm
Dimension: 4.6×250 mm
Mobile Phase:
Blue: 50/50 v/v MeOH/$H_2O$
Black: 30/70 v/v MeCN/$H_2O$
Flow Rate: 1.0 mL/min
Temperature: 35 ℃
Injection: 10 μL
Detection: UV 220 nm
Peaks: 1. Dcl-Pcl
2. m-Pcl
3. Pcl


Dcl-Pcl

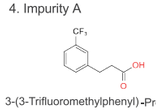

m-Pcl

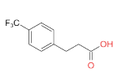

Pcl

### 3-(3-Trifluoromethylphenyl)propionic Acid




Column: ChromCore PFP, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 50/50 v/v MeOH/0.1% phosphoric acid in $H_2O$
Flow Rate: 1.0 mL/min
Temperature: 40 ℃
Injection: 10 μL
Detection: UV 210 nm
Peaks: 1. 3-(3-Trifluoromethylphenyl)-Propionic Acid
2. Impurity D
3. Impurity G
4. Impurity A


3-(3-Trifluoromethylphenyl)-Propionic Acid

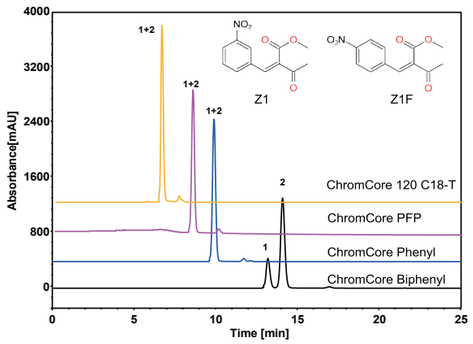

Impurity D


Impurity G


Impurity A

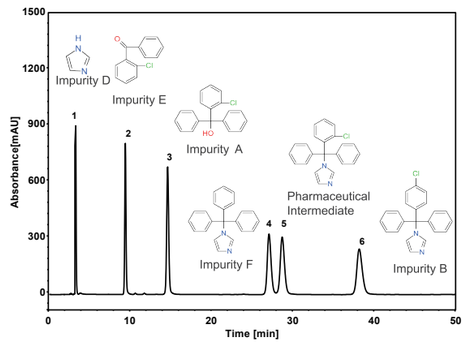
## ChromCore Biphenyl

### Pharmaceutical Intermediate (Selectivity Comparison)




Columns: ChromCore 120 C18-T, 5 μm
ChromCore PFP, 5 μm
ChromCore Phenyl, 5 μm
ChromCore Biphenyl, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 65/35 v/v MeOH/$H_2O$
Flow Rate: 1.0 mL/min
Temperature: 35 ℃
Injection: 5 μL
Detection: UV 265 nm
Peaks: 1. Z1f
2. Z1

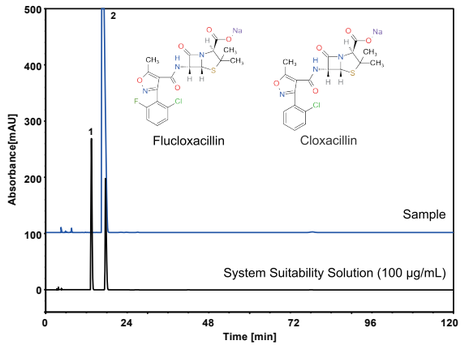
### Pharmaceutical Intermediate




Column: ChromCore Biphenyl, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 75/25 v/v MeOH/25 mM ammonium phosphate solution, pH6.5
Flow Rate: 1.0 mL/min
Temperature: 40 ℃
Injection: 10 μL
Detection: UV 215 nm
Sample: Mixed standards solution (0.05 mg/mL dissolved in 70% MeOH)
Peaks: 1. Impurity D 2. Impurity E 3. Impurity A
4. Impurity F 5. Pharmaceutical Intermediate 6. Impurity B

## ChromCore 300 C18

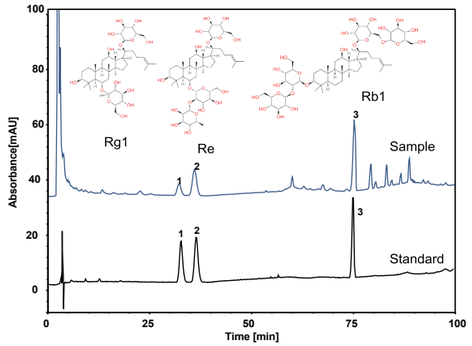
### Flucloxacillin Sodium




Column: ChromCore 300 C18, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 25/75 v/v MeCN/20 mM phosphate solution, pH5.0
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 20 μL
Detection: UV 225 nm
Peaks: 1. Cloxacillin
2. Flucloxacillin

| | R.T. (min) | Theoretical Plate (USP) | Tailing Factor (USP) | Resolution (USP) | Signal to Noise (S/N) |
|---|---|---|---|---|---|
| Cloxacillin | 13.353 | 12763 | 1.84 | / | / |
| Flucloxacillin | 17.490 | 11951 | 1.96 | 7.43 | 166.6 |

### Red Ginseng



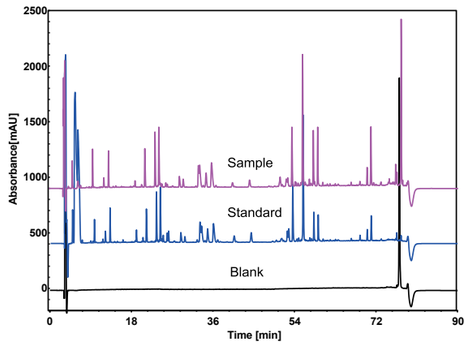

Column: ChromCore 300 C18, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: A) MeCN
B) $H_2O$
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 19 | 81 |
| 35 | 19 | 81 |
| 55 | 29 | 71 |
| 70 | 29 | 71 |
| 100 | 40 | 60 |

Flow Rate: 1.0 mL/min
Temperature: 30 ℃
Injection: 10 μL
Detection: UV 203 nm
Peaks: 1. Ginsenosides Rg1
2. Ginsenosides Re
3. Ginsenosides Rb1

## ChromCore 300 C8

### Peptide Mapping of rhGH

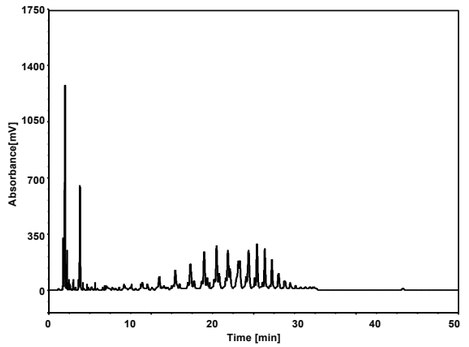



Column: ChromCore 300 C8, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: A) 0.1% TFA in $H_2O$
B) 0.1% TFA in 90% MeCN/$H_2O$
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 100 | 0 |
| 20 | 80 | 20 |
| 45 | 75 | 25 |
| 70 | 50 | 50 |
| 75 | 20 | 80 |

Flow Rate: 1.0 mL/min
Temperature: 35 ℃
Injection: 100 μL
Detection: UV 214 nm

### PEG Conjugates



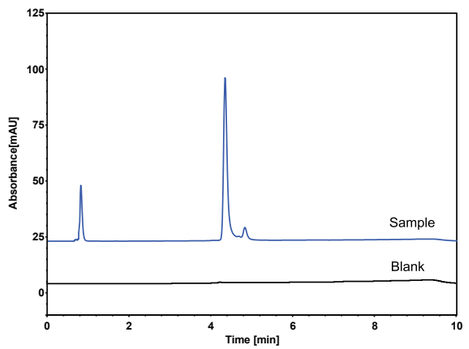

Column: ChromCore 300 C8, 3 μm
Dimension: 2.1×100 mm
Mobile Phase: A) 0.1% acetic acid in $H_2O$
B) MeCN
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 45 | 55 |
| 30 | 0 | 100 |
| 40 | 0 | 100 |
| 40.1 | 45 | 55 |
| 50 | 45 | 55 |

Flow Rate: 0.25 mL/min
Temperature: 40 ℃
Injection: 5 μL
Detection: ELSD

## ChromCore 300 C4-T

### BSA

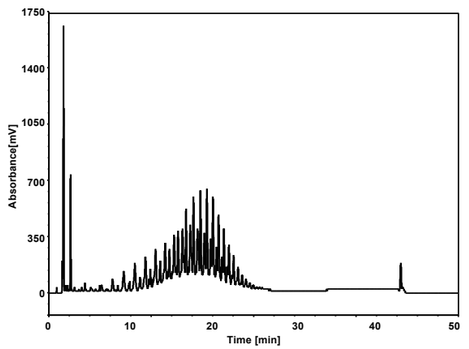



Column: ChromCore 300 C4-T, 5 μm
Dimension: 4.6×50 mm
Mobile Phase: A) 0.1% TFA in $H_2O$
B) 0.1% TFA in MeCN
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 75 | 25 |
| 8 | 40 | 60 |
| 9 | 75 | 25 |

Flow Rate: 1.0 mL/min
Temperature: 70 ℃
Injection: 10 μL
Detection: UV 280 nm

### PEG Conjugates




Column: ChromCore 300 C4-T, 3 μm
Dimension: 2.1×100 mm
Mobile Phase: A) 0.1% acetic acid in $H_2O$
B) MeCN
Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 45 | 55 |
| 30 | 0 | 100 |
| 40 | 0 | 100 |
| 40.1 | 45 | 55 |
| 50 | 45 | 55 |

Flow Rate: 0.25 mL/min
Temperature: 40 ℃
Injection: 5 μL
Detection: ELSD

## Ordering Information

| Product Name | Particle Size (μm) | Length (mm) | ID (mm) | | |
|---|---|---|---|---|---|
| | | | 4.6 | 3.0 | 2.1 |
| ChromCore 120 C18 | 5 | 250 | A001-050012-04625S | A001-050012-03025S | A001-050012-02125S |
| | | 150 | A001-050012-04615S | A001-050012-03015S | A001-050012-02115S |
| | 3 | 150 | A001-030012-04615S | A001-030012-03015S | A001-030012-02115S |
| | 1.8 | 100 | / | A001-018012-03010S | A001-018012-02110S |
| ChromCore AQ C18 | 5 | 250 | A201-050018-04625S | A201-050018-03025S | A201-050018-02125S |
| | | 150 | A201-050018-04615S | A201-050018-03015S | A201-050018-02115S |
| | 3 | 150 | A201-030018-04615S | A201-030018-03015S | A201-030018-02115S |
| | 1.8 | 100 | / | A201-018018-03010S | A201-018018-02110S |
| ChromCore AR C18 | 5 | 250 | A401-050012-04625S | A401-050012-03025S | A401-050012-02125S |
| | | 150 | A401-050012-04615S | A401-050012-03015S | A401-050012-02115S |
| | 3 | 150 | A401-030012-04615S | A401-030012-03015S | A401-030012-02115S |
| | 1.8 | 100 | / | A401-018012-03010S | A401-018012-02110S |
| ChromCore BR C18 | 5 | 250 | A301-050018-04625S | A301-050018-03025S | A301-050018-02125S |
| | | 150 | A301-050018-04615S | A301-050018-03015S | A301-050018-02115S |
| | 3 | 150 | A301-030018-04615S | A301-030018-03015S | A301-030018-02115S |
| | 1.8 | 100 | / | A301-018018-03010S | A301-018018-02110S |
| ChromCore 120 C18-T | 5 | 250 | A501-050012-04625S | A501-050012-03025S | A501-050012-02125S |
| | | 150 | A501-050012-04615S | A501-050012-03015S | A501-050012-02115S |
| | 3 | 150 | A501-030012-04615S | A501-030012-03015S | A501-030012-02115S |
| ChromCore Polar C18 | 5 | 250 | A060-050012-04625S | A060-050012-03025S | A060-050012-02125S |
| | | 150 | A060-050012-04615S | A060-050012-03015S | A060-050012-02115S |
| | 3 | 150 | A060-030012-04615S | A060-030012-03015S | A060-030012-02115S |
| ChromCore 120 C8 | 5 | 250 | A007-050012-04625S | A007-050012-03025S | A007-050012-02125S |
| | | 150 | A007-050012-04615S | A007-050012-03015S | A007-050012-02115S |
| | 3 | 150 | A007-030012-04615S | A007-030012-03015S | A007-030012-02115S |
| | 1.8 | 100 | / | A007-018012-03010S | A007-018012-02110S |
| ChromCore AQ C8 | 5 | 250 | A207-050018-04625S | A207-050018-03025S | A207-050018-02125S |
| | | 150 | A207-050018-04615S | A207-050018-03015S | A207-050018-02115S |
| | 3 | 150 | A207-030018-04615S | A207-030018-03015S | A207-030018-02115S |
| | 1.8 | 100 | / | A207-018018-03010S | A207-018018-02110S |
| ChromCore C30 | 5 | 250 | A062-050018-04625S | A062-050018-03025S | A062-050018-02125S |
| | | 150 | A062-050018-04615S | A062-050018-03015S | A062-050018-02115S |
| | 3 | 150 | A062-030018-04615S | A062-030018-03015S | A062-030018-02115S |

| Product Name | Particle Size (μm) | Length (mm) | ID (mm) | | |
|---|---|---|---|---|---|
| | | | 4.6 | 3.0 | 2.1 |
| ChromCore Phenyl | 5 | 250 | A011-050012-04625S | A011-050012-03025S | A011-050012-02125S |
| | | 150 | A011-050012-04615S | A011-050012-03015S | A011-050012-02115S |
| | 3 | 150 | A011-030012-04615S | A011-030012-03015S | A011-030012-02115S |
| | 1.8 | 100 | / | A011-018012-03010S | A011-018012-02110S |
| ChromCore Phenyl-Hexyl | 5 | 250 | A311-050012-04625S | A311-050012-03025S | A311-050012-02125S |
| | | 150 | A311-050012-04615S | A311-050012-03015S | A311-050012-02115S |
| | 3 | 150 | A311-030012-04615S | A311-030012-03015S | A311-030012-02115S |
| | 1.8 | 100 | / | A311-018012-03010S | A311-018012-02110S |
| ChromCore PFP | 5 | 250 | A043-050012-04625S | A043-050012-03025S | A043-050012-02125S |
| | | 150 | A043-050012-04615S | A043-050012-03015S | A043-050012-02115S |
| | 3 | 150 | A043-030012-04615S | A043-030012-03015S | A043-030012-02115S |
| | 1.8 | 100 | / | A043-018012-03010S | A043-018012-02110S |
| ChromCore Biphenyl | 5 | 250 | A211-050012-04625S | A211-050012-03025S | A211-050012-02125S |
| | | 150 | A211-050012-04615S | A211-050012-03015S | A211-050012-02115S |
| | 3 | 150 | A211-030012-04615S | A211-030012-03015S | A211-030012-02115S |
| | 1.8 | 100 | / | A211-018012-03010S | A211-018012-02110S |
| ChromCore 300 C18 | 5 | 250 | A001-050030-04625S | A001-050030-03025S | A001-050030-02125S |
| | | 150 | A001-050030-04615S | A001-050030-03015S | A001-050030-02115S |
| | 3 | 150 | A001-030030-04615S | A001-030030-03015S | A001-030030-02115S |
| ChromCore 300 C8 | 5 | 250 | A007-050030-04625S | A007-050030-03025S | A007-050030-02125S |
| | | 150 | A007-050030-04615S | A007-050030-03015S | A007-050030-02115S |
| | 3 | 150 | A007-030030-04615S | A007-030030-03015S | A007-030030-02115S |
| ChromCore 300 C4-T | 5 | 250 | A226-050030-04625S | A226-050030-03025S | A226-050030-02125S |
| | | 150 | A226-050030-04615S | A226-050030-03015S | A226-050030-02115S |
| | 3 | 150 | A226-030030-04615S | A226-030030-03015S | A226-030030-02115S |

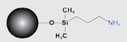
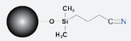
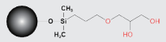
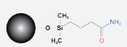
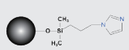
# ChromCore Normal Phase/HILIC LC Columns

ChromCore Normal-Phase/HILIC HPLC columns are based on a combination of novel monodispersed particle technology, advanced column chemistry and well-established column packing process. These columns are suited for a broad range of applications, including pharmaceutical, food and beverage, clinical mass spectrometry, chemical, environmental, consumer products, and more.

## Main Features

- Monodispersed, high-purity, porous, spherical silica particles for high column efficiency and mechanical strength
- Versatile column chemistries for broad selectivity coverage
- Excellent chromatography performance for symmetrical peaks
- Good column-to-column consistency

## Specification

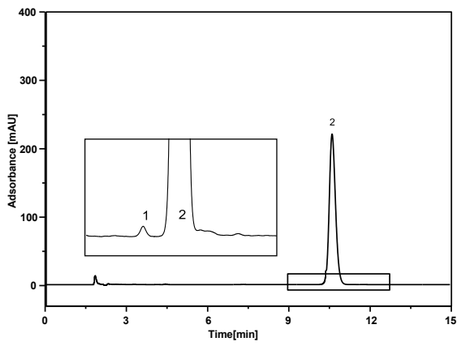
| Product Name | Solid Phase | Particle Size (µm) | Pore Size (Å) | Carbon Load (%) | pH Range | Aqueous Compatibility | Pressure Limit (psi) | Temperature Limit (°C) | USP Listing |
|---|---|---|---|---|---|---|---|---|---|
| Silica |  | 3, 5 | 120 | 0 | 3-7 | 100% | 6000 for 3 µm<br>5000 for 5 µm | 60 | L3 |
| $NH_2$ |  | 3, 5 | 120 | 4 | 2-8 | 100% | | 60 | L8 |
| CN |  | 3, 5 | 120 | 6 | 2-8 | 100% | | 60 | L10 |
| HILIC-Diol |  | 3, 5 | 120 | 10 | 2-8 | 100% | | 60 | L20 |
| HILIC-Amide |  | 3, 5 | 120 | 7 | 2-8 | 100% | | 60 | L68 |
| HILIC-Imidazole |  | 3, 5 | 120 | 5 | 2-8 | 100% | | 60 | / |



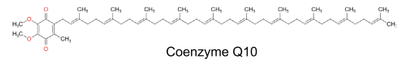
# Application

## ChromCore Silica

### Coenzyme Q10 and Isomer



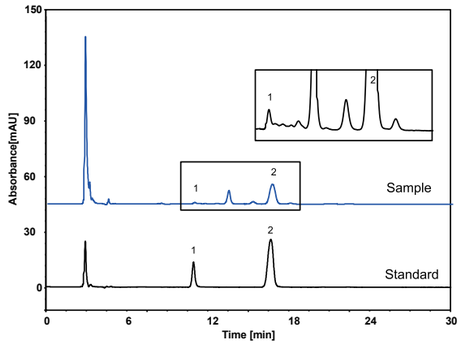

Column: ChromCore Silica, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: 97/3 v/v hexane/ethyl acetate
Flow Rate: 2.0 mL/min
Temperature: 30 ℃
Injection: 20 µL
Detection: UV 275 nm
Peaks: 1. Coenzyme Q10 Isomer
2. Coenzyme Q10



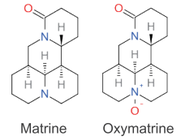
Coenzyme Q10

## ChromCore $NH_2$

### Sophora

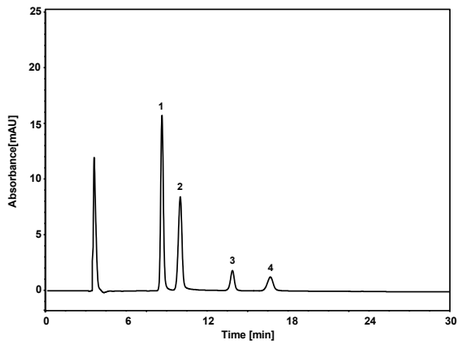



Column: ChromCore $NH_2$, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: A) MeCN
B) EtOH
C) 3%(v/v)$H_3PO_4$ in $H_2O$
Gradient: A/B/C v/v/v 80/10/10
Flow Rate: 1.0 mL/min
Temperature: 30 ℃
Injection: 5 µL
Detection: UV 220 nm
Peaks: 1. Matrine
2. Oxymatrine

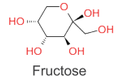


Matrine Oxymatrine

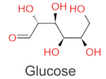
### Honey



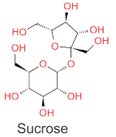

Column: ChromCore $NH_2$, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: 75/25 v/v MeCN/$H_2O$
Flow Rate: 1.0 mL/min
Temperature: 35 ℃
Injection: 15 µL
Detection: RID
Peaks: 1. Fructose
2. Glucose
3. Sucrose
4. Maltose



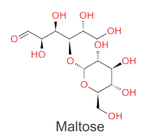
Fructose



Glucose



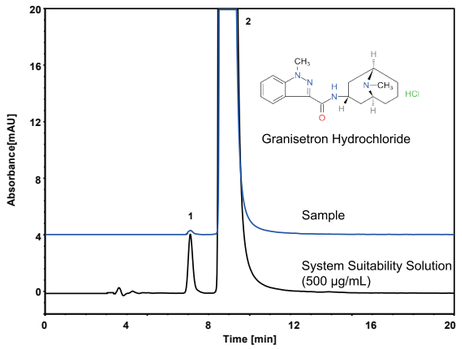
Sucrose



Maltose

## ChromCore CN

### Granisetron Hydrochloride

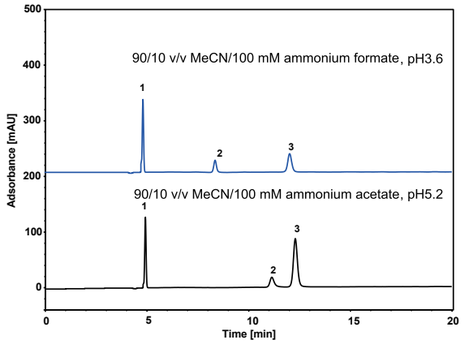



Column: ChromCore CN, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 50/50 v/v MeOH/0.25% (v/v) triethylamine in 50 mM sodium acetate solution
Flow Rate: 1.0 mL/min
Temperature: 25 ℃
Injection: 20 μL
Detection: UV 302 nm
Peaks: 1. Photodegradation Product
2. Granisetron

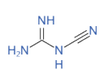
| | R.T. (min) | Theoretical Plate (USP) | Trailing Factor (USP) | Resolution (USP) | Signal To Noise (S/N) |
|---|---|---|---|---|---|
| Photodegradation Product | 7.100 | 4734 | 1.30 | / | / |
| Granisetron | 8.700 | 3126 | 1.85 | 3.10 | 21.1 |

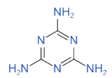
## ChromCore HILIC-Diol

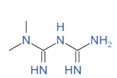
### Metformin




Column: ChromCore HILIC-Diol, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: Shown in chromatogram
Flow Rate: 1.0 mL/min
Temperature: 30 ℃
Injection: 5 μL
Detection: UV 218 nm
Peaks: 1. Dicyandiamide
2. Metformin
3. Melamine

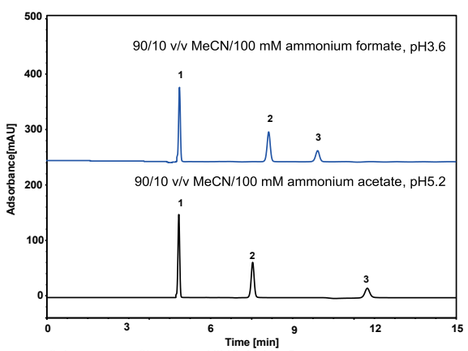

Dicyandiamide


Metformin

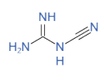

Melamine

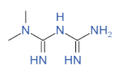
## ChromCore HILIC-Amide

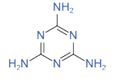
### Metformin



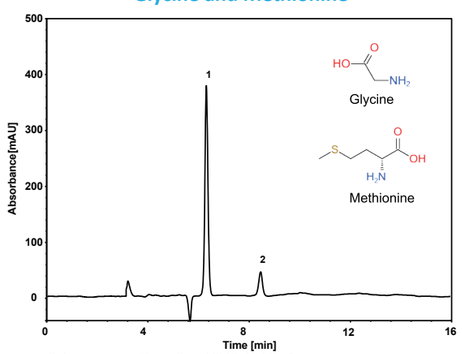

Column: ChromCore HILIC-Amide, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: See chromatogram
Flow Rate: 1.0 mL/min
Temperature: 30 ℃
Injection: 5 μL
Detection: UV 218 nm
Peaks: 1. Dicyandiamide
2. Melamine
3. Metformin


Dicyandiamide


Melamine


Metformin

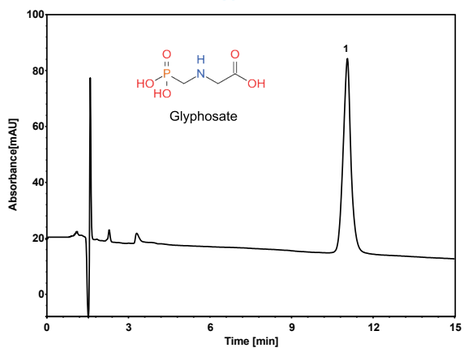
### Glycine and Methionine




Column: ChromCore HILIC-Amide, 5 μm
Dimension: 4.6×250 mm
Mobile Phase : 75/25 v/v MeCN/25 mM sodium phosphate in $H_2O$, pH5.5
Flow Rate: 1.0 mL/min
Temperature: 35 ℃
Injection: 10 μL
Detection: UV 210 nm
Sample: Glycine and Methionine
Peaks: 1. Methionine
2. Glycine

## ChromCore HILIC-Imidazole

### Glyphosate




Column: ChromCore HILIC-Imidazole, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 3/97 v/v MeOH/2 mM potassium phosphate buffer, pH1.9
Flow Rate: 1.5 mL/min
Temperature: 30 ℃
Injection: 10 μL
Detection: UV 195 nm
Peak: 1. Glyphosate (2 mg/mL)

## Ordering Information

| Product Name | Particle Size (µm) | Length (mm) | ID (mm) | | |
|---|---|---|---|---|---|
| | | | 4.6 | 3.0 | 2.1 |
| ChromCore Silica | 5 | 250 | A003-050012-04625S | A003-050012-03025S | A003-050012-02125S |
| | | 150 | A003-050012-04615S | A003-050012-03015S | A003-050012-02115S |
| | 3 | 150 | A003-030012-04615S | A003-030012-03015S | A003-030012-02115S |
| ChromCore $NH_2$ | 5 | 250 | A008-050012-04625S | A008-050012-03025S | A008-050012-02125S |
| | | 150 | A008-050012-04615S | A008-050012-03015S | A008-050012-02115S |
| | 3 | 150 | A008-030012-04615S | A008-030012-03015S | A008-030012-02115S |
| ChromCore CN | 5 | 250 | A010-050012-04625S | A010-050012-03025S | A010-050012-02125S |
| | | 150 | A010-050012-04615S | A010-050012-03015S | A010-050012-02115S |
| | 3 | 150 | A010-030012-04615S | A010-030012-03015S | A010-030012-02115S |
| ChromCore HILIC-Diol | 5 | 250 | A020-050012-04625S | A020-050012-03025S | A020-050012-02125S |
| | | 150 | A020-050012-04615S | A020-050012-03015S | A020-050012-02115S |
| | 3 | 150 | A020-030012-04615S | A020-030012-03015S | A020-030012-02115S |
| ChromCore HILIC-Amide | 5 | 250 | A068-050012-04625S | A068-050012-03025S | A068-050012-02125S |
| | | 150 | A068-050012-04615S | A068-050012-03015S | A068-050012-02115S |
| | 3 | 150 | A068-030012-04615S | A068-030012-03015S | A068-030012-02115S |
| ChromCore HILIC-Imidazole | 5 | 250 | A208-050012-04625S | A208-050012-03025S | A208-050012-02125S |
| | | 150 | A208-050012-04615S | A208-050012-03015S | A208-050012-02115S |
| | 3 | 150 | A208-030012-04615S | A208-030012-03015S | A208-030012-02115S |

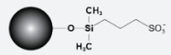
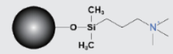
# ChromCore IEX LC Columns

ChromCore IEX HPLC columns are based on a combination of novel monodispersed particle technology, advanced column chemistry and well-established column packing process. These columns are suited for ionic analytes separation including cationic and anionic analytes in pharmaceutical, food and beverage, chemical, environmental, consumer products, and more.

## Main Features

- Monodispersed, high-purity, porous, spherical silica particles for high column efficiency and mechanical strength
- Suited for separating cationic and anionic analytes
- Good column-to-column consistency

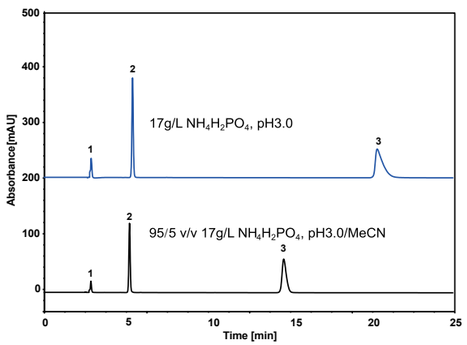
## Specification

| Product Name | Solid Phase | Particle Size (µm) | Pore Size (Å) | pH Range | Pressure Limit (psi) | Temperature Limit (°C) | USP Listing |
|---|---|---|---|---|---|---|---|
| SCX |  | 3, 5 | 120 | 2-8 | 6000 for 3 µm<br>5000 for 5 µm | 60 | L9 |
| 300 SCX | | 3, 5 | 300 | 2-8 | | 60 | L9 |
| SAX |  | 3, 5 | 120 | 2-8 | | 60 | L14 |
| 300 SAX | | 3, 5 | 300 | 2-8 | | 60 | L14 |

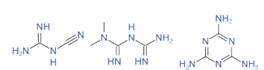
# Application

## ChromCore 300 SCX

### Metformin

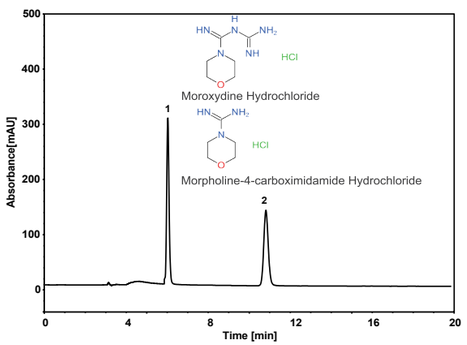



Column: ChromCore 300 SCX, 5 μm
Dimension: 4.6×250 mm
Mobile Phase:
Blue: 17 g/L ammonium dihydrogen phosphate in $H_2O$, pH3.0
Black: 95/5 v/v 17 g/L ammonium dihydrogen phosphate in $H_2O$, pH3.0/MeCN
Flow Rate: 1.0 mL/min
Temperature: 30 ℃
Injection: 5 μL
Detection: UV 218 nm
Peaks: 1. Dicyandiamide
2. Melamine
3. Metformin



Dicyandiamide Melamine Metformin

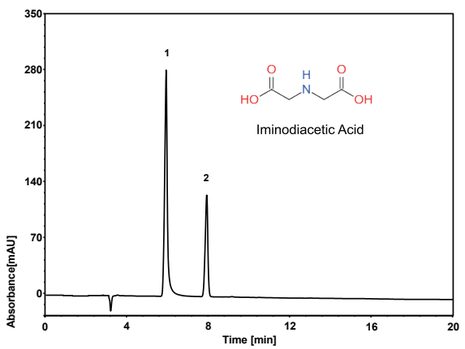
### Moroxydine Hydrochloride




Column: ChromCore 300 SCX, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 10/90 v/v MeCN/150 mM ammonium dihydrogen phosphate in $H_2O$, pH2.5
Flow Rate: 1.0 mL/min
Temperature: 30 ℃
Injection: 2 μL
Detection: UV 198 nm
Peaks: 1. Morpholine-4-carboximidamide Hydrochloride
2. Moroxydine Hydrochloride

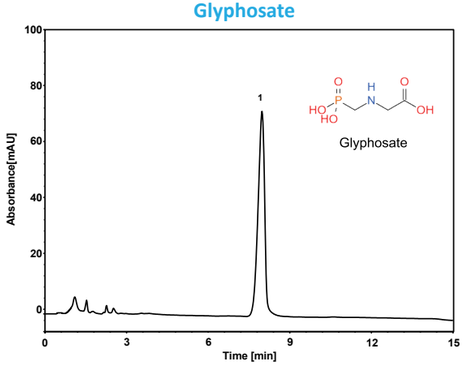
## ChromCore SAX

### Iminodiacetic Acid




Column: ChromCore SAX, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 30 mM potassium phosphate solution, pH6.0
Flow Rate: 1.0 mL/min
Temperature: 27 ℃
Injection: 10 μL
Detection: UV 195 nm
Peaks: 1. Iminodiacetic acid
2. $Cl^-$

### Glyphosate




Column: ChromCore SAX, 5 μm
Dimension: 4.6×250 mm
Mobile Phase: 3/97 v/v MeOH/2 mM potassium phosphate buffer, pH1.9
Flow Rate: 1.5 mL/min
Temperature: 30 ℃
Injection: 10 μL
Detection: UV 195 nm
Peak: 1. Glyphosate (2 mg/mL)

## Ordering Information

| Product Name | Particle Size (μm) | Length (mm) | ID (mm) | | |
|---|---|---|---|---|---|
| | | | 4.6 | 3.0 | 2.1 |
| ChromCore SCX | 5 | 250 | A052-050012-04625S | A052-050012-03025S | A052-050012-02125S |
| | | 150 | A052-050012-04615S | A052-050012-03015S | A052-050012-02115S |
| | 3 | 150 | A052-030012-04615S | A052-030012-03015S | A052-030012-02115S |
| ChromCore 300 SCX | 5 | 250 | A052-050030-04625S | A052-050030-03025S | A052-050030-02125S |
| | | 150 | A052-050030-04615S | A052-050030-03015S | A052-050030-02115S |
| | 3 | 150 | A052-030030-04615S | A052-030030-03015S | A052-030030-02115S |
| ChromCore SAX | 5 | 250 | A014-050012-04625S | A014-050012-03025S | A014-050012-02125S |
| | | 150 | A014-050012-04615S | A014-050012-03015S | A014-050012-02115S |
| | 3 | 150 | A014-030012-04615S | A014-030012-03015S | A014-030012-02115S |
| ChromCore 300 SAX | 5 | 250 | A014-050030-04625S | A014-050030-03025S | A014-050030-02125S |
| | | 150 | A014-050030-04615S | A014-050030-03015S | A014-050030-02115S |
| | 3 | 150 | A014-030030-04615S | A014-030030-03015S | A014-030030-02115S |

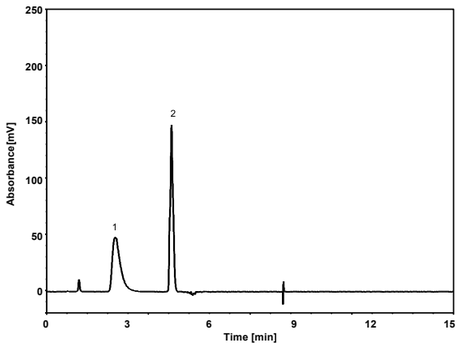
# ChromCore Application-Specific Columns

ChromCore application-specific columns are designed to meet separation challenges for specific and difficult applications. Each of these columns provides guaranteed separation for its targeted applications under prescribed chromatographic conditions.

## ChromCore SAA

Designed for neutral surfactant analysis in (bio)pharmaceutical, chemical industry and environmental samples.

PF68 and Tween 80




Column: ChromCore SAA, 5 µm
Dimension: 4.6×150 mm
Mobile Phase: A) 0.1% acetic acid in $H_2O$
B) 0.1% acetic acid in isopropanol

Gradient:

| t(min) | %A | %B |
|---|---|---|
| 0 | 80 | 20 |
| 0.1 | 80 | 20 |
| 0.2 | 66 | 34 |
| 2.6 | 66 | 34 |
| 2.7 | 0 | 100 |
| 6.7 | 0 | 100 |
| 6.8 | 80 | 20 |
| 15 | 80 | 20 |

Flow Rate: 1.2 mL/min
Temperature: 25 ℃
Injection: 5 µL
Detection: ELSD (Evap: 65 ℃, Neb: 55 ℃, Gas: 1.6 SLM)
Peaks: 1. PF68
2. Tween 80

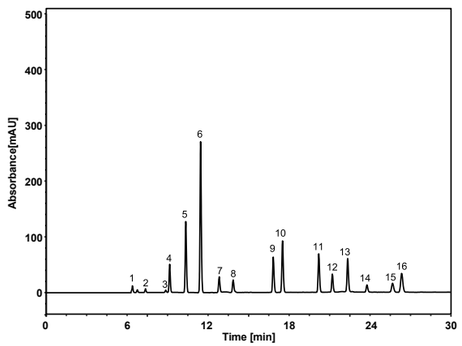
### Ordering Information

| Product Name | Particle Size (µm) | Length (mm) | ID (mm) |
|---|---|---|---|
| | | | 4.6 |
| ChromCore SAA | 5 | 150 | S014-050018-04615S |

## ChromCore PAH

Designed for surfactant analysis in (bio)pharmaceutical, chemical industry and environmental samples.

16 PAHs




Column: ChromCore PAH, 5 µm
Dimension: 4.6×250 mm
Mobile Phase: A) $H_2O$
B) MeCN

Gradient:

| t(min) | %A | %B |
|---|---|---|
| -10 | 40 | 60 |
| 0 | 40 | 60 |
| 2 | 40 | 60 |
| 20 | 0 | 100 |
| 30 | 0 | 100 |

Flow Rate: 1.5 mL/min
Temperature: 25 ℃
Injection: 5 µL
Detection: UV 254 nm
Peaks: 1. Naphthalene 2. Acenaphthylene 3. Acenaphthene
4. Fluorene 5. Phenanthrene 6. Anthracene
7. Fluoranthene 8. Pyrene 9. Benzo(a)anthracene
10. Chrysene 11. Benzo(b)fluoranthene
12. Benzo(k)fluoranthene 13. Benzo(a)pyrene
14. Dibenz(a,h)anthracene 15. Benzo(g,h,i)perylene
16. Indeno(1,2,3-cd)pyrene

### Ordering Information

| Product Name | Particle Size (µm) | Length (mm) | ID (mm) |
|---|---|---|---|
| | | | 4.6 |
| ChromCore PAH | 5 | 250 | A118-050018-04625S |
| | 3 | 150 | A118-030018-04615S |

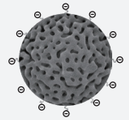
## ChromCore Sugar Columns

ChromCore Sugar columns are prepared from monodispersed spherical PS/DVB particles by a unique sulfonation process to generate $H^+$, $Na^+$, or $Ca^{2+}$ forms for separating sugars, sugar alcohols, organic acids or their mixture.

### Main Features

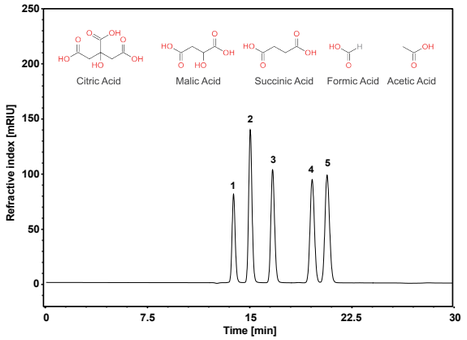
- Excellent chromatography performance for symmetrical peaks
- Good mechanical strength for longer column life
- Higher cross-linking for higher flow rate and better resolution

### Specification

| Product Name | Solid Phase | Particle Size (µm) | Cross Linking | Pressure Limit (psi) | Temperature Limit (°C) | Operating pH Range |
|---|---|---|---|---|---|---|
| Sugar 10-H |  | 6, 8 | 10% | 1200 | 95 | 1-3 |
| Sugar 10-Ca | | 6, 8 | 10% | 1200 | 95 | 5-9 |
| Sugar-10-Na | | 6, 8 | 10% | 1200 | 95 | 5-9 |

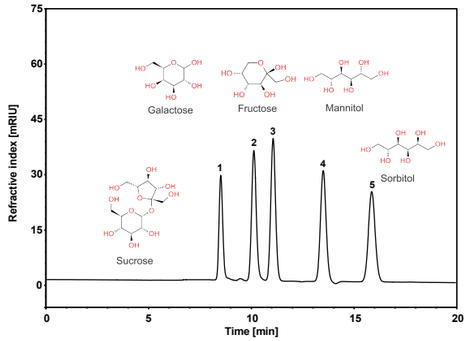
# Application

## Organic Acids




Column: ChromCore Sugar-10H, 6 μm
Dimension: 7.8×300 mm
Mobile Phase: 9 mM $H_2SO_4$ in $H_2O$
Flow Rate: 0.5 mL/min
Temperature: 65 ℃
Injection: 5 μL
Detection: RID
Peaks:
1. Citric Acid
2. Malic Acid
3. Succinic Acid
4. Formic Acid
5. Acetic Acid

## Sugars




Column: ChromCore Sugar-10Ca, 6 μm
Dimension: 7.8×300 mm
Mobile Phase: $H_2O$
Flow Rate: 0.5 mL/min
Temperature: 80 ℃
Injection: 5 μL
Detection: RID
Peaks:
1. Sucrose
2. Galactose
3. Fructose
4. Mannitol
5. Sorbitol

## Ordering Information

| Product Name | Particle Size (μm) | Length (mm) | ID (mm) | |
|---|---|---|---|---|
| | | | 4.6 | 7.8 |
| ChromCore Sugar-10H | 8 | 300 | / | A017-080010-07830S |
| | | 250 | A017-080010-04625S | / |
| | 6 | 300 | / | A017-060010-07830S |
| | | 250 | A017-060010-04625S | / |
| ChromCore Sugar-10Ca | 8 | 300 | / | A019-080010-07830S |
| | | 250 | A019-080010-04625S | / |
| | 6 | 300 | / | A019-060010-07830S |
| | | 250 | A019-060010-04625S | / |
| ChromCore Sugar-10Na | 8 | 300 | / | A058-080010-07830S |
| | | 250 | A058-080010-04625S | / |
| | 6 | 300 | / | A058-060010-07830S |
| | | 250 | A058-060010-04625S | / |



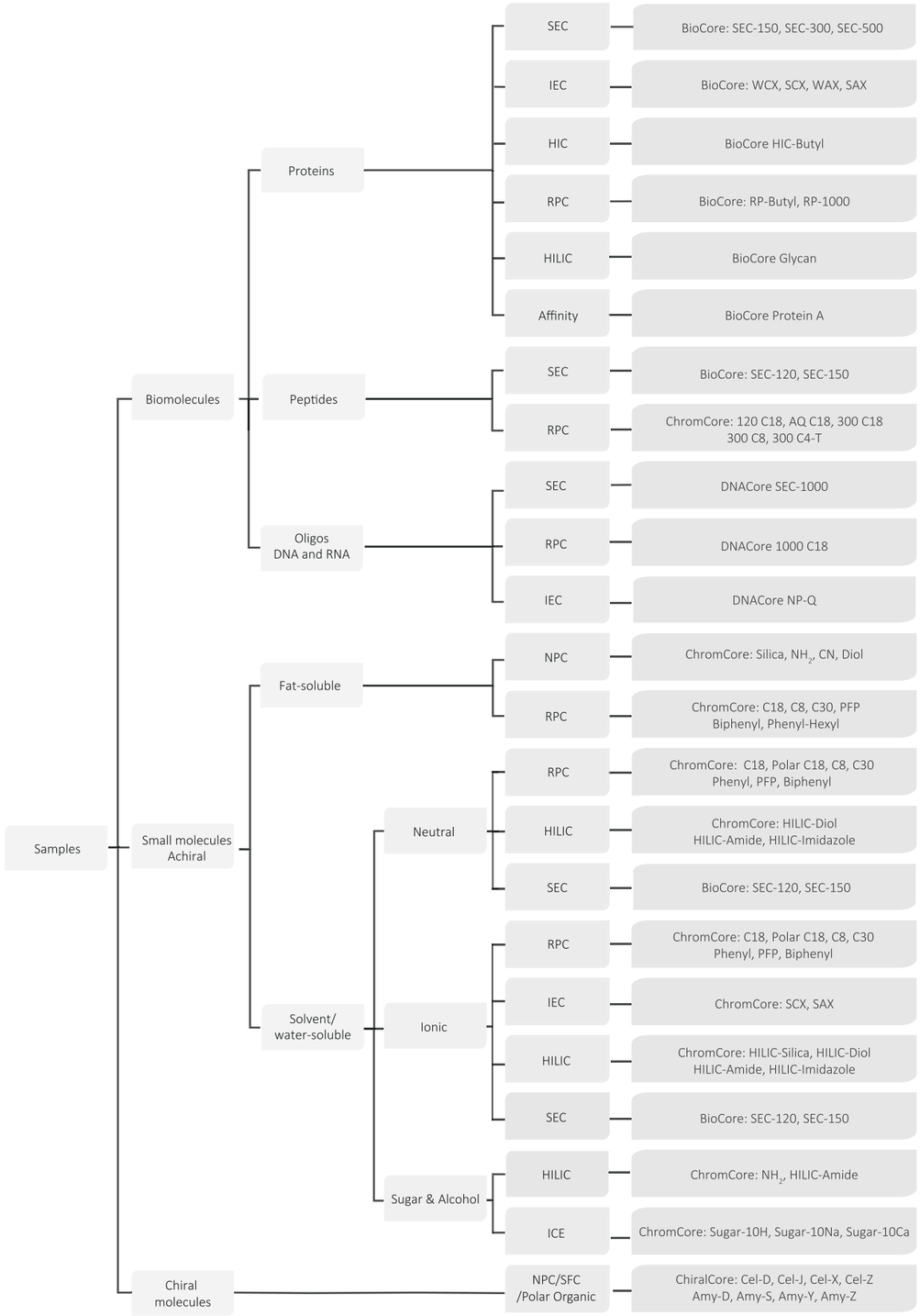


# USP Listing

| USP Listing | Packing | Brand Name |
|---|---|---|
| L1 | Octadecyl silane chemically bonded to porous or non-porous silica or ceramic microparticles, 1.5 to 10 μm in diameter, or a monolithic rod | ChromCore 120 C18<br>ChromCore AQ C18<br>ChromCore AR C18<br>ChromCore BR C18<br>ChromCore 120 C18-T<br>ChromCore 300 C18 |
| L3 | Porous silica particles, 1.5 to 10 μm in diameter, or a monolithic silica rod | ChromCore Silica |
| L7 | Octylsilane chemically bonded to totally or superficially porous silica particles, 1.5 to 10 μm in diameter, or a monolithic silica rod | ChromCore 120 C8<br>ChromCore AQ C8<br>ChromCore 300 C8 |
| L8 | An essentially monomolecular layer of aminopropylsilane chemically bonded to totally porous silica gel support, 1.5 to 10 μm in diameter, or a monolithic silica rod | ChromCore $NH_2$ |
| L9 | Irregular or spherical, totally porous silica gel having a chemically bonded, strongly acidic cation-exchange coating, 3 to 10 μm in diameter | ChromCore SCX<br>ChromCore 300 SCX |
| L10 | Nitrile groups chemically bonded to porous silica particles, 1.5 to 10 μm in diameter, or a monolithic silica rod | ChromCore CN |
| L11 | Phenyl groups chemically bonded to porous silica particles, 1.5 to 10 μm in diameter, or a monolithic silica rod | ChromCore Phenyl<br>ChromCore Phenyl-Hexyl<br>ChromCore Phenyl-Ether<br>ChromCore Biphenyl |
| L14 | Silica gel having a chemically bonded strongly basic quaternary ammonium anion-exchange coating, 5 to 10 μm in diameter | ChromCore SAX<br>ChromCore 300 SAX |
| L17 | Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the hydrogen form, 6 to 12 μm in diameter | ChromCore Sugar-10H |
| L19 | Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the calcium form, 5 – 15 μm in diameter | ChromCore Sugar-10Ca |
| L20 | Dihydroxypropane groups chemically bonded to porous silica or hybrid particles, 1.5 to 10 μm in diameter, or a monolithic silica rod | ChromCore HILIC-Diol<br>BioCore SEC-120<br>BioCore SEC-150<br>BioCore SEC-300<br>BioCore SEC-500 |
| L26 | Butyl silane chemically bonded to totally porous or superficially porous silica particles, 1.5 to 10 μm in diameter | ChromCore 300 C4-T |
| L40 | Cellulose tris-3,5-dimethylphenylcarbamate coated porous silica particles, 3 μm to 20 μm in diameter | ChiralCore Cel-D |
| L43 | Pentafluorophenyl groups chemically bonded to silica particles by a propyl spacer, 1.5 to 10 μm in diameter | ChromCore PFP |
| L51 | Amylose tris-3,5-dimethylphenylcarbamate-coated, porous, spherical, silica particles, 3 to 10 μm in diameter | ChiralCore Amy-D |
| L58 | Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the sodium form, about 6 to 30 μm diameter | ChromCore Sugar-10Na |
| L60 | Spherical, porous silica gel, 10 μm or less in diameter, the surface of which has been covalently modified with alkyl amide groups and endcapped | ChromCore Polar C18 |
| L62 | C30 silane bonded phase on a fully porous spherical silica, 3 to 15 μm in diameter | ChromCore C30 |
| L68 | Spherical, porous silica, 10 μm or less in diameter, the surface of which has been covalently modified with alkyl amide groups and not endcapped | ChromCore HILIC-Amide<br>BioCore Glycan |
| L78 | A silane ligand that consists of both reversed-phase (an alkyl chain longer than C8) and anion-exchange (primary, secondary, tertiary, or quartenary amino groups) functional groups chemically bonded to porous or non-porous silica or ceramic micro-particles, 1.0 to 50 μm in diameter, or a monolithic rod | ChromCore SAA |
| L80 | Cellulose tris(4-methylbenzoate)-coated, porous, spherical, silica particles, 5 - 20 μ in diameter | ChiralCore Cel-J |
| L90 | Amylose tris-[(S)-alpha-methylbenzylcarbamate] coated on porous, spherical silica particles, 3 to 10 μm in diameter | ChiralCore Amy-S |
| L118 | Aqueous polymerized C18 groups on silica particles, 1.2 to 5 μm in diameter | ChromCore PAH |

# LC Columns Selection Guide

NanoChrom






NanoChrom


NanoChrom Technologies (Suzhou) Co., Ltd

FILE VERSION:202303