

Service and Support System

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CATALOG OF CHROMATOGRAPHIC CONSUMABLES

More Trustable With Forever

Address: No.8 Wenqu Road, High-tech Zone, Hefei, Anhui, China

TEL: +86 400-112-0066

WEB: [www.wayeal.com.cn](http://www.wayeal.com.cn)



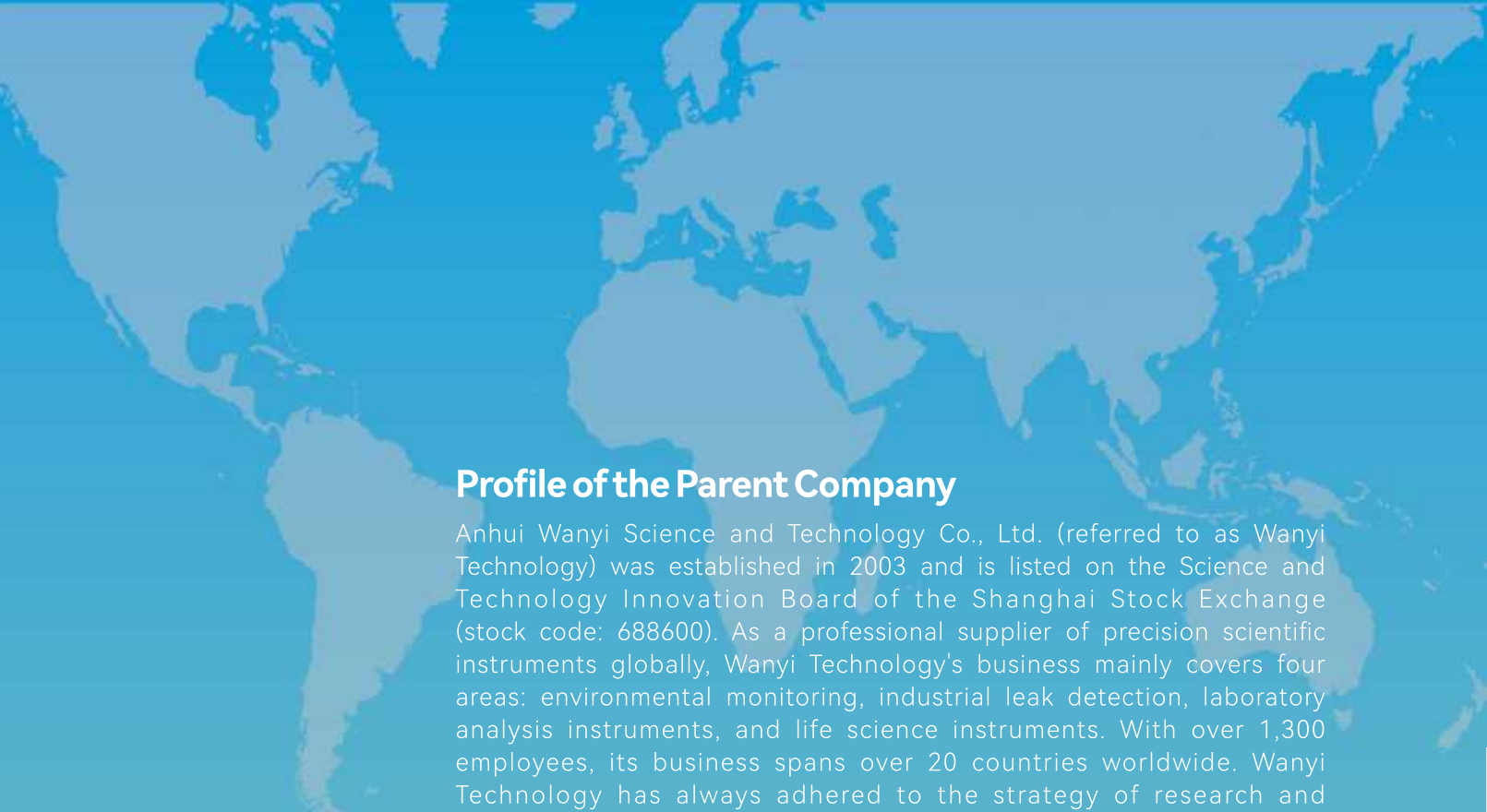
Alibaba  
Verified Supplier



Made-in China  
Gold Supplier



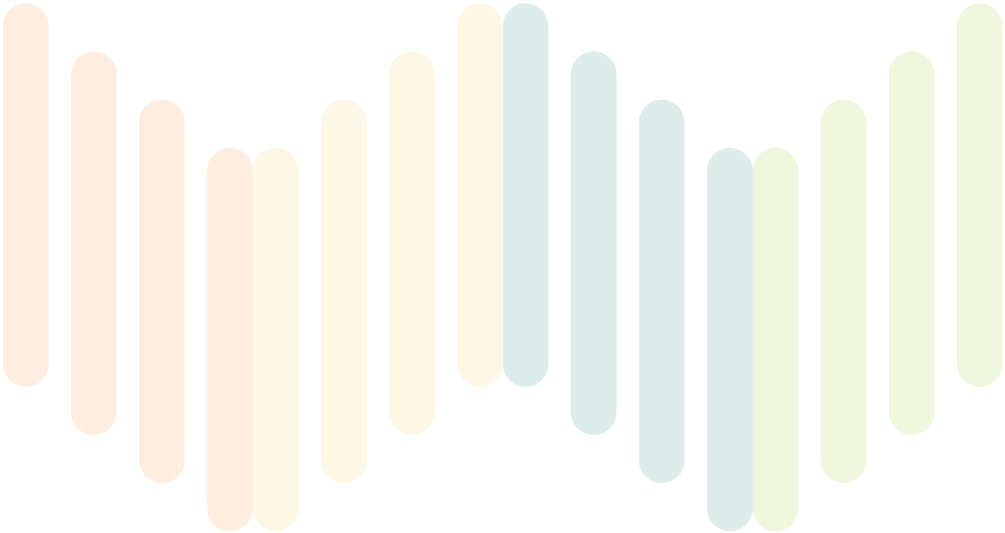
Directindustry  
Listed Supplier



## Profile of the Parent Company

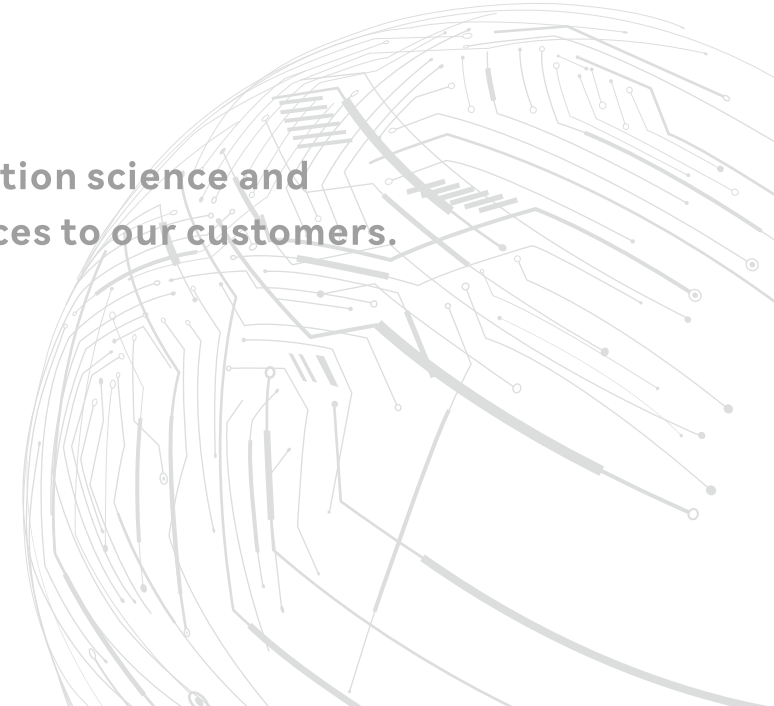


Anhui Wanyi Science and Technology Co., Ltd. (referred to as Wanyi Technology) was established in 2003 and is listed on the Science and Technology Innovation Board of the Shanghai Stock Exchange (stock code: 688600). As a professional supplier of precision scientific instruments globally, Wanyi Technology's business mainly covers four areas: environmental monitoring, industrial leak detection, laboratory analysis instruments, and life science instruments. With over 1,300 employees, its business spans over 20 countries worldwide. Wanyi Technology has always adhered to the strategy of research and development innovation and product leadership. In recent years, it has continuously increased its investment in research and development, with annual R&D expenditure accounting for approximately 20% of its revenue. Through endogenous and exogenous development, it has established research platforms such as postdoctoral research workstations, academician workstations, and national-level enterprise technology centers. It has been recognized as a national-level "small giant" enterprise specializing in innovation, as well as a national intellectual property demonstration enterprise. Adhering to the corporate spirit of "Quality Wanyi, Service Wanyi," it continuously integrates advanced manufacturing resources from around the world, globalizes component procurement, standardizes production and manufacturing, and provides customers with high-quality products and services. In the future, Wanyi Technology aims to become an enterprise with strong international competitiveness in the field of precision scientific instruments and life health, and become a respected model of Chinese enterprises with a sense of responsibility!



## Company Profile

Anhui NovaChrom New Materials Technology Co., Ltd. was established in 2022. It is a wholly-owned subsidiary of Anhui Wanyi Science and Technology Co., Ltd. (SH688600), with a registered capital of 10 million RMB, focusing on the research, development, production, and sales of separation and purification materials with chromatography consumables as its core, as well as providing industry solutions. The company's R&D team consists of master's and doctoral graduates from the University of Science and Technology of China, collaborating with several universities nationwide. Its products include analytical-grade ion exchange chromatography columns, liquid chromatography columns, and various pre-treatment consumables, serving industries such as environmental testing, food inspection, chemicals, and materials. NovaChrom New Materials Technology is committed to advancing separation science and providing better services to its customers.



**Advancing separation science and  
providing better services to our customers.**



The chromatography consumables independently developed and produced by NovaChrom New Materials include hydroxide anion exchange chromatography columns, carbonate anion exchange chromatography columns, cation exchange chromatography columns, general-purpose guard columns, ion chromatography pre-treatment cartridges, liquid chromatography columns, ghost peak trapping columns, etc., widely used in environmental testing, food testing, and other fields.



Please use the relevant products reasonably according to the instructions.  
The data and chromatograms in this product catalog are for reference only.  
**Warm Reminder:** For chemical reagents involved in the use of products, please understand their safety and hazards on your own.  
There may be changes in specifications and reference test conditions for product upgrades and replacements, without further notice.

# CATALOGUE

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Hydroxide Anion Exchange Chromatography Column



Characteristics

The unique surface bonding technology, combined with adjustable modification methods, enables this series of chromatography columns to exhibit excellent selectivity and separation erformance, suitable for the simultaneous analysis of various anions.

| Product Model | Product Information        | Specifications | Particle Size | Application Areas                     | Catalog Number |
|---------------|----------------------------|----------------|---------------|---------------------------------------|----------------|
| HS-5A-P1      | Hydroxide Ion              | 4.0×150mm      | 5μm           | 6 types of anions                     | IC0101         |
| HS-5A-P2      | Hydroxide Ion              | 4.6×250mm      | 5μm           | 11types of anions                     | IC0102         |
| HS-5A-P3      | Hydroxide Ion              | 4.0×250mm      | 5μm           | 20types of anions                     | IC0103         |
| HS-5A-I       | Hydroxide Ion              | 4.0×250mm      | 5μm           | High retention anions                 | IC0104         |
| HS-5A-Cr      | Specialized Rinse Solution | 4.0×250mm      | 5μm           | Hexavalent chromium specific          | IC0105         |
| HS-5A-SP1     | Hydroxide Ion              | 4.0×150mm      | 5μm           | 8types of anions (sulfite detection)  | IC0106         |
| HS-5A-SP2     | Hydroxide Ion              | 4.0×250mm      | 5μm           | 12types of anions (sulfite detection) | IC0107         |
| HS-5A-P4      | Specialized Rinse          | 4.0×250mm      | 5μm           | S <sup>2-</sup> 、CN <sup>-</sup>      | IC0109         |
| HS-5A-PP      | Hydroxide Ion              | 4.0×250mm      | 5μm           | polyphosphates                        | IC0112         |
| HS-5A-P3      | Hydroxide Ion              | 2.0×250mm      | 5μm           | 8 types of anions                     | IC0111         |
| HS-5A-SP2     | Hydroxide Ion              | 2.0×250mm      | 5μm           | 8types of anions (sulfite detection)  | IC0113         |

Hydroxide Anion Exchange Chromatography Column HS-5A-P

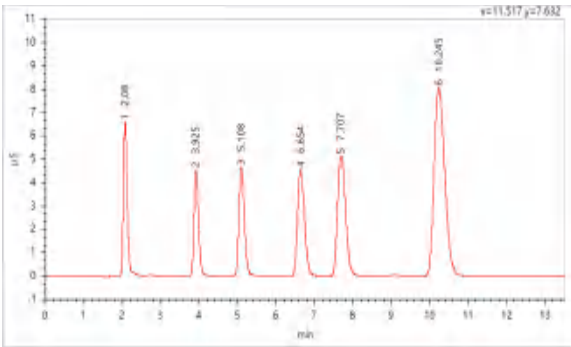
Utilizing HS-5A-P1 for the analysis of six types of anions

Characteristics:

Short column, more suitable for rapid separation.

Applicable Standards:

GB5009.33-2016 National Food Safety Standard – Determination of Nitrite and Nitrate in Food, etc.



Column: HS-5A-P1  
Eluent: 20mM KOH  
Flow rate: 1.2mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C

|                                 |        |
|---------------------------------|--------|
| 1.F <sup>-</sup>                | 2mg/L  |
| 2.Cl <sup>-</sup>               | 3mg/L  |
| 3.NO <sub>2</sub> <sup>-</sup>  | 5mg/L  |
| 4.Br <sup>-</sup>               | 10mg/L |
| 5.NO <sub>3</sub> <sup>-</sup>  | 20mg/L |
| 6.SO <sub>4</sub> <sup>2-</sup> | 20mg/L |

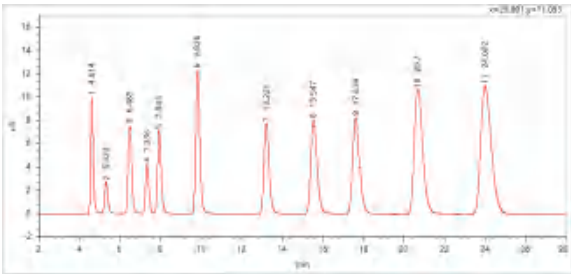
Utilizing HS-5A-P2 for the analysis of eleven types of anions

Characteristics:

HS-5A-P2 is a universal anion exchange chromatography column that can effectively separate eleven types of anions in a single run, suitable for the determination of common anions as well as formate and acetate ions.

Applicable Standards:

GB 8538-2022 National Food Safety Standard – Inspection Method for Drinking Natural Mineral Water; GB/T 35665-2017 Ion Chromatography Method for Determination of Formate and Acetate Ions in Atmospheric Precipitation, etc.



Column: HS-5A-P2  
Eluent: 22mM KOH  
Flow rate: 1mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C

|                                    |        |
|------------------------------------|--------|
| 1.F <sup>-</sup>                   | 3mg/L  |
| 2.CH <sub>3</sub> COO <sup>-</sup> | 5mg/L  |
| 3.HCOO <sup>-</sup>                | 5mg/L  |
| 4.ClO <sub>2</sub> <sup>-</sup>    | 10mg/L |
| 5.BrO <sub>3</sub> <sup>-</sup>    | 20mg/L |
| 6.Cl <sup>-</sup>                  | 6mg/L  |
| 7.NO <sub>2</sub> <sup>-</sup>     | 15mg/L |
| 8.ClO <sub>3</sub> <sup>-</sup>    | 25mg/L |
| 9.Br <sup>-</sup>                  | 25mg/L |
| 10.NO <sub>3</sub> <sup>-</sup>    | 25mg/L |
| 11.SO <sub>4</sub> <sup>2-</sup>   | 30mg/L |

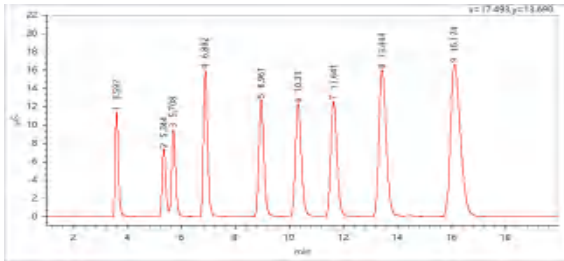
Utilizing HS-5A-P3 for the analysis of nine types of anions

Characteristics:

HS-5A-P3 is a high-efficiency anion exchange chromatography column, capable of effectively separating nine types of anions in a single run. When combined with gradient elution, it can simultaneously detect 17 types of anions, with performance comparable to imported products. HS-5A-P3 is suitable for the analysis of five disinfection by-products in water quality.

Applicable Standards:

GB/T 20188-2006 Determination of Bromate in Wheat Flour by Ion Chromatography, etc.



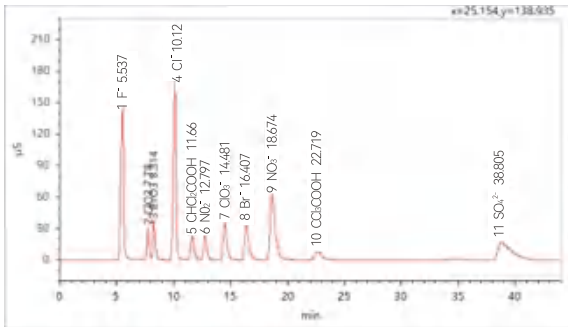
Column: HS-5A-P3  
Eluent: 22mM KOH  
Flow rate: 1mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C

|                                 |        |
|---------------------------------|--------|
| 1.F <sup>-</sup>                | 3mg/L  |
| 2.ClO <sub>2</sub> <sup>-</sup> | 10mg/L |
| 3.BrO <sub>3</sub> <sup>-</sup> | 20mg/L |
| 4.Cl <sup>-</sup>               | 6mg/L  |
| 5.NO <sub>2</sub> <sup>-</sup>  | 5mg/L  |
| 6.ClO <sub>3</sub> <sup>-</sup> | 25mg/L |
| 7.Br <sup>-</sup>               | 25mg/L |
| 8.NO <sub>3</sub> <sup>-</sup>  | 25mg/L |
| 9.SO <sub>4</sub> <sup>2-</sup> | 30mg/L |

Utilizing HS-5A-P3 for the analysis of five disinfection by-products

Applicable Standards:

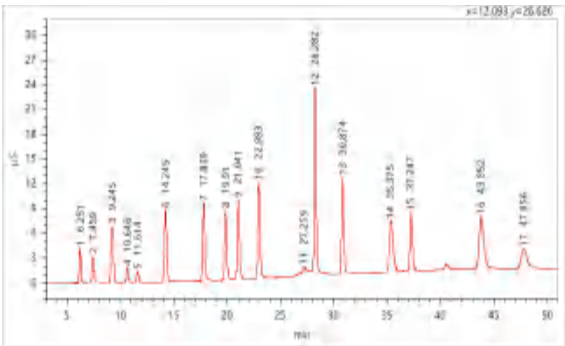
GB5750.10-2023 National Standard for Drinking Water Inspection – Part 1 0: Disinfection By-Products Index Ion Chromatography Method, etc.



Column: HS-5A-P3  
Eluent: 13mM KOH  
Flow rate: 1.0mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C

|                                  |         |
|----------------------------------|---------|
| 1.F <sup>-</sup>                 | 0.5mg/L |
| 2.ClO <sub>2</sub> <sup>-</sup>  | 5mg/L   |
| 3.BrO <sub>3</sub> <sup>-</sup>  | 5mg/L   |
| 4.Cl <sup>-</sup>                | 5mg/L   |
| 5.CHCl <sub>2</sub> COOH         | 5mg/L   |
| 6.NO <sub>2</sub> <sup>-</sup>   | 2.5mg/L |
| 7.ClO <sub>3</sub> <sup>-</sup>  | 10mg/L  |
| 8.Br <sup>-</sup>                | 2.5mg/L |
| 9.NO <sub>3</sub> <sup>-</sup>   | 6.6mg/L |
| 10.CCl <sub>3</sub> COOH         | 5mg/L   |
| 11.SO <sub>4</sub> <sup>2-</sup> | 5mg/L   |

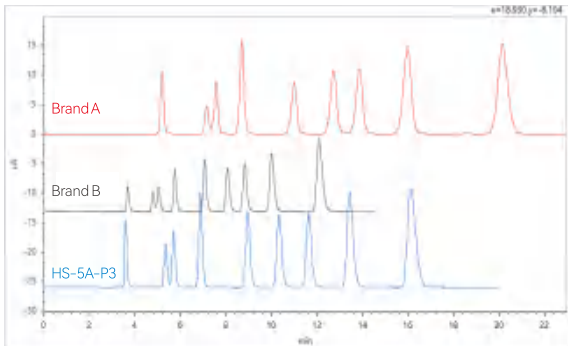
Utilizing HS-5A-P3 gradient elution for the analysis of seventeen types of anions



Column: HS-5A-P3  
Eluent: KOH 10mM From 0 to 10 min and 10 to 58mM From 10 to 45 min  
Flow rate: 1mL/min  
Detector: Suppressed conductivity  
Column Temp: 40°C

|                                                |        |
|------------------------------------------------|--------|
| 1.F <sup>-</sup>                               | 2mg/L  |
| 2.CH <sub>3</sub> COO <sup>-</sup>             | 10mg/L |
| 3.HCOO <sup>-</sup>                            | 10mg/L |
| 4.ClO <sub>2</sub> <sup>-</sup>                | 10mg/L |
| 5.BrO <sub>3</sub> <sup>-</sup>                | 20mg/L |
| 6.Cl <sup>-</sup>                              | 6mg/L  |
| 7.NO <sub>2</sub> <sup>-</sup>                 | 25mg/L |
| 8.ClO <sub>3</sub> <sup>-</sup>                | 25mg/L |
| 9.Br <sup>-</sup>                              | 25mg/L |
| 10.NO <sub>3</sub> <sup>-</sup>                | 25mg/L |
| 11.CO <sub>3</sub> <sup>2-</sup>               | 25mg/L |
| 12.SO <sub>4</sub> <sup>2-</sup>               | 25mg/L |
| 13.C <sub>2</sub> O <sub>4</sub> <sup>2-</sup> | 25mg/L |
| 14.I <sup>-</sup>                              | 30mg/L |
| 15.S <sub>2</sub> O <sub>3</sub> <sup>2-</sup> | 25mg/L |
| 16.PO <sub>4</sub> <sup>3-</sup>               | 30mg/L |
| 17.ClO <sub>4</sub> <sup>-</sup>               | 30mg/L |

Comparison between HS-5A-P3 and other manufacturers in the industry



The above tests were conducted under uniform hardware conditions. The standard solutions used were of the same concentration, and the separation conditions used for testing were all in accordance with the standard conditions provided in the manufacturer's chromatography column user manual.

## Hydroxide Anion Exchange Chromatography Column HS-5A-I

### Utilizing HS-5A-I for the analysis of eight types of anions

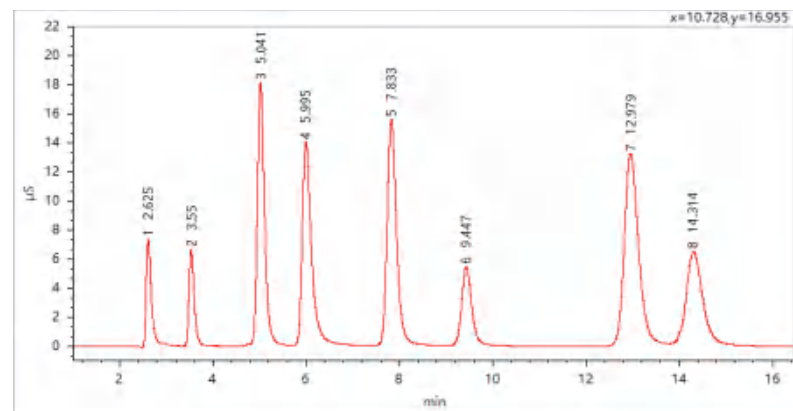
#### Characteristics:

This is a multifunctional anion exchange chromatography column, capable of effectively separating strongly retained ions such as iodide ions, exhibiting good separation efficiency and high column performance; by changing the concentration of the eluent, conventional anion separation can be achieved, making it versatile.

#### Applicable Standards:

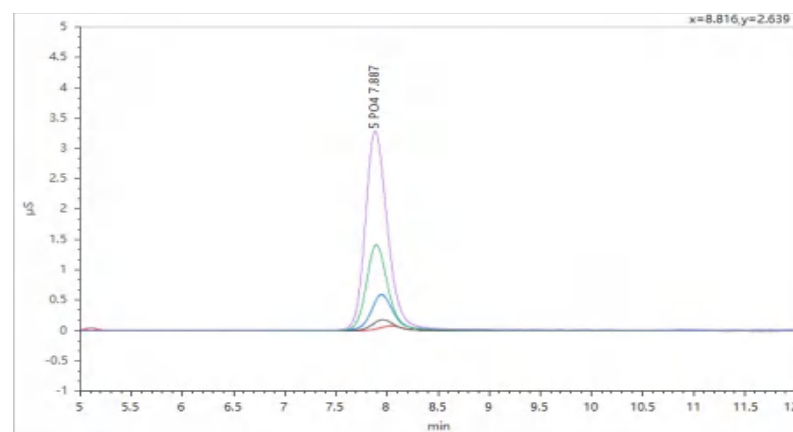
HJ778-2015 Determination of Iodide in Water Quality by Ion Chromatography, etc.

Column: HS-5A-I  
Eluent: 20mM KOH  
Flow rate: 1mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C

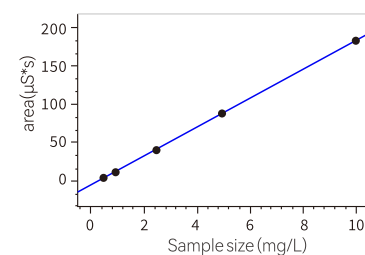


|                                               |        |
|-----------------------------------------------|--------|
| 1.F <sup>-</sup>                              | 2mg/L  |
| 2.Cl <sup>-</sup>                             | 3mg/L  |
| 3.SO <sub>4</sub> <sup>2-</sup>               | 5mg/L  |
| 4.C <sub>2</sub> O <sub>4</sub> <sup>2-</sup> | 10mg/L |
| 5.S <sub>2</sub> O <sub>3</sub> <sup>2-</sup> | 20mg/L |
| 6.I <sup>-</sup>                              | 20mg/L |
| 7.SCN <sup>-</sup>                            | 20mg/L |
| 8.ClO <sub>4</sub> <sup>-</sup>               | 20mg/L |

### Utilizing HS-5A-I for the validation of phosphate standard curve

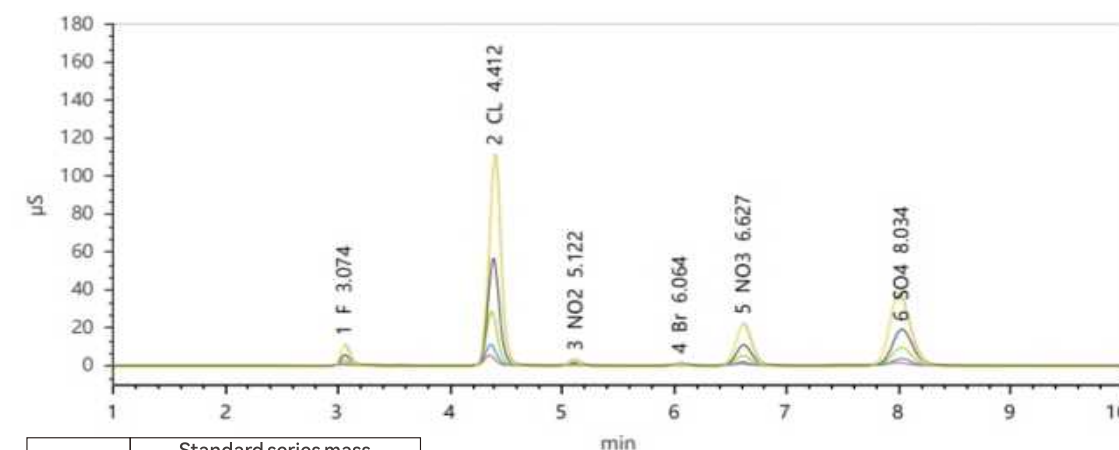


Column: HS-5A-I  
Eluent: 20mM KOH  
Flow rate: 1mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C



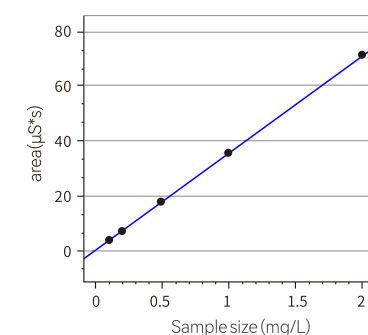
Compound Name: PO4  
Curve Equation:  $y = 18.16553 \cdot x + 5.60714$   
Correlation Coefficient:  $R = 0.99943$   
Coefficient of Determination:  $R^2 = 0.99886$

### Analysis for the validation of standard curve according to HJ84-2016

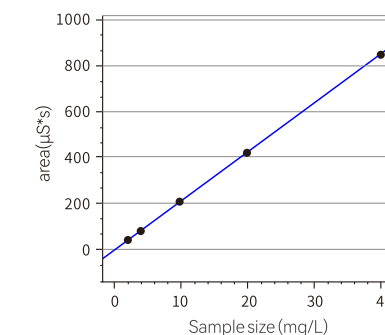


| Ion name                      | Standard series mass concentration (mg/L) |      |      |      |      |      |
|-------------------------------|-------------------------------------------|------|------|------|------|------|
| F <sup>-</sup>                | 0.00                                      | 0.10 | 0.20 | 0.50 | 1.00 | 2.00 |
| Cl <sup>-</sup>               | 0.00                                      | 2.00 | 4.00 | 10.0 | 20.0 | 40.0 |
| NO <sub>2</sub> <sup>-</sup>  | 0.00                                      | 0.10 | 0.20 | 0.50 | 1.00 | 2.00 |
| Br <sup>-</sup>               | 0.00                                      | 0.10 | 0.20 | 0.50 | 1.00 | 2.00 |
| NO <sub>3</sub> <sup>-</sup>  | 0.00                                      | 1.00 | 2.00 | 5.00 | 10.0 | 20.0 |
| SO <sub>4</sub> <sup>2-</sup> | 0.00                                      | 2.00 | 4.00 | 10.0 | 20.0 | 40.0 |

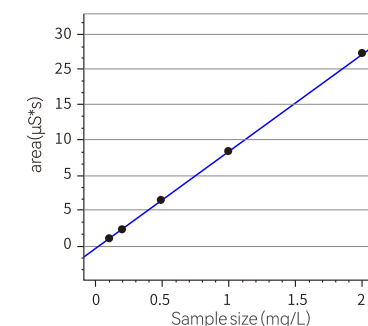
Column: HS-5A-I  
Eluent: 10mM KOH  
Flow rate: 1.0mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C



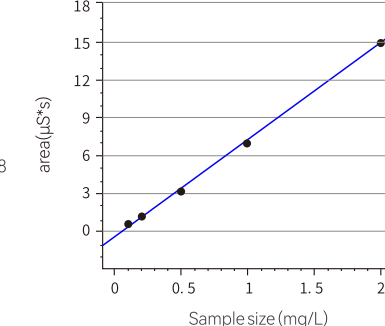
Compound Name: F  
Curve Equation:  $y = 35.604716 \cdot x + 0.033434$   
 $R = 0.999956$   
 $R^2 = 0.999911$



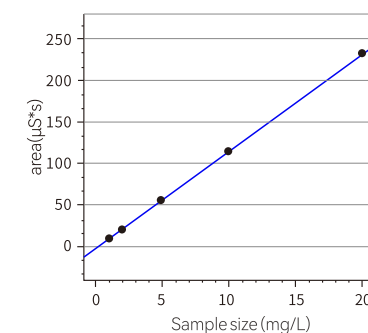
Compound Name: Cl  
Curve Equation:  $y = 21.227439 \cdot x + 4.550177$   
 $R = 0.999991$   
 $R^2 = 0.999982$



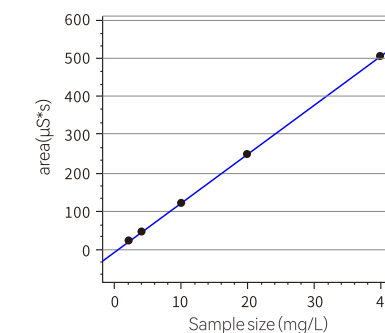
Compound Name: NO2  
Curve Equation:  $y = 313.821517 \cdot x + 0.444958$   
 $R = 0.999892$   
 $R^2 = 0.999783$



Compound Name: Br  
Curve Equation:  $y = 7.683762 \cdot x + 0.468364$   
 $R = 0.99960$   
 $R^2 = 0.99921$



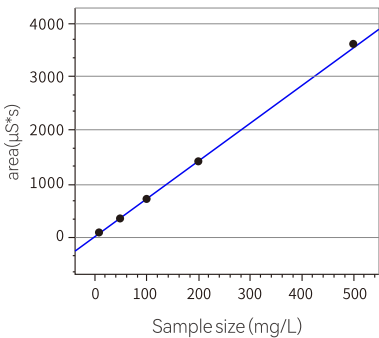
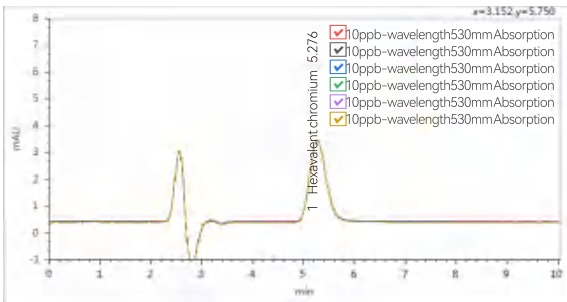
Compound Name: NO3  
Curve Equation:  $y = 11.767522 \cdot x + 0.0431$   
 $R = 0.999935$   
 $R^2 = 0.999870$



Compound Name: SO4  
Curve Equation:  $y = 12.782613 \cdot x + 5.776353$   
 $R = 0.999970$   
 $R^2 = 0.999939$

Hydroxide Anion Exchange Chromatography  
Column HS-5A-Cr for Hexavalent Chromium

Hydroxide Anion Exchange Chromatography Column HS-5A-Cr for Hexavalent Chromium

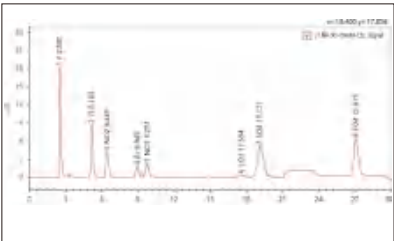


Compound Name:六价铬  
Curve Equation:  
 $y=7.04759 \cdot x-1.12174$   
R:0.999999  
R^2:0.99997

Column: HS-5A-Cr  
Eluent: 250mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>+100mM NH<sub>3</sub>·H<sub>2</sub>O  
Flow rate: 1.0mL/min  
Detector: UV(530nm)+Post Column  
Column Temp: 30°C

Hydroxide Anion Exchange Chromatography Column  
HS-5A-SP1/SP2 for Sulfate Ion

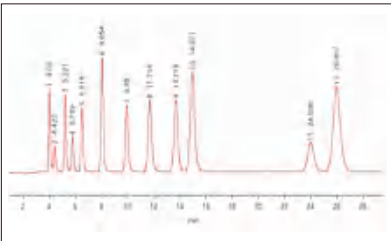
Utilizing HS-5A-SP1 for the analysis  
of eight types of anions



|                                 |        |
|---------------------------------|--------|
| 1.F <sup>-</sup>                | 5mg/L  |
| 2.Cl <sup>-</sup>               | 5mg/L  |
| 3.NO <sub>2</sub> <sup>-</sup>  | 5mg/L  |
| 4.Br <sup>-</sup>               | 5mg/L  |
| 5.NO <sub>3</sub> <sup>-</sup>  | 5mg/L  |
| 6.SO <sub>3</sub> <sup>2-</sup> | 10mg/L |
| 7.SO <sub>4</sub> <sup>2-</sup> | 5mg/L  |
| 8.PO <sub>4</sub> <sup>3-</sup> | 20mg/L |

Column: HS-5A-SP1  
Eluent: KOH 30mM From 0 to 19.5 min and 70mM From 19.6 to 28 min and 30mM From 28.1 to 40min  
Flow rate: 1.0mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C

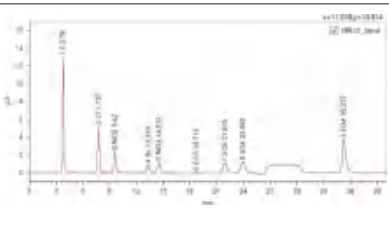
Utilizing HS-5A-SP2 for the analysis  
of twelve types of anions



|                                    |        |
|------------------------------------|--------|
| 1.F <sup>-</sup>                   | 3mg/L  |
| 2.CH <sub>3</sub> COO <sup>-</sup> | 5mg/L  |
| 3.HCOO <sup>-</sup>                | 5mg/L  |
| 4.ClO <sub>2</sub> <sup>-</sup>    | 10mg/L |
| 5.BrO <sub>3</sub> <sup>-</sup>    | 20mg/L |
| 6.Cl <sup>-</sup>                  | 6mg/L  |
| 7.NO <sub>2</sub> <sup>-</sup>     | 15mg/L |
| 8.ClO <sub>3</sub> <sup>-</sup>    | 25mg/L |
| 9.Br <sup>-</sup>                  | 25mg/L |
| 10.NO <sub>3</sub> <sup>-</sup>    | 25mg/L |
| 11.SO <sub>3</sub> <sup>2-</sup>   | 30mg/L |
| 12.SO <sub>4</sub> <sup>2-</sup>   | 30mg/L |

Column: HS-5A-SP2  
Eluent: 32mM KOH  
Flow rate: 1mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C

Utilizing HS-5A-SP2 for the analysis  
according to standard HJ84-2016



|                                 |        |
|---------------------------------|--------|
| 1.F <sup>-</sup>                | 5mg/L  |
| 2.Cl <sup>-</sup>               | 5mg/L  |
| 3.NO <sub>2</sub> <sup>-</sup>  | 5mg/L  |
| 4.Br <sup>-</sup>               | 5mg/L  |
| 5.NO <sub>3</sub> <sup>-</sup>  | 5mg/L  |
| 7.SO <sub>3</sub> <sup>2-</sup> | 10mg/L |
| 8.SO <sub>4</sub> <sup>2-</sup> | 5mg/L  |
| 9.PO <sub>4</sub> <sup>3-</sup> | 20mg/L |

Column: HS-5A-SP2  
Eluent: KOH 35mM From 0 to 24 min and 70mM From 24.1 to 39 min and 35mM From 39.1 to 60min  
Flow rate: 1.0mL/min  
Detector: Suppressed conductivity  
Column Temp: 30°C

Carbonate Anion Exchange Chromatography Column



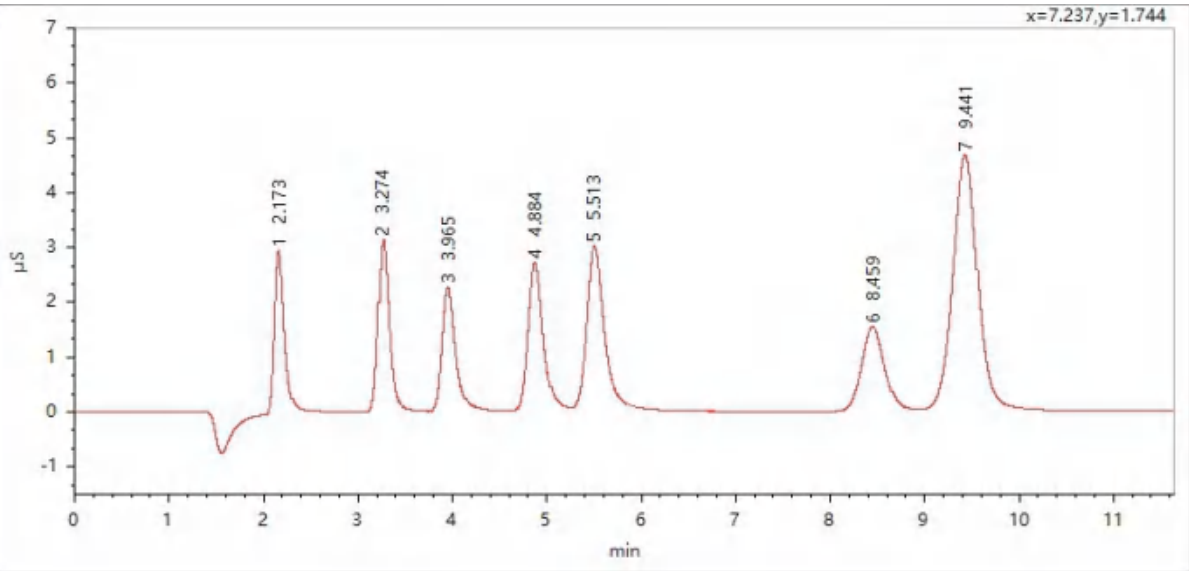
Characteristics

The column utilizes selected quaternization reagents, combined with porous polystyrene/divinylbenzene microspheres and unique surface modification techniques, enabling this series of chromatography columns to possess excellent separation performance for various anions in the carbonate system.

| Catalog Number | Product Model | Product Information | Specifications | ParticleSize | Application Areas                    |
|----------------|---------------|---------------------|----------------|--------------|--------------------------------------|
| IC0203         | CS-5A-SP1     | Carbonate Ion       | 4.0×150mm      | 5μm          | 8types of anions (sulfite detection) |
| IC0204         | CS-5A-P4      | Carbonate Ion       | 4.0×250mm      | 5μm          | 10types of anions                    |
| IC0205         | CS-5A-P3      | Carbonate Ion       | 4.0×150mm      | 5μm          | 7types of anions                     |
| IC0206         | CS-5A-P5      | Carbonate Ion       | 2.0×250mm      | 5μm          | 7types of anions                     |

Carbonate Anion Exchange Chromatography Column CS-5A-P3

- Optimal quaternary ammonium functionalized chromatography column
- Fast peak elution speed, achieving separation of seven common anions within 10 minutes

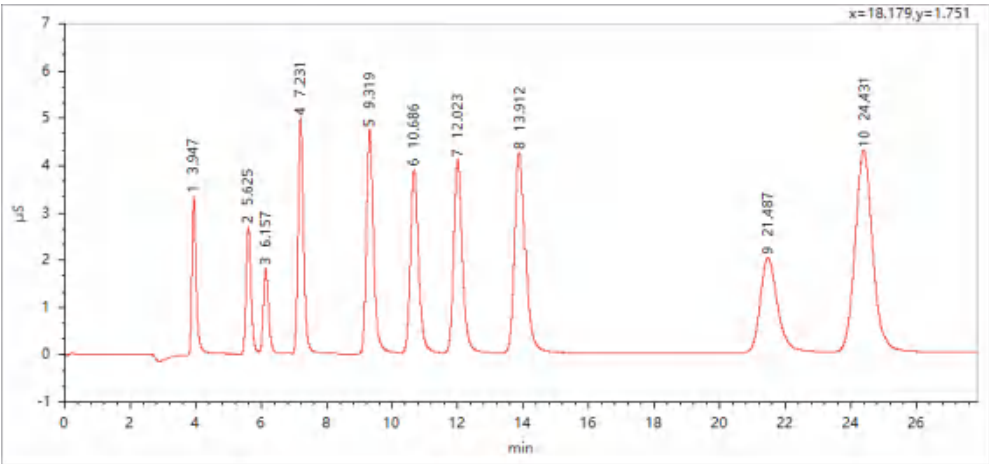


Column : CS-5A-P3  
Eluent : 4.5mM Na<sub>2</sub>CO<sub>3</sub> + 1.0mM NaHCO<sub>3</sub>  
Flow rate : 1.0mL/min  
Detector : Suppressed conductivity  
Column Temp : 30°C

|                                 |        |
|---------------------------------|--------|
| 1.F <sup>-</sup>                | 2mg/L  |
| 2.Cl <sup>-</sup>               | 3mg/L  |
| 3.NO <sub>2</sub> <sup>-</sup>  | 5mg/L  |
| 4.Br <sup>-</sup>               | 10mg/L |
| 5.NO <sub>3</sub> <sup>-</sup>  | 10mg/L |
| 6.PO <sub>4</sub> <sup>3-</sup> | 15mg/L |
| 7.SO <sub>4</sub> <sup>2-</sup> | 15mg/L |

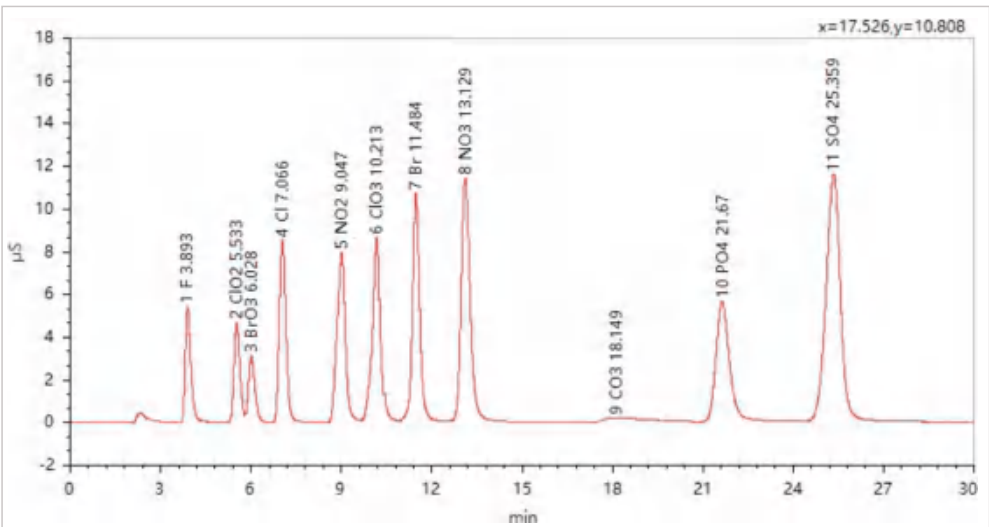
Carbonate Anion Exchange Chromatography Column CS-5A-P4

- High-capacity quaternary ammonium functionalized chromatography column
- Excellent separation efficiency
- Low interference level of carbonate ions in samples
- Applicable to various standards such as HJ84-2016/ GB 5750.10-2023/GB8538-2022



Column : CS-5A-P4  
Eluent : 4.5mM Na<sub>2</sub>CO<sub>3</sub> + 1.0mM NaHCO<sub>3</sub>  
Flow rate : 1.0mL/min  
Detector : Suppressed conductivity  
Column Temp : 30°C

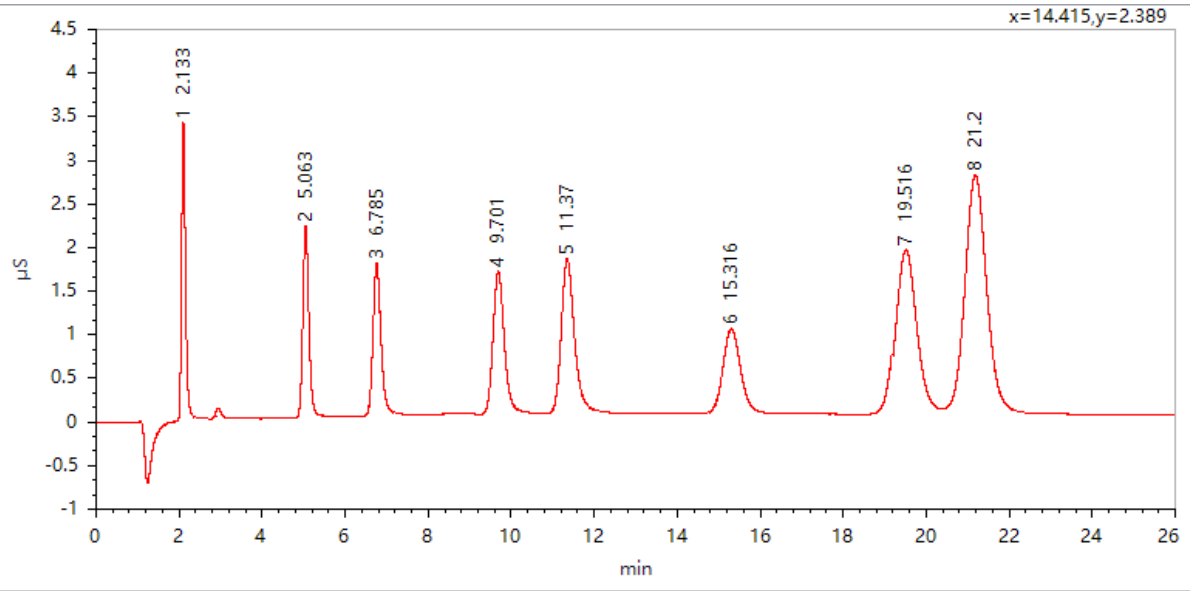
|                                  |        |
|----------------------------------|--------|
| 1.F <sup>-</sup>                 | 3mg/L  |
| 2.ClO <sub>2</sub> <sup>-</sup>  | 10mg/L |
| 3.BrO <sub>3</sub> <sup>-</sup>  | 20mg/L |
| 4.Cl <sup>-</sup>                | 6mg/L  |
| 5.NO <sub>2</sub> <sup>-</sup>   | 15mg/L |
| 6.ClO <sub>3</sub> <sup>-</sup>  | 25mg/L |
| 7.Br <sup>-</sup>                | 25mg/L |
| 8.NO <sub>3</sub> <sup>-</sup>   | 25mg/L |
| 9.PO <sub>4</sub> <sup>3-</sup>  | 40mg/L |
| 10.SO <sub>4</sub> <sup>2-</sup> | 30mg/L |



Interference chromatogram of high concentration carbonate ions on conventional ions

Carbonate Anion Exchange Chromatography Column CS-5A-SP1 for Sulfate Ion

- High-capacity quaternary ammonium functionalized chromatography column
- Exhibits excellent selectivity for sulfate ions
- Capable of equidistant separation of eight anions specified in the HJ84-2016 standard



Column : CS-5A-SP1  
Eluent : 5.0mM Na<sub>2</sub>CO<sub>3</sub> + 1.5mM NaHCO<sub>3</sub>  
Flow rate : 1.2mL/min  
Detector : Suppressed conductivity  
Column Temp : 30°C

|                                 |        |
|---------------------------------|--------|
| 1.F <sup>-</sup>                | 2mg/L  |
| 2.Cl <sup>-</sup>               | 3mg/L  |
| 3.NO <sub>2</sub> <sup>-</sup>  | 5mg/L  |
| 4.Br <sup>-</sup>               | 10mg/L |
| 5.NO <sub>3</sub> <sup>-</sup>  | 10mg/L |
| 6.PO <sub>4</sub> <sup>3-</sup> | 15mg/L |
| 7.SO <sub>3</sub> <sup>2-</sup> | 15mg/L |
| 8.SO <sub>4</sub> <sup>2-</sup> | 15mg/L |

Cation Exchange Chromatography Column



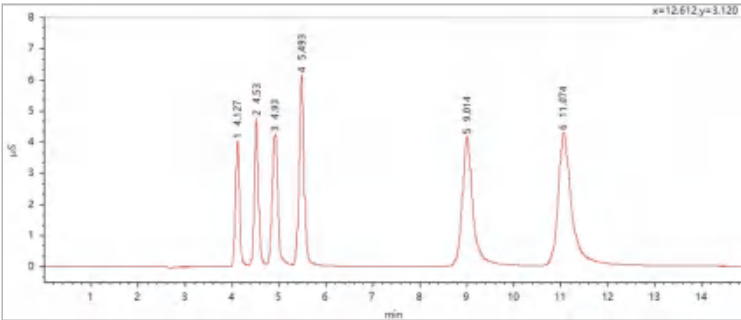
Characteristics

The combination of porous PS/DVB microspheres with unique grafting techniques results in a high-capacity carboxylic acid functionalized chromatography packing material, enabling this column to exhibit excellent separation performance for six common cations, while also providing excellent peak shape for the separation of other methylamines.

| Product Model | Product Information | Specifications | Particle Size | Application Areas                           | Catalog Number |
|---------------|---------------------|----------------|---------------|---------------------------------------------|----------------|
| MS-5C-P1      | MSA                 | 4.6X250mm      | 5μm           | Common monovalent and divalent metal ions   | IC0301         |
| MS-5C-P2      | MSA                 | 4.6X250mm      | 5μm           | 6 types of cations, 3 types of methylamines | IC0302         |
| MS-5C-P2      | MSA                 | 2.0×250mm      | 5μm           | K Na Mg Ca                                  | IC0303         |

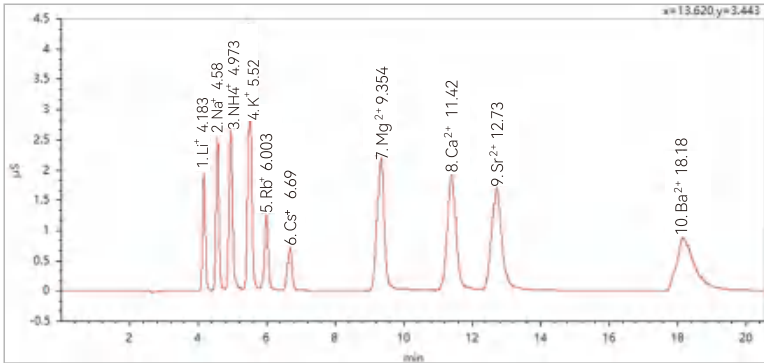
Cation Exchange Chromatography Column MS-5C-P1

- Porous PS/DVB microspheres combined with unique grafting techniques
- Porous PS/DVB microspheres combined with unique grafting techniques
- Low tailing factors for magnesium and calcium ions



Column : MS-5C-P1  
Eluent : 20mM MSA  
Flow rate : 1.0mL/min  
Detector : Suppressed conductivity  
Column Temp : 40°C

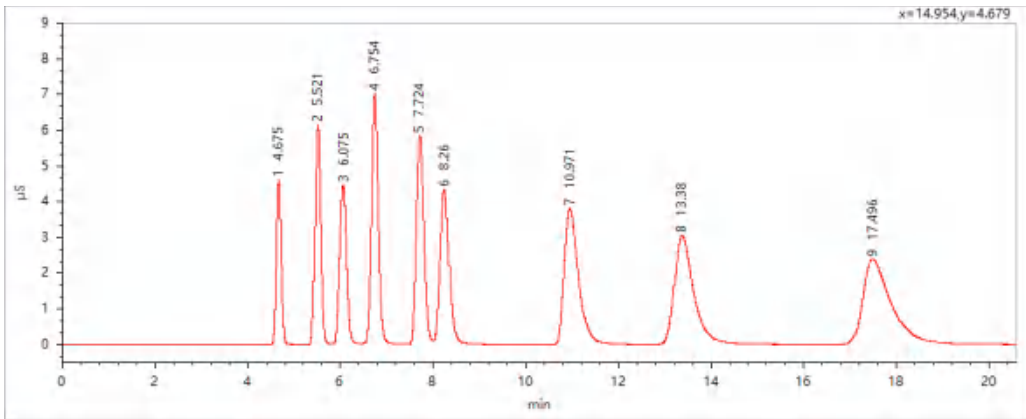
|                                |         |
|--------------------------------|---------|
| 1.Li <sup>+</sup>              | 0.5mg/L |
| 2.Na <sup>+</sup>              | 2.0mg/L |
| 3.NH <sub>4</sub> <sup>+</sup> | 2.5mg/L |
| 4.K <sup>+</sup>               | 5.0mg/L |
| 5.Mg <sup>2+</sup>             | 2.5mg/L |
| 6.Ca <sup>2+</sup>             | 5.0mg/L |



Capable of equidistant separation of other monovalent and divalent metal ions under the same test conditions

MS-5C-P2 Cation Chromatographic Column

- High-capacity carboxylic acid functionalized chromatographic column (5500 µeq/Column)
- Porous PS/DVB microspheres combined with unique grafting technology
- Capable of isocratic separation of six conventional cations and three methylamine substances
- Applicable to various application standards such as HJ 812-2016/HJ 1076-2019



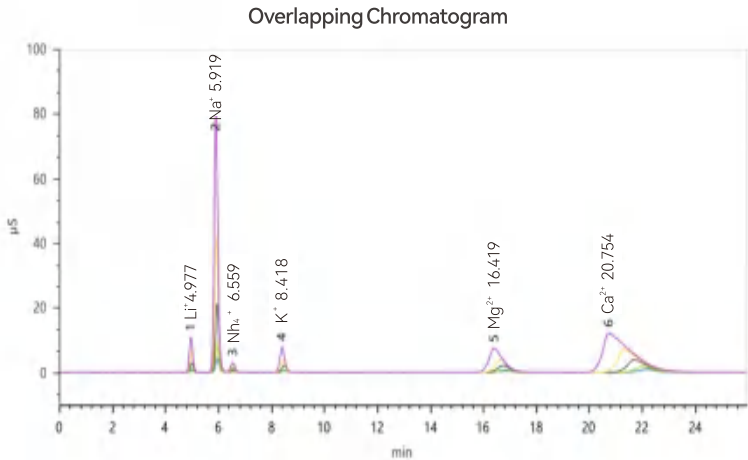
|                                      |         |
|--------------------------------------|---------|
| 1.Li <sup>+</sup>                    | 0.5mg/L |
| 2.Na <sup>+</sup>                    | 2.0mg/L |
| 3.NH <sub>4</sub> <sup>+</sup>       | 2.5mg/L |
| 4.CH <sub>3</sub> NH <sub>2</sub>    | 10mg/L  |
| 5.K <sup>+</sup>                     | 5.0mg/L |
| 6.(CH <sub>3</sub> ) <sub>2</sub> NH | 10mg/L  |
| 7.(CH <sub>3</sub> ) <sub>3</sub> N  | 20mg/L  |
| 8.Mg <sup>2+</sup>                   | 2.5mg/L |
| 9.Ca <sup>2+</sup>                   | 5.0mg/L |

Column: MS-5C-P2  
Eluent: 30mM MSA  
Flow rate: 1.0mL/min  
Detector: Suppressed conductivity  
Column Temp: 40°C

Using MS-5C-P2 for Standard Verification of HJ812-2016

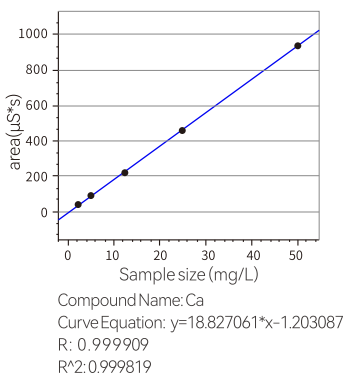
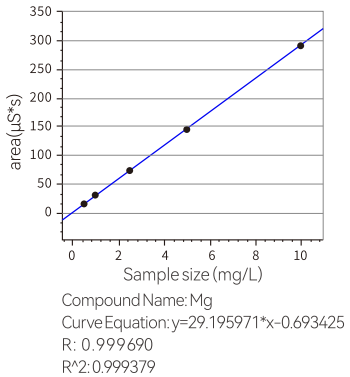
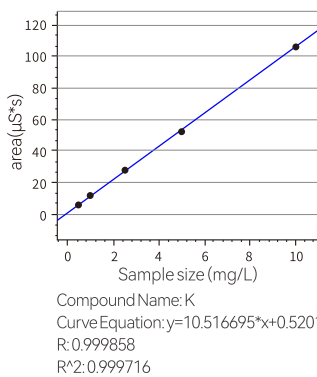
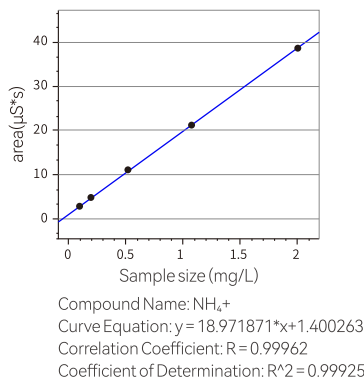
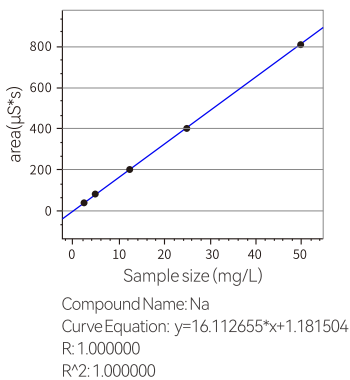
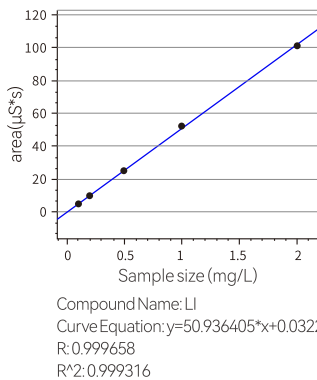
Applicable Standards:

HJ812-2016 Determination of Soluble Cations (Li<sup>+</sup>, Na<sup>+</sup>, NH<sub>4</sub><sup>+</sup>, K<sup>+</sup>, Ca<sup>2+</sup>, Mg<sup>2+</sup>) in Water by Ion Chromatography;  
HJ1076-2019 Determination of Ammonia, Methylamine, Dimethylamine, and Trimethylamine in Ambient Air

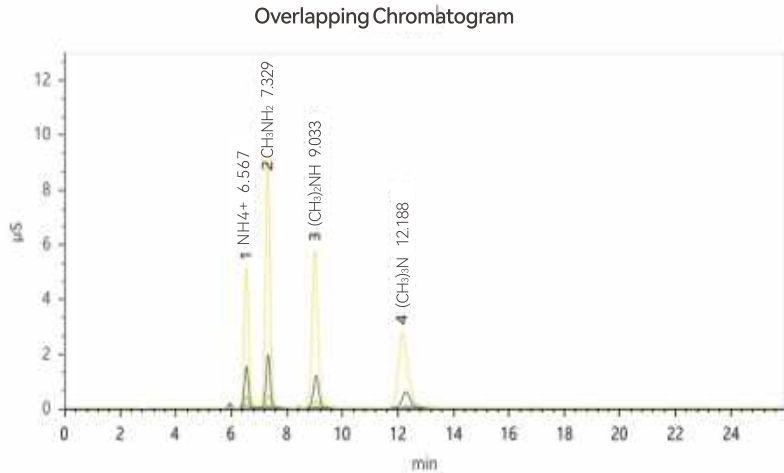


| Ion name                     | Standard series mass concentration (mg/L) |     |      |      |      |
|------------------------------|-------------------------------------------|-----|------|------|------|
| Li <sup>+</sup>              | 0.1                                       | 0.2 | 0.5  | 1.0  | 2.0  |
| Na <sup>+</sup>              | 2.5                                       | 5.0 | 12.5 | 25.0 | 50.0 |
| NH <sub>4</sub> <sup>+</sup> | 0.1                                       | 0.2 | 0.5  | 1.0  | 2.0  |
| K <sup>+</sup>               | 0.5                                       | 1.0 | 2.5  | 5.0  | 10.0 |
| Mg <sup>2+</sup>             | 0.5                                       | 1.0 | 2.5  | 5.0  | 10.0 |
| Ca <sup>2+</sup>             | 2.5                                       | 5.0 | 12.5 | 25.0 | 50.0 |

Column: MS-5C-P2  
Eluent: 30mM MSA  
Flow rate: 1.0mL/min  
Detector: Suppressed conductivity  
Column Temp: 40°C

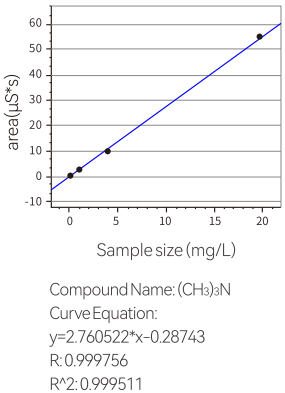
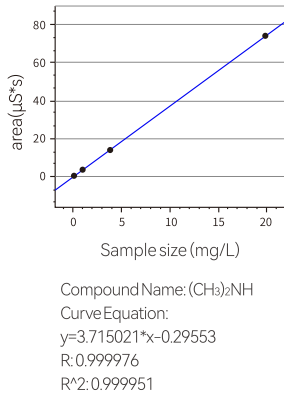
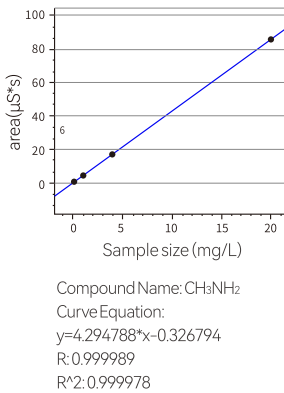
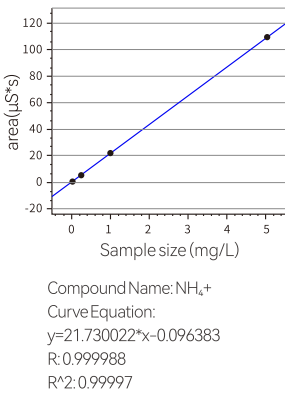


Using MS-5C-P2 for Standard Verification of HJ1076-2019



| Standard series mass concentration (mg/L) |       |      |      |      |      |
|-------------------------------------------|-------|------|------|------|------|
| Compound Name                             | 1     | 2    | 3    | 4    | 5    |
| NH <sub>4</sub> <sup>+</sup>              | 0.025 | 0.05 | 0.25 | 1.00 | 5.00 |
| CH <sub>3</sub> NH <sub>2</sub>           | 0.1   | 0.2  | 1.0  | 4.0  | 20.0 |
| (CH <sub>3</sub> ) <sub>2</sub> NH        | 0.1   | 0.2  | 1.0  | 4.0  | 20.0 |
| (CH <sub>3</sub> ) <sub>3</sub> N         | 0.1   | 0.2  | 1.0  | 4.0  | 20.0 |

Column: MS-5C-P2  
Eluent: 30mM MSA  
Flow rate: 1.0mL/min  
Detector: Suppressed conductivity  
Column Temp: 40°C



Liquid Chromatography Column



Characteristics

Characteristics: The conventional liquid chromatography columns independently developed by NovaChrom utilize uniform silica gel microspheres, combined with advanced and stable bonding phase modification techniques, enabling the separation of analytes with different hydrophobicities. These columns have a wide range of applications and offer high cost-effectiveness. The hybrid series adopt organic-inorganic hybrid silica gel microspheres, combined with novel bonding technologies, suitable for applications requiring a wide pH range and various mobile phase systems.

Ordering information Nova Atom for liquid chromatography columns

| Product Model   | Product Information                              | Specifications | Particle Size | pH Range | Catalog Number |
|-----------------|--------------------------------------------------|----------------|---------------|----------|----------------|
| Nova Atom C18   | Liquid phase C18 analytical column               | 4.6×250mm      | 5μm           | 1.5–9.5  | LC0101         |
| Nova Atom PC18  | Hydrophilic C18 analytical column                | 4.6×125mm      | 3μm           | 1.5–9.0  | LC2012         |
| Nova Atom PC18  | Hydrophilic C18 analytical column                | 4.6×250mm      | 5μm           | 1.5–9.0  | LC0103         |
| Nova Atom AQC18 | Hydrophilic C18 analytical column                | 4.6×250mm      | 5μm           | 1.5–9.0  | LC0107         |
| Nova Atom SC18  | Wide pH range C18 liquid analytical column       | 4.6×250mm      | 5μm           | 1.5–11   | LC0105         |
| Nova Atom C8    | Liquid phase C8 analytical column                | 4.6×250mm      | 5μm           | 2–8      | LC0201         |
| Nova Atom Ph    | Liquid phase phenyl analysis column              | 4.6×250mm      | 5μm           | 2–8      | LC0301         |
| Nova Atom NH2   | Liquid phase amino group analytical column       | 4.6×250mm      | 5μm           | 2–8      | LC0401         |
| Nova Atom CN    | Liquid-phase cyano-based analytical column       | 4.6×250mm      | 5μm           | 2–8      | LC0501         |
| Nova Atom Diol  | Liquid-phase diol-based analytical column        | 4.6×250mm      | 5μm           | 2–8      | LC2007         |
| Nova Atom PFP   | Liquid phase pentafluorobenzyl analytical column | 4.6×250mm      | 5μm           | 2–8      | LC2005         |
| Nova Atom Sil   | Liquid phase pure silica gel analytical column   | 4.6×250mm      | 5μm           | 2–7      | LC2006         |

Ordering information Nova Element for liquid chromatography columns

| Product Model      | Product Information                                   | Specifications | Particle Size | pH Range | Catalog Number |
|--------------------|-------------------------------------------------------|----------------|---------------|----------|----------------|
| Nova Element tC18  | Liquid phase hybrid C18 analytical column             | 4.6×250mm      | 5μm           | 1–12     | LC1001         |
| Nova Element AQC18 | Liquid phase hybrid hydrophilic C18 analytical column | 4.6×250mm      | 5μm           | 1–12     | LC1003         |
| Nova Element tC8   | Liquid phase hybrid C8 analytical column              | 4.6×250mm      | 5μm           | 1–12     | LC1004         |
| Nova Element tPh   | Liquid phase hybrid phenyl analytical column          | 4.6×250mm      | 5μm           | 1–12     | LC1002         |
| Nova Element NH2   | Liquid phase hybrid amino group analytical column     | 4.6×250mm      | 5μm           | 1–9      | LC1005         |
| Nova Element Amide | Liquid phase hybrid Amide analytical column           | 4.6×250mm      | 5μm           | 2–11     | LC1007         |

Ordering information Liquid phase dedicated column

| Product Model      | Product Information                                               | Specifications | Particle Size | pH Range | Catalog Number |
|--------------------|-------------------------------------------------------------------|----------------|---------------|----------|----------------|
| Nova Proton C18–CM | Liquid chromatography column for traditional Chinese medicine     | 4.6×250mm      | 5μm           | 2–9      | LC2003         |
| Nova Proton C18–P  | Liquid phase additive special column                              | 4.6×250mm      | 5μm           | 1.5–9    | LC2001         |
| Nova Proton AA     | Liquid phase amino acid specific column                           | 4.6×250mm      | 5μm           | 1.5–9    | LC2002         |
| Nova Proton PAH    | Liquid chromatography column for polycyclic aromatic hydrocarbons | 4.6×250mm      | 5μm           | 1.5–9    | LC2019         |

Guard Column Series

Direct-connection guard columns,Tubular-connection guard columns (low dead volume), and various other models

Nova Atom™ HPLC Columns

The Nova Atom™ HPLC Columns are developed by Anhui NovaChrom New Materials Co., Ltd., specifically designed for the separation of small molecule compounds. Using spherical fully porous silica gel with impurity metal content below 10 ppm as the matrix, employing advanced surface bonding technology and end-capping manufacturing processes, thereby possessing advantages of high column efficiency, mechanical strength, and performance. The variety of bonded stationary phases and broad range of selectivity enable effective separation of acidic, alkaline, and neutral compounds, ensuring excellent peak shapes. Strict production standards and testing methods guarantee outstanding batch-to-batch reproducibility. Currently, this series of products have achieved full localization from research and development to production and technical support.

Nova Atom Types of bonding phases

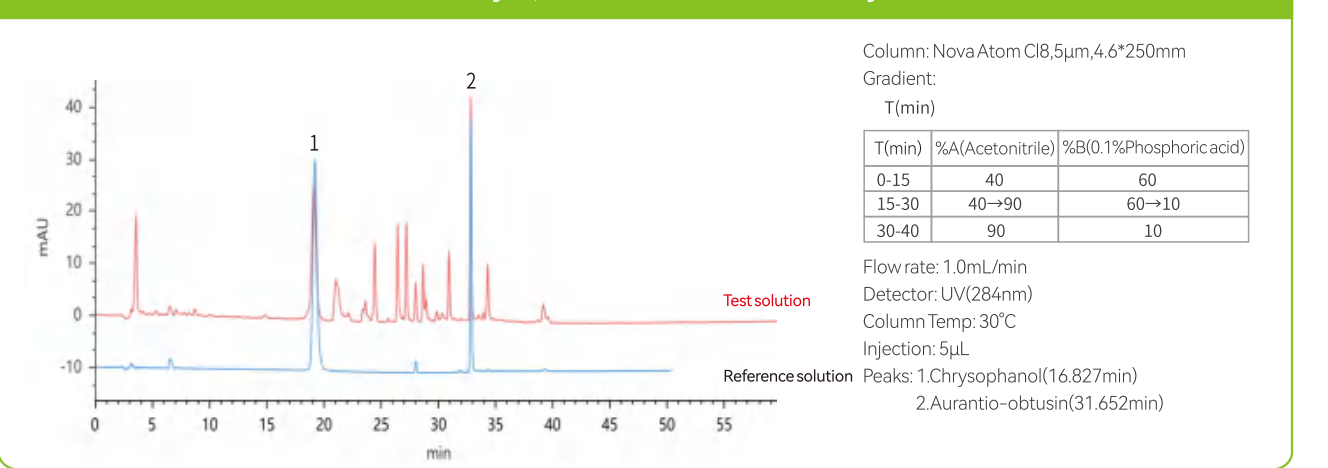
| Separate Mode                                     | opposition                                      |                                                    |                                                 |                                              |                                               |                                                       |                                   | positive phase /HILIC                                    |                                            |                                    |                                                        |
|---------------------------------------------------|-------------------------------------------------|----------------------------------------------------|-------------------------------------------------|----------------------------------------------|-----------------------------------------------|-------------------------------------------------------|-----------------------------------|----------------------------------------------------------|--------------------------------------------|------------------------------------|--------------------------------------------------------|
| Product Name                                      | C18                                             | Pc18                                               | AQC18                                           | SC18                                         | C8                                            | Ph                                                    | PFP                               | NH2                                                      | CN                                         | Diol                               | Sil                                                    |
| Bonded Phase                                      | octadecyl (ODS)                                 | octadecyl (ODS)                                    | octadecyl (ODS)                                 | octadecyl (ODS)                              | octyl                                         | phenyl                                                | Five fluorobenzyl                 | aminopropyl                                              | cyan                                       | Diol group                         | not have                                               |
| Base Material                                     | Full porous silicone                            |                                                    |                                                 |                                              |                                               |                                                       |                                   |                                                          |                                            |                                    |                                                        |
| Partide Size                                      | 3μ m/5μm                                        | 3μ m/5μm                                           | 5μm                                             | 5μm                                          | 5μm                                           | 5μm                                                   | 5μm                               | 5μm                                                      | 5μm                                        | 5μm                                | 5μm                                                    |
| Pore Size                                         | 120Å                                            | 100Å                                               | 120Å                                            | 120Å                                         | 120Å                                          | 120Å                                                  | 100Å                              | 120Å                                                     | 120Å                                       | 120Å                               | 120Å                                                   |
| Surface Area                                      | 350m2/g                                         | 450m2/g                                            | 300m2/g                                         | 350m2/g                                      | 350m2/g                                       | 350m2/g                                               | 450m2/g                           | 350m2/g                                                  | 350m2/g                                    | 350m2/g                            | 350m2/g                                                |
| Carbon Load                                       | 16%                                             | 16%                                                | 15%                                             | 19%                                          | 9%                                            | 8%                                                    | 10%                               | 5%                                                       | 6%                                         | 8%                                 | 0%                                                     |
| Whether to seal the tail                          | yes                                             | yes                                                | yes                                             | yes                                          | yes                                           | yes                                                   | yes                               | deny                                                     | deny                                       | deny                               | deny                                                   |
| pH Range                                          | 1.5–9.5                                         | 1.5–9.0                                            | 1.5–9.0                                         | 1.5–11                                       | 2–8                                           | 2–8                                                   | 2–8                               | 2–8                                                      | 2–8                                        | 2–8                                | 2–7                                                    |
| Water-phase compatibility                         | <95% aqueous phase                              | 100% Water phase                                   | 100% Water phase                                | <95% aqueous phase                           | <95% aqueous phase                            | <95% aqueous phase                                    | <95% aqueous phase                | <95% aqueous phase                                       | <95% aqueous phase                         | <95% aqueous phase                 | 100% Water phase                                       |
| Of the same trade or occupation Standard products | Agilent ZORBAX Eclipse XDB–C18 Ultimate® XB–C18 | Agilent ZORBAX Eclipse Plus–C18 Ultimate® Plus–C18 | Agilent ZORBAX StableBond Aq Ultimate® – AQ–C18 | Agilent ZORBAX Extend–C18 Ultimate® – XS–C18 | Agilent ZORBAX Eclipse XDB–C8 Ultimate® XB–C8 | Agilent ZORBAX Eclipse XDB–Phenyl Ultimate® XB–Phenyl | Agilent Pursuit PFP Ultimate® PFP | Agilent ZORBAX Original NH2 Ultimate® XB–NH <sub>2</sub> | Agilent ZORBAX Original CN Ultimate® XB–CN | ShimNex HE Diol–120 Ultimate® Diol | Agilent ZORBAX Original Sil Ultimate® SiO <sub>2</sub> |

Nova Atom C18 Column

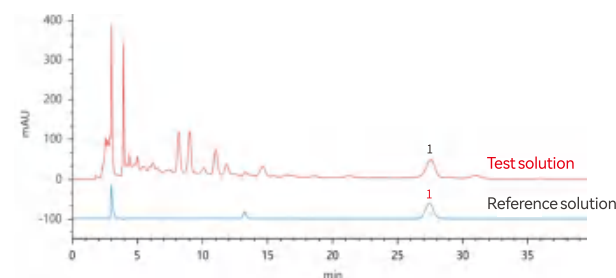
Characteristics:

Utilizing spherical fully porous silica gel as the matrix, employing advanced surface bonding technology and end-capping manufacturing techniques, and prepared through optimized packing processes, the Nova Atom C18 column is an ideal choice for analyzing small molecule compounds. It offers wide applicability, excellent stability, and batch-to-batch reproducibility, making it suitable for separating compounds with different hydrophobicities.

For routine analysis, Nova Atom C18 is used to analyze rutin

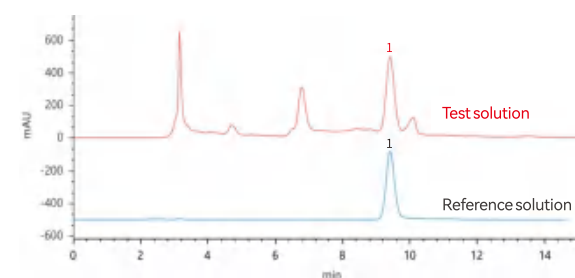


For routine analysis, Nova Atom C18 is used to analyze Albizia bark



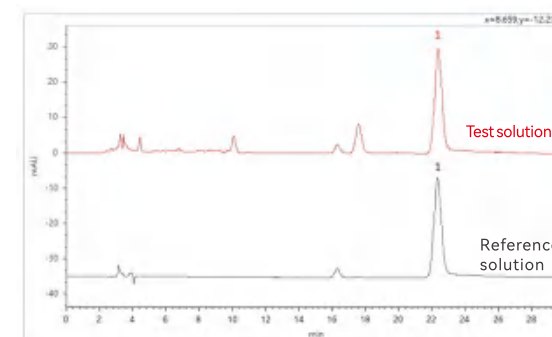
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Mobile phase: 18/82 v/v Acetonitrile/0.04% Phosphoric acid  
Flow rate: 1.0 mL/min  
Detector: UV(204nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Peaks: 1. (-)-Syringaresinol-4-O- $\beta$ -D-apiofuranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside

For routine analysis, Nova Atom C18 is used to analyze Radix Paeoniae Rubra



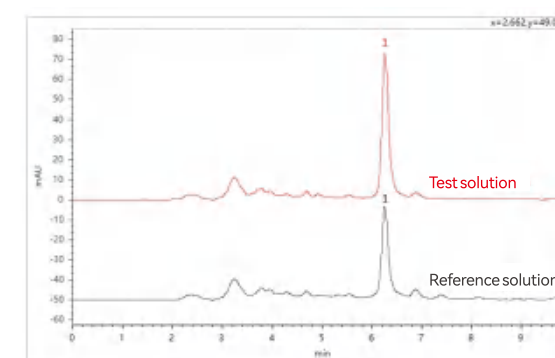
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Mobile phase: 40/65 v/v Methyl alcohol/0.05 mol/L Potassium Phosphate Monobasic solution  
Flow rate: 1.0 mL/min  
Detector: UV(230nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Peaks: 1. Paeoniflorin (9.423 min)

For routine analysis, Nova Atom C18 is used to analyze Radix Paeoniae Alba



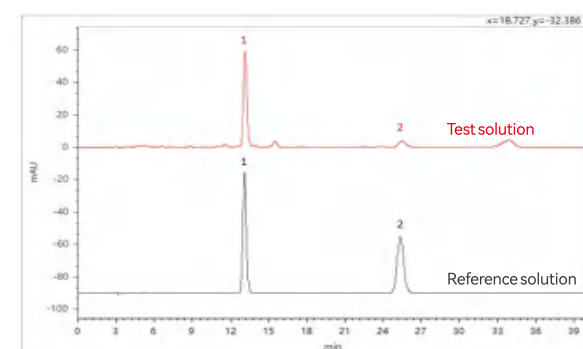
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Mobile phase: 14/86 v/v Acetonitrile/0.1% Phosphoric acid  
Flow rate: 1.0 mL/min  
Detector: UV(230nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Peaks: 1. Paeoniflorin (22.456 min)

For routine analysis, Nova Atom C18 is used to analyze Herba Lycopodii



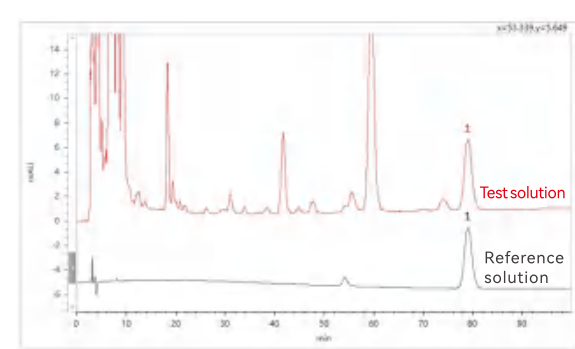
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Mobile phase: 50/50 v/v Acetonitrile/0.4% Phosphoric acid  
Flow rate: 1.0 mL/min  
Detector: UV(365nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Peaks: 1. Kaempferol (6.271 min)

For routine analysis, Nova Atom C18 is used to analyze Rhizoma Bupleuri



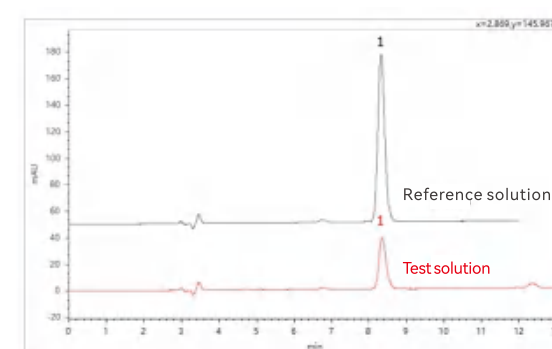
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 75% Methyl alcohol/25% H<sub>2</sub>O  
Flow rate: 1.0 mL/min  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Detector: UV(321nm)  
Compounds:  
1. Praeruptorin A (13.154 min)  
2. Praeruptorin B (25.47 min)

For routine analysis, Nova Atom C18 is used to analyze Corydalis yanhusuo



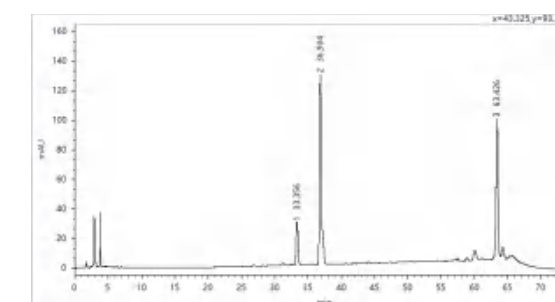
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 55% Methyl alcohol/45% 0.1% Phosphoric acid pH 6.0  
Flow rate: 1.0 mL/min  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Detector: UV(280nm)  
Compounds:  
1. Tetrahydropalmatine (79.132 min)

For routine analysis, Nova Atom C18 is used to analyze Fructus Piperis



Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 77/23 v/v Methyl alcohol/H<sub>2</sub>O  
Flow rate: 1.0 mL/min  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Detector: UV(343nm)  
Compounds: 1. Piperine (8.329 min)

For routine analysis, Nova Atom C18 is used to analyze Radix Notoginseng

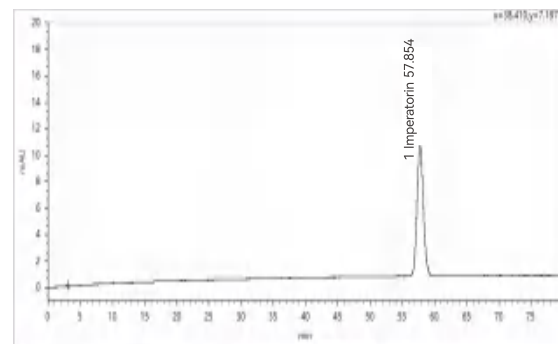


Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent:

| T(min) | %A(Acetonitrile)    | %B(H <sub>2</sub> O) |
|--------|---------------------|----------------------|
| 0-12   | 19                  | 81                   |
| 12-60  | 19 $\rightarrow$ 36 | 81 $\rightarrow$ 64  |
| 60-75  | 36 $\rightarrow$ 19 | 64 $\rightarrow$ 81  |

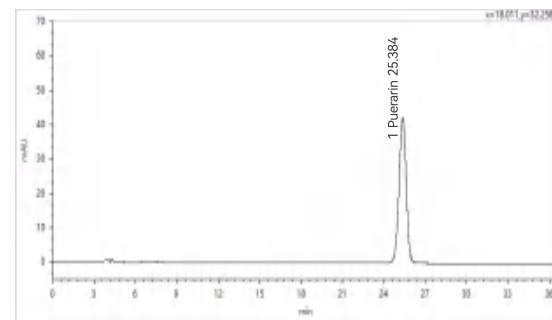
Flow rate: 1.0 mL/min  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Detector: UV(203nm)  
Compounds: 1. Notoginsenoside R1  
2. Ginsenoside Rg1  
3. Ginsenoside-Rb1

For routine analysis, Nova Atom C18 is used to analyze Angelica root



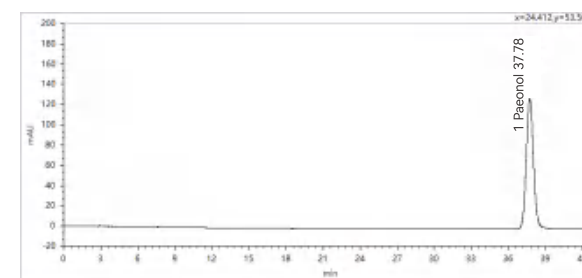
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Mobile phase: 55/45 v/v Methyl alcohol/H<sub>2</sub>O  
Flow rate: 1.0mL/min  
Detector: UV(300nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L

For routine analysis, Nova Atom C18 is used to analyze Kudzu root



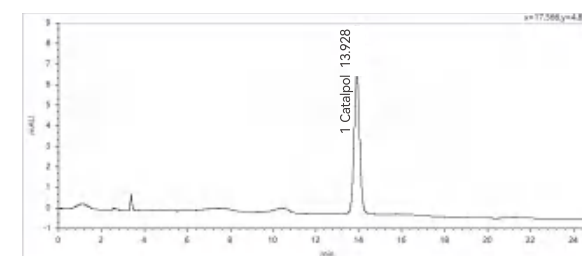
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Mobile phase: 25/75 v/v Methyl alcohol/H<sub>2</sub>O  
Flow rate: 1.0mL/min  
Detector: UV(250nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L

For routine analysis, Nova Atom PC18 is used to analyze Cortex Moutan



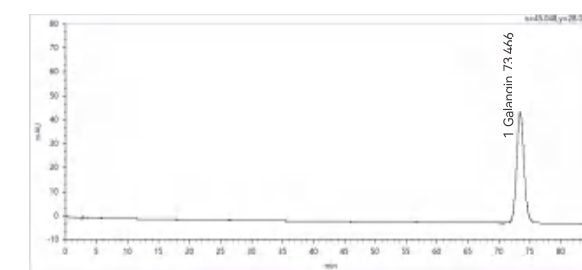
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 45/55 v/v Methyl alcohol/H<sub>2</sub>O  
Flow rate: 1.0mL/min  
Detector: UV(274nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L

For routine analysis, Nova Atom PC18 is used to analyze Rehmannia root



Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 5/95 v/v Methyl alcohol/0.1% Phosphoric acid  
Flow rate: 1.0mL/min  
Detector: UV(203nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L

For routine analysis, Nova Atom PC18 is used to analyze Rhizoma Kaempferiae



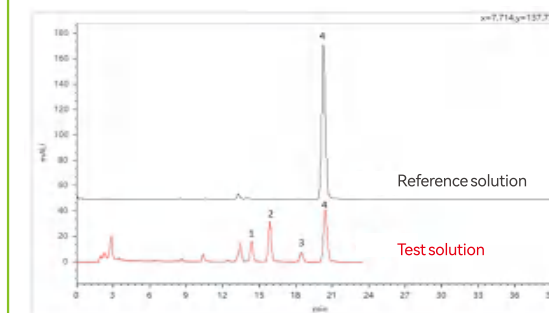
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 55/45 v/v Methyl alcohol/0.2% Phosphoric acid  
Flow rate: 1.0mL/min  
Detector: UV(266nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L

## Nova Atom SC18 Column

### Characteristics:

Narrow pore size distribution ; high bonding density; suitable for purification of peptides with low molecular weight, and other compounds; strong acid and alkali resistance, high durability.

For routine analysis, Nova Atom SC18 is used to analyze Coptis chinensis



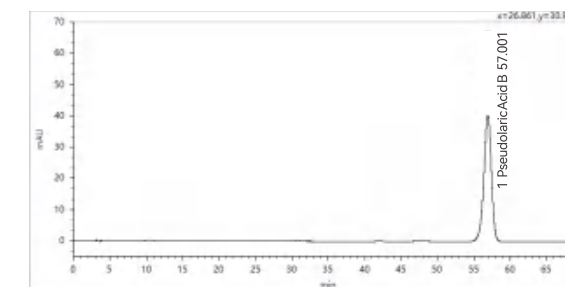
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 50/50 v/v methanol/0.05mol/L potassium dihydrogen phosphate solution (with 0.4g of sodium dodecyl sulfate per 100ml, adjusted to pH 4.0 with phosphoric acid)  
Flow rate: 1.0mL/min  
Detector: UV(345nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L  
Compounds: 1. Epiberberine  
2. Coptisine  
3. Palmatine  
4. Berberine chloride

## Nova Atom C8 Column

### Characteristics:

Suitable for the analysis of compounds with high retention on C18 phase, i.e., more hydrophobic compounds.

Chinense Golden Larch Bark



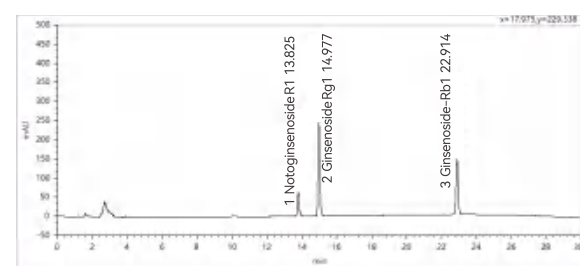
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 50/50 v/v Methyl alcohol/1% Acetic Acid  
Flow rate: 1.0mL/min  
Detector: UV(260nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L

## Nova Atom PC18 Column

### Characteristics:

Utilizing a novel end-capping technology to minimize silanol activity, with superior performance; high surface area, retention, and sample loading capacity; suitable for analyzing both hydrophilic and hydrophobic compounds; provides excellent peak shapes for acidic, alkaline, and neutral compounds, suitable for 100% aqueous phase systems.

For routine analysis, Nova Atom PC18 is used to analyze Salvia miltiorrhiza root

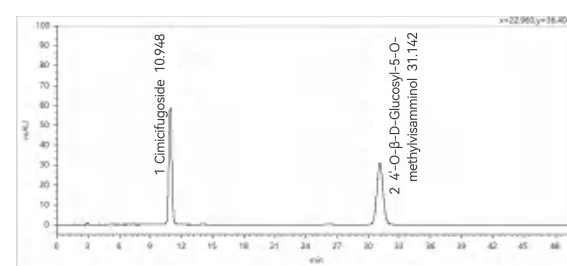


Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent:

| T(min) | %A(Acetonitrile) | %B(H <sub>2</sub> O) |
|--------|------------------|----------------------|
| 0-20   | 20→40            | 80→60                |
| 20-26  | 40→20            | 60→80                |

Flow rate: 1.0mL/min  
Detector: UV(203nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L

For routine analysis, Nova Atom PC18 is used to analyze Saposhnikovia divaricata root



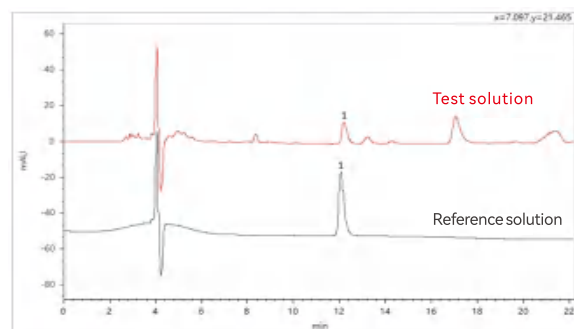
Column: Nova Atom C18, 5 $\mu$ m, 4.6\*250mm  
Eluent: 40/60 v/v Methyl alcohol/H<sub>2</sub>O  
Flow rate: 1.0mL/min  
Detector: UV(254nm)  
Column Temp: 30°C  
Injection: 10 $\mu$ L

## Nova Atom NH2 Column

### Characteristics:

Can be used in both normal phase and reverse phase modes, especially for separating sugars using acetonitrile/water as the mobile phase; also suitable for separating alkaline compounds for normal phase mode.

#### Detection of Betaine in Goji Berries



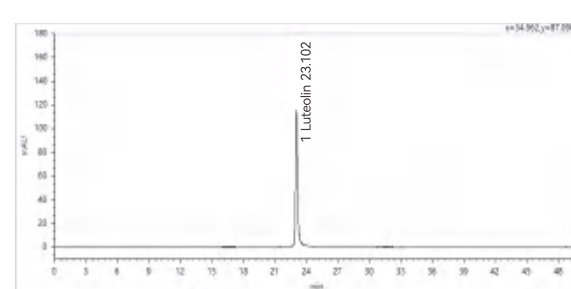
Column: Nova Atom NH2, 5μm, 4.6\*250mm  
Eluent: 85/15 v/v Acetonitrile/H<sub>2</sub>O  
Flow rate: 1.0mL/min  
Detector: UV(195nm)  
Column Temp: 30°C  
Injection: 10μL  
Compounds: 1. Betaine

## Nova Atom Ph Column

### Characteristics:

Based on hydrophobic and π-π interactions, providing selectivity for aromatic and heterocyclic compounds; complementary selectivity to C18 stationary phase.

#### Detection of Luteolin in Honeysuckle



Column: Nova Atom Ph, 5μm, 4.6\*250mm  
Eluent:

| T(min) | %A(Acetonitrile) | %B(0.5%Acetate A analytical Titrant) |
|--------|------------------|--------------------------------------|
| 0-15   | 10→20            | 90→80                                |
| 15-30  | 20               | 80                                   |
| 30-40  | 20→30            | 80→70                                |

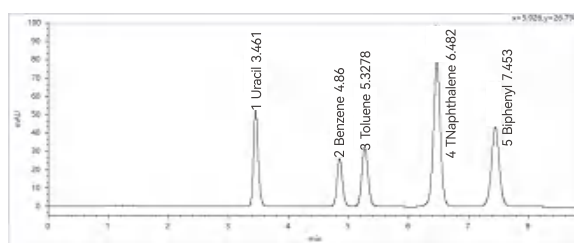
Flow rate: 1.0mL/min  
Detector: UV(350nm)  
Column Temp: 30°C  
Injection: 10μL

## Nova Atom CN Column

### Characteristics:

Less hydrophobic than C18 and C8, enabling rapid analysis of compounds that are strongly retained on C18 and C8 columns; suitable for normal phase, reverse phase, and HILIC separation modes; excellent batch-to-batch reproducibility and stability.

#### Standard Chromatograms (Five Standard Samples)



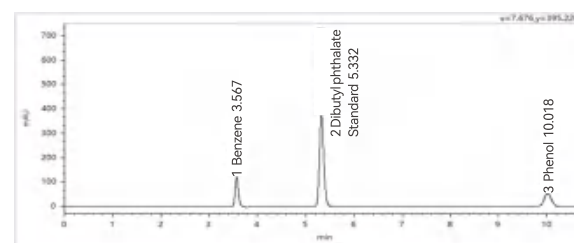
Column: Nova Atom CN, 5μm, 4.6\*250mm  
Eluent: 60/40 v/v Methyl alcohol/H<sub>2</sub>O  
Flow rate: 1.0mL/min  
Detector: UV(254nm)  
Column Temp: 30°C  
Injection: 10μL  
Compounds: 1. Uracil  
2. Benzene  
3. Toluene  
4. Naphthalene  
5. Biphenyl

## Nova Atom Diol Column

### Characteristics:

Diol (dihydroxy) chromatography column, suitable for most normal phase chromatography applications, also serves as the stationary phase for HILIC mode, used for separation of peptides, proteins, polar drug molecules, etc., also suitable for separation of organic acids and their polymers.

#### Standard Chromatograms (Three Standard Samples)



Column: Nova Atom Diol, 5μm, 4.6\*250mm  
Eluent: 10/90 v/v Ethyl acetate/Hexane  
Flow rate: 1.0mL/min  
Detector: UV(254nm)  
Column Temp: 30°C  
Injection: 10μL  
Compounds: 1. Benzene  
2. Dibutyl phthalate Standard  
3. Phenol

## Hybrid Chromatographic Columns from the Nova Element Series

### Hybrid Particles

Hybrid Particles: The maximum pH of conventional silica gel particles in the mobile phase is 8. Under high pH conditions, silica gel filler will dissolve. However, after doping with organic monomers, nucleophilic substitution reactions slow down, reducing the dissolution rate of particle surfaces, thereby extending the lifespan of chromatographic columns. Hybrid particles combine the advantages of organic and inorganic packing materials, providing both high mechanical strength and the wide pH stability range of polymer packing materials.

### Tri-functional Bonding Technology

Tri-functional Bonding Technology: In traditional single-functional group octadecyl (Figure 1A) bonding methods, dimethyloctadecyl chlorosilane is used to react with hydroxyl groups on the silica gel surface, where the octadecyl group is connected to the silica gel surface via a silicon-oxygen bond. However, The silicon-oxygen bond is easy to break under acidic conditions, causing the octadecyl group to detach from the surface of the silica gel, leading to column failure. NovaChrom has developed a method for tri-functional group octadecyl bonding, using octadecyl trichlorosilane as the raw material, allowing the octadecyl group to be connected to the silica gel surface via three silicon-oxygen bonds (Figure 1B). This technology significantly improves the stability of the bonded phase and markedly enhances the column's lifespan under wide pH conditions.

### Technical Advantage

1

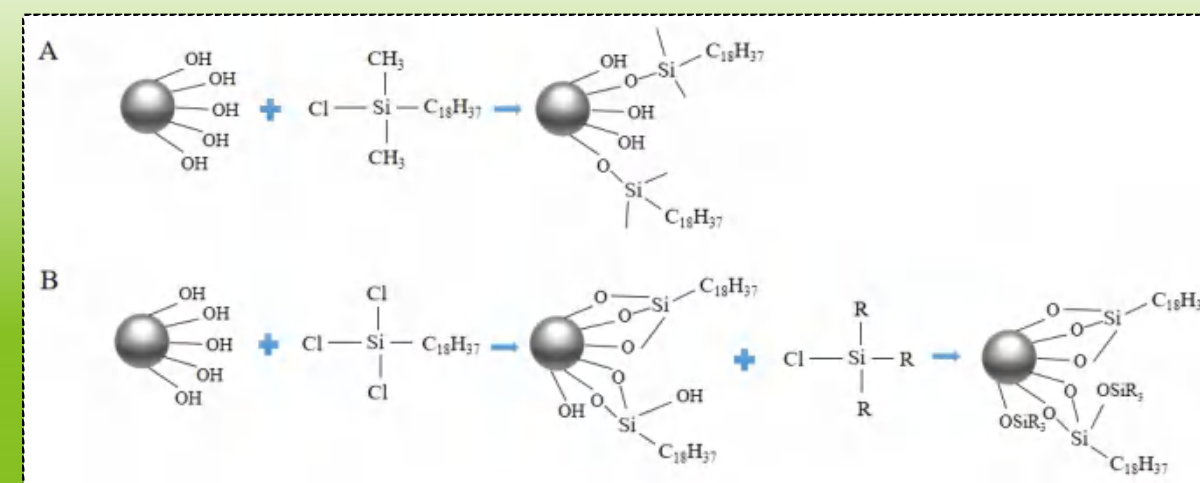
Hybrid particle chromatography filler has excellent pH resistance stability.

2

After bonding and then sealing, the silanol activity is reduced to make the alkaline compound peak shape more perfect.

3

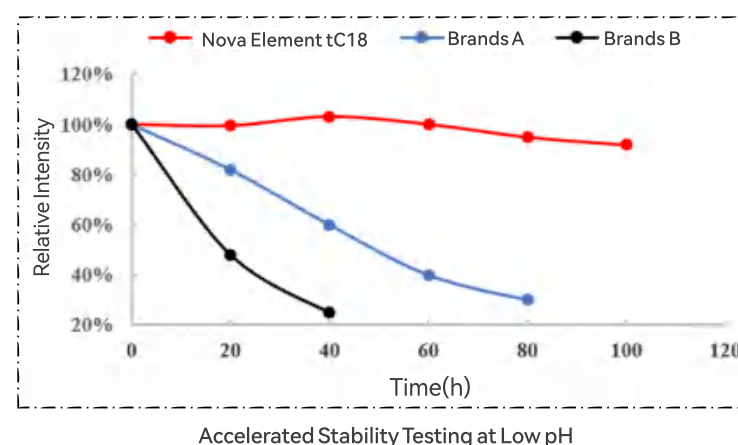
Selectivity of a Wide Range of Mobile Phase pH Development Methods



## Nova Element series columns accelerate stability testing at low pH

|                         |                                                                                                                                                                                    |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Experimental Conditions | Rinsing Solution: Aqueous solution containing 1% TFA<br>pH = 1<br>Temperature: 80°C<br>Detection: Monitor changes in column retention strength at regular intervals during rinsing |
|                         |                                                                                                                                                                                    |
| Column Testing          | Column: Nova Element tC18 (5μm, 4.6*250mm)<br>Mobile Phase: Methanol/Water = 80/20<br>Flow Rate: 1 mL/min<br>Injection Volume: 5μL<br>Detector: UV 254nm<br>Analyte: Naphthalene   |
|                         |                                                                                                                                                                                    |

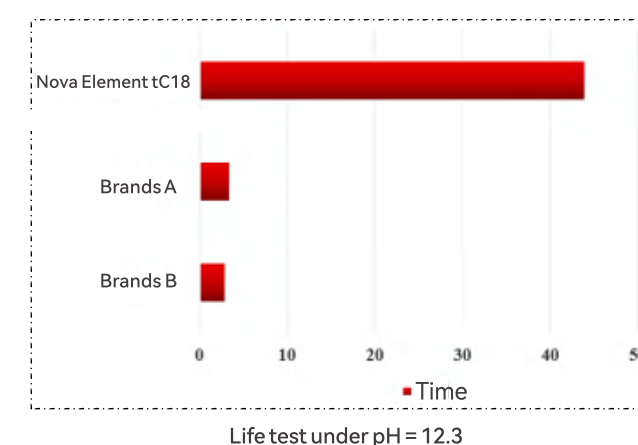
To investigate the stability of Nova Element series hybrid chromatographic columns under low pH mobile phase conditions, we used an aqueous solution of 1%TFA at pH=1,80°C for continuous flushing for about 100 hours. Naphthalene was employed as the analyte to monitor column retention. As depicted in Figure 2, the hybrid columns exhibited only a slight decrease in efficiency and minimal changes in retention capability after approximately 100 hours of rinsing. In contrast, two conventional single-functional group bonded chromatographic columns from another brand showed a significant decrease in efficiency within less than 30 hours of rinsing. This comparison clearly demonstrates the excellent stability of the three-functional group bonded packing material under low pH conditions.



## Investigation of the Lifetime of Nova Element Series Chromatographic Columns at Extreme pH 12.3

|                                |                                                                                                                                                                                      |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Experimental Conditions        | Rinsing Solution: Sodium hydroxide aqueous solution<br>pH = 12.3<br>Temperature: 50°C<br>Detection: Monitor changes in column retention strength at regular intervals during rinsing |
|                                |                                                                                                                                                                                      |
| Chromatographic Column Testing | Column: Nova Element tC18 (5μm, 4.6*250mm)<br>Mobile Phase: Acetonitrile/Water = 70/30<br>Flow Rate: 0.8mL/min<br>Injection Volume: 5μL<br>Detector: UV 254nm<br>Analyte: Anthracene |
|                                |                                                                                                                                                                                      |

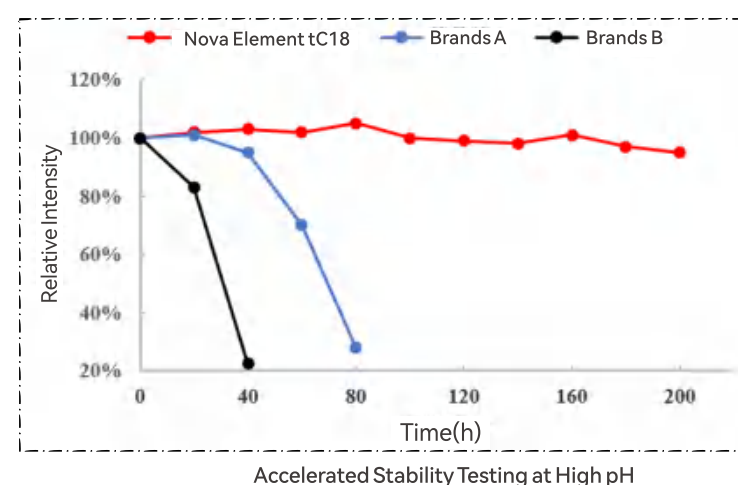
In order to investigate the lifetime of Nova Element series hybrid chromatographic columns at the extreme pH, we used a 0.02mol/L NaOH solution with pH adjusted to 12.3 and rinsed the columns at 50°C. Anthracene was employed as the test compound to explore the time required for the efficiency of the columns to decrease by half. As shown in Figure 4, under such extreme conditions, the lifetimes of two conventional silica gel chromatographic columns decreased to half in approximately 3 hours, while the hybrid filler reached over 40 hours of rinsing time. The comparison graph of lifetimes under harsh conditions illustrates the excellent alkaline resistance of the hybrid packing.



## Nova Element series columns accelerate stability testing at high pH

|                         |                                                                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Experimental Conditions | Rinsing Solution: Aqueous solution containing TEA (triethylamine)<br>pH = 10<br>Temperature: 50°C<br>Detection: Monitor changes in column retention strength at regular intervals during rinsing |
|                         |                                                                                                                                                                                                  |
| Column Testing          | Column: Nova Element tC18 (5μm, 4.6*250mm)<br>Mobile Phase: Acetonitrile/Water = 70/30<br>Flow Rate: 0.8mL/min<br>Injection Volume: 5μL<br>Detector: UV 254nm<br>Analyte: Anthracene             |
|                         |                                                                                                                                                                                                  |

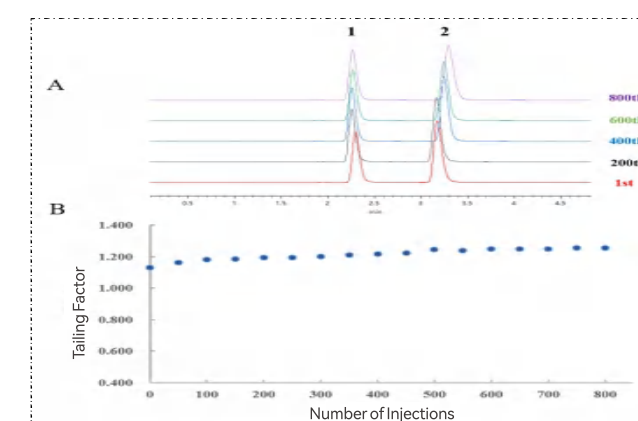
The stability of silica gel under high pH conditions is a crucial performance indicator for hybrid chromatographic columns. We employed a triethylamine solution to adjust the pH to 10 and continuously rinsed the chromatographic column at 50°C. Anthracene was used as the analyte to observe column retention midway through the experiment. As illustrated in Figure 3, the packing material of Nova Element tC18 consists of three functional group bonded hybrid chromatographic columns. During the rinsing experiment, the retention capability remained virtually unchanged over time. In contrast, two conventional single-functional group bonded chromatographic columns showed consistent retention capability initially, but significant efficiency reduction was observed after approximately 30 hours of rinsing. These experimental results demonstrate the excellent stability of Nova Element series chromatographic columns under accelerated testing at high pH.



## Continuous Analysis of Nova Element Series Chromatographic Columns under Alkaline Mobile Phase

|                |                                                                                                                                                                                                |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Column Testing | Column: Nova Element tC18 (5μm, 4.6*250mm)<br>Mobile Phase: Methanol/TEA (pH=9.5) 10/90<br>Flow Rate: 1 mL/min<br>Injection Volume: 5μL<br>Detector: UV 254nm<br>Analytes: Uracil and Cytosine |
|                |                                                                                                                                                                                                |

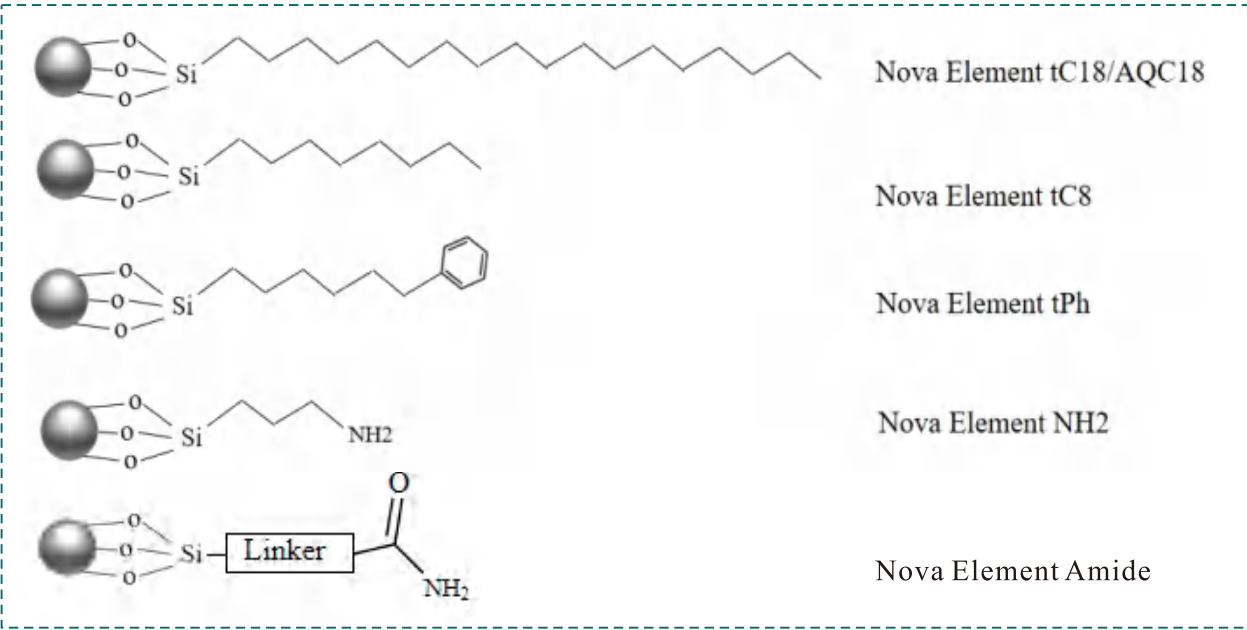
Conventional chromatographic columns with a mobile phase pH greater than 8 can cause dissolution of the silica gel matrix, leading to a decrease in column efficiency and making them difficult to use normally. Using uracil and cytosine as test compounds, we further investigated the performance of hybrid chromatographic columns under alkaline conditions (pH=9.5). Experimental results depicted in Figure 5A indicate that Nova Element tC18 maintains retention capability even after 800 injections under alkaline aqueous mobile phase conditions. Figure 5B also demonstrates the excellent peak shape of the chromatographic column, indicating outstanding lifespan of the hybrid column under demanding conditions compared to conventional columns.



A Continuous analysis of hybrid column under alkaline mobile phase (with uracil as 1 and cytosine as 2)  
B Changes of uracil tailing factors in continuous analysis

Product Introduction

Surface bonding structure of Nova Element series packing materials



Nova Element Types of bonding phases

| Chromatic column name          | Nova Element tC18               | Nova Element tC8                | Nova Element tPh                       | Nova Element AQC18                   | Nova Element Nh2                | Nova Element Amide                 |
|--------------------------------|---------------------------------|---------------------------------|----------------------------------------|--------------------------------------|---------------------------------|------------------------------------|
| Stationary phase               | The positive octan              | octyl                           | Benzyl                                 | The positive octane                  | aminopropyl                     | acylamino                          |
| Separate mode                  | opposition                      | opposition                      | opposition                             | opposition                           | positive phase /HILIC           | positive phase /HILIC              |
| Filling substrate              | Organic hybrid silicone         |                                 |                                        |                                      |                                 |                                    |
| Key and way                    | Three key bonding               |                                 |                                        |                                      |                                 |                                    |
| Partide Size                   | 5μm                             | 5μm                             | 5μm                                    | 5μm                                  | 5μm                             | 5μm                                |
| Pore Size                      | 130Å                            | 130Å                            | 130Å                                   | 130Å                                 | 130Å                            | 130Å                               |
| Carbon load                    | 18%                             | 13%                             | 15%                                    | 14%                                  | 9%                              | 12%                                |
| pH Range                       | 1-12                            | 1-12                            | 1-12                                   | 1-12                                 | 1-9                             | 2-11                               |
| stop end                       | Double sealing end              | Double sealing end              | Single sealing end                     | Double sealing end                   | No sealing end                  | No sealing end                     |
| The upper limit of temperature | 80°C (Low pH)<br>60°C (High pH) | 60°C (Low pH)<br>60°C (High pH) | 80°C (Low pH)<br>60°C (High pH)        | 80°C (Low pH)<br>60°C (High pH)      | 60°C (Low pH)<br>45°C (High pH) | 60°C (Low pH)<br>45°C (High pH)    |
| USP classify                   | L1                              | L7                              | L11                                    | L1                                   | L8                              | L68                                |
| Peer standard products         | X-bridgeC18<br>Elite BEH-tC18   | X-bridgeC8<br>Xtimate C8        | X-bridge phenyl<br>XtimatePhenyl-Hexyl | InertSustain AQC18<br>Ultimate AQC18 | ChromCore NH2<br>UltimateXB-NH2 | ChromCoreAmide<br>UltimateXB Amide |

Analytical Applications

Examining the selectivity of different bonded phases in the Nova Element hybrid series

Column Testing

Column: Nova Element series reversed-phase chromatographic column (5μm, 4.6\*250mm)

Mobile Phase: Methanol/Water 80/20

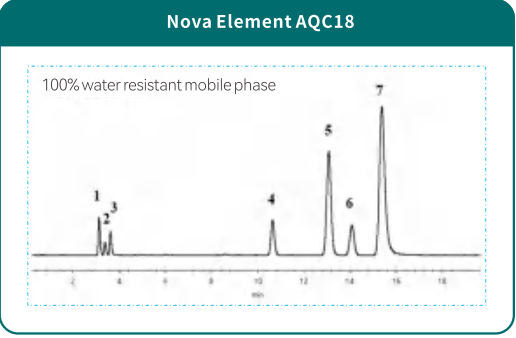
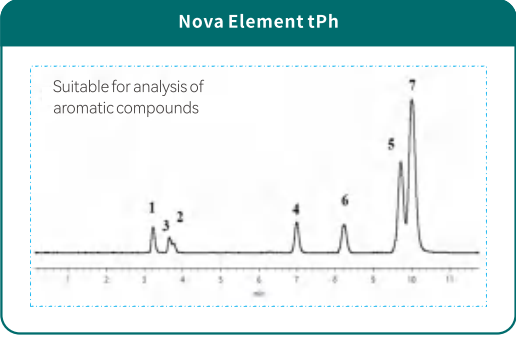
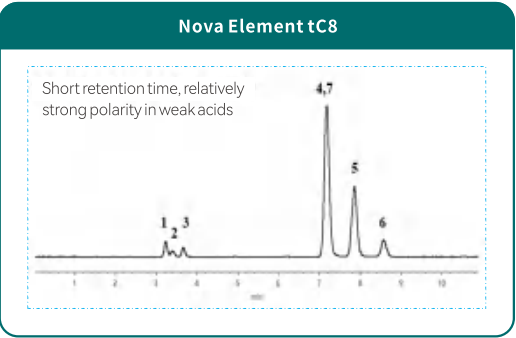
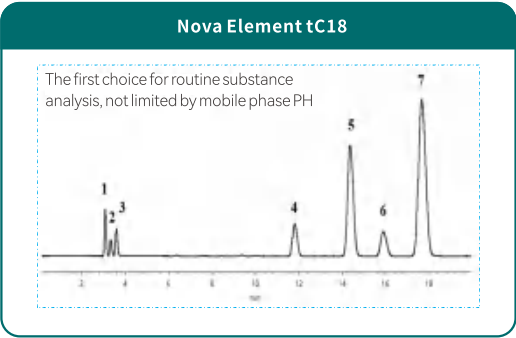
Flow Rate: 1mL/min

Injection Volume: 5μL

Temperature: 40°C

Detector: UV 254nm

Analytes: 1. Uracil 2. Caffeine 3. Phenol 4. Butylbenzene 5. o-Terphenyl6. Phenylpentane 7. Triphenylene



Column Testing

Column: Nova Element series normal-phase chromatographic column (5μm, 4.6\*250mm)

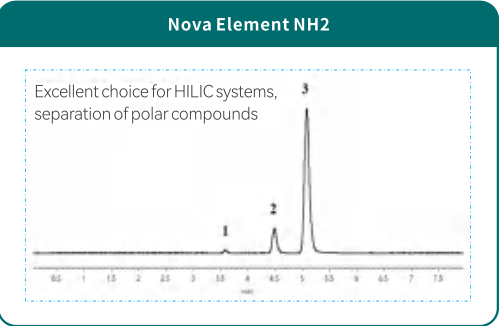
Mobile Phase: n-Hexane/Isopropanol 99.5/0.5

Flow Rate: 1mL/min

Injection Volume: 5μL

Detector: UV 254nm

Sample Components: 1. Toluene 2. 4-Nitrochlorobenzene 3. Nitrobenzene



Column Testing

Column: Nova Element series normal-phase chromatographic column (5μm, 4.6\*250mm)

Mobile Phase: Acetonitrile/100mM AmmoniumFormate pH3=80/20

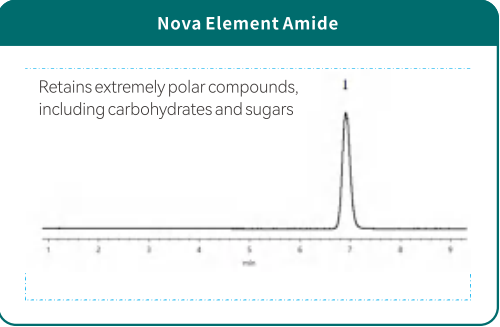
Flow Rate: 0.4mL/min

Temperature: 30°C

Detector: UV 254nm

Injection Volume: 10μL

Analyte: 1. Anthracene



## Nova-Pre SPE-HLB

### Introduction and Principles

Solid Phase Extraction Columns (SPE Columns) are sample pretreatment products developed from chromatographic columns, used for extraction, separation, and concentration.



#### Principle

NovaChrom novel polymer-based matrix fillers overcome the drawbacks of traditional silica-based fillers. SPE columns are based on liquid-solid chromatography theory, utilizing selective adsorption and elution to enrich, separate, and purify samples. The principle involves specific adsorbent materials within the column that selectively enrich and separate target compounds in samples through physical or chemical interactions.



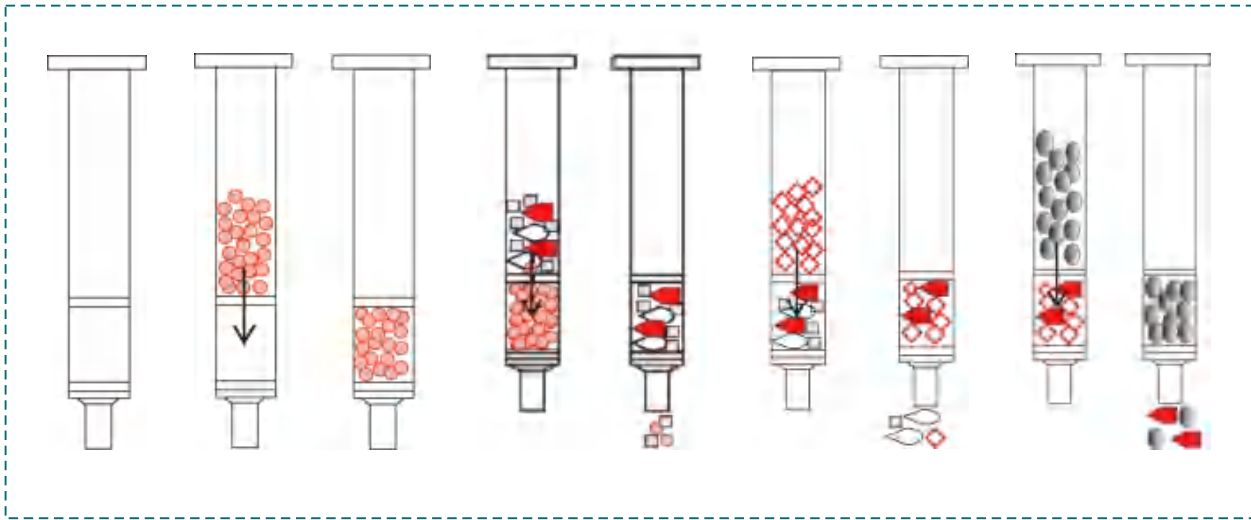
#### Applications

Widely used in pretreatment of complex samples such as food, agricultural products, environmental samples, and biological samples. In environmental monitoring, they extract and enrich organic pollutants in water, soil, and air. In food safety, they separate and enrich residual pesticides, veterinary drugs, and additives. In pharmaceutical and biomedical fields, they extract drugs from bodily fluids, tissues, and metabolites.



#### Selection and Usage

When selecting an SPE column, consider its capacity. Complex matrices (e.g., food, biological samples) may adsorb both target compounds and impurities. The total amount of target compounds and adsorbable impurities must not exceed the column capacity; otherwise, partial loss of targets may occur, leading to low recovery rates.



#### Steps

Column Selection → Activation → Loading → Washing → Elution

#### Activation

Wets and activates the filler to enhance interaction between targets and the solid phase while removing impurities

#### Loading

Sample dissolved in solvent is loaded onto the column. Flow rate must be controlled to ensure sufficient interaction time.

#### Washing

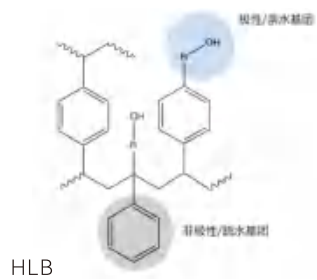
Removes interfering impurities using medium-strength solvents without eluting target compounds.

#### Elution

Collects target compounds using appropriate elution solvents of moderate strength.

## Polyvinylpyrrolidone-Based SPE

### HLB (Hydrophilic-Lipophilic Balance)



#### Chemical Description

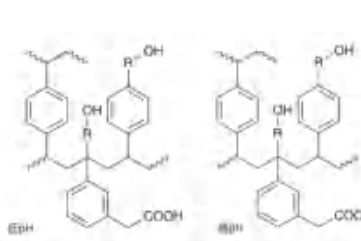
Water-wettable polystyrene-N-vinylpyrrolidone-divinylbenzene with non-ionized hydroxyl groups.

|                       |                                                      |
|-----------------------|------------------------------------------------------|
| Average Particle Size | 30 $\mu\text{m}$ , 60 $\mu\text{m}$                  |
| Average Pore Size     | 90 Å                                                 |
| Type                  | Wettable non-polar adsorbent, no secondary reactions |

#### Applications

Extracts acidic, neutral, and alkaline analytes from biological fluids and aqueous matrices. Performance unaffected by filler drying.

### WCX (Weak Cation Exchange)



#### Chemical Description

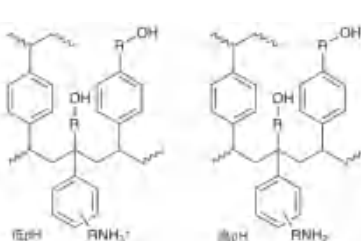
Carboxylic acid-modified polystyrene-N-vinylpyrrolidone-divinylbenzene with non-ionized hydroxyl groups.

|                       |                                         |
|-----------------------|-----------------------------------------|
| Average Particle Size | 30 $\mu\text{m}$ , 60 $\mu\text{m}$     |
| Average Pore Size     | 90 Å                                    |
| Filler Type           | Non-polar/weak cation exchange (pKa ~5) |

#### Applications

Extracts strong alkaline analytes (e.g., quaternary ammonium compounds) from biological fluids.

### WAX (Weak Anion Exchange)



#### Chemical Description

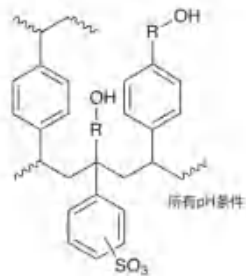
Primary-secondary amine-modified polystyrene-N-vinylpyrrolidone-divinylbenzene with non-ionized hydroxyl groups.

|                       |                                        |
|-----------------------|----------------------------------------|
| Average Particle Size | 30 $\mu\text{m}$ , 60 $\mu\text{m}$    |
| Average Pore Size     | 90 Å                                   |
| Filler Type           | Non-polar/weak anion exchange (pKa ~9) |

#### Applications

Extracts acidic analytes (e.g., sulfonic acids) from biological fluids.

### MCX (Mixed-Mode Strong Cation Exchange)



#### Chemical Description

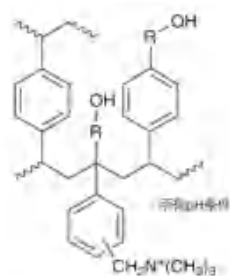
Sulfonic acid-modified polystyrene-N-vinylpyrrolidone-divinylbenzene with non-ionized hydroxyl groups.

|                       |                                             |
|-----------------------|---------------------------------------------|
| Average Particle Size | 30 $\mu\text{m}$ , 60 $\mu\text{m}$         |
| Average Pore Size     | 90 Å                                        |
| Filler Type           | Non-polar/strong cation exchange mixed-mode |

#### Applications

Extracts alkaline analytes from biological fluids.

### MAX (Mixed-Mode Strong Anion Exchange)



#### Chemical Description

Quaternary ammonium-modified polystyrene-N-vinylpyrrolidone-divinylbenzene with non-ionized hydroxyl groups.

|                       |                                            |
|-----------------------|--------------------------------------------|
| Average Particle Size | 30 $\mu\text{m}$ , 60 $\mu\text{m}$        |
| Average Pore Size     | 90 Å                                       |
| Filler Type           | Non-polar/strong anion exchange mixed-mode |

#### Applications

Extracts acidic analytes from biological and aqueous matrices.

Product Features

| Nova-Pre Series | Features                                                                                                                                                                                                      | Sample Matrix                                         | Similar Products | Typical Applications                                                                                                    |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------|
| HLB             | <ul style="list-style-type: none"><li>Non-polar, weak polar, and moderate polarity compounds</li><li>High recovery, reproducibility</li><li>3–10x capacity vs. C18 silica</li><li>pH 1–14 tolerance</li></ul> | Food, pharmaceuticals, biological fluids, water, soil | Waters Oasis HLB | Drug analysis in blood/urine (tetracyclines, morphine), pesticide residues in food, veterinary drug detection in dairy. |
| MCX             | <ul style="list-style-type: none"><li>Strong alkaline compounds (pKa 8–10)</li><li>pH 0–14 tolerance</li><li>Complex matrix purification</li></ul>                                                            | Food, pharmaceuticals, biological fluids, water, soil | Waters Oasis MCX | Detection of clenbuterol, malachite green, sulfonamides, and $\beta$ -agonists in animal products.                      |
| MAX             | <ul style="list-style-type: none"><li>Acidic compounds (pKa 2–4)</li><li>pH 0–14 tolerance</li><li>Complex matrix purification</li></ul>                                                                      | Food, pharmaceuticals, biological fluids, water, soil | Waters Oasis MAX | Additives in dairy, pesticide residues, cosmetic active ingredients.                                                    |
| WCX             | <ul style="list-style-type: none"><li>Strong alkaline compounds (pKa &gt;10)</li><li>pH 0–14 tolerance</li></ul>                                                                                              | Food, pharmaceuticals, biological fluids, water, soil | Waters Oasis WCX | Analysis of quaternary ammonium drugs, clenbuterol residues.                                                            |
| WAX             | <ul style="list-style-type: none"><li>Strong acidic compounds (pKa &lt;1)</li><li>pH 0–14 tolerance</li></ul>                                                                                                 | Food, pharmaceuticals, biological fluids, water, soil | Waters Oasis WAX | Detection of synthetic pigments in food, sulfonic acid compounds.                                                       |

Product Ordering Information

| Product Name | PN     | Specifications     |
|--------------|--------|--------------------|
| NovaPre -HLB | LC3001 | 30mg/1mL; 50/pcs   |
|              | LC3002 | 60mg/3mL; 50/pcs   |
|              | LC3003 | 150mg/3mL; 50/pcs  |
|              | LC3004 | 500mg/3mL; 50/pcs  |
|              | LC3005 | 150mg/6mL; 30/pcs  |
|              | LC3006 | 200mg/6mL; 30/pcs  |
|              | LC3007 | 500mg/6mL; 30/pcs  |
|              | LC3008 | 500mg/12mL; 20/pcs |
| NovaPre -MCX | LC3101 | 30mg/1mL; 50/pcs   |
|              | LC3102 | 60mg/3mL; 50/pcs   |
|              | LC3103 | 150mg/3mL; 50/pcs  |
|              | LC3104 | 500mg/3mL; 50/pcs  |
|              | LC3105 | 150mg/6mL; 30/pcs  |
|              | LC3106 | 200mg/6mL; 30/pcs  |
|              | LC3107 | 500mg/6mL; 30/pcs  |
|              | LC3108 | 500mg/12mL; 20/pcs |
| NovaPre -WCX | LC3201 | 30mg/1mL; 50/pcs   |
|              | LC3202 | 60mg/3mL; 50/pcs   |
|              | LC3203 | 150mg/3mL; 50/pcs  |
|              | LC3204 | 500mg/3mL; 50/pcs  |
|              | LC3205 | 150mg/6mL; 30/pcs  |
|              | LC3206 | 200mg/6mL; 30/pcs  |
|              | LC3207 | 500mg/6mL; 30/pcs  |
|              | LC3208 | 500mg/12mL; 20/pcs |
| NovaPre -MAX | LC3301 | 30mg/1mL; 50/pcs   |
|              | LC3302 | 60mg/3mL; 50/pcs   |
|              | LC3303 | 150mg/3mL; 50/pcs  |
|              | LC3304 | 500mg/3mL; 50/pcs  |
|              | LC3305 | 150mg/6mL; 30/pcs  |
|              | LC3306 | 200mg/6mL; 30/pcs  |
|              | LC3307 | 500mg/6mL; 30/pcs  |
|              | LC3308 | 500mg/12mL; 20/pcs |
| NovaPre -WAX | LC3401 | 30mg/1mL; 50/pcs   |
|              | LC3402 | 60mg/3mL; 50/pcs   |
|              | LC3403 | 150mg/3mL; 50/pcs  |
|              | LC3404 | 500mg/3mL; 50/pcs  |
|              | LC3405 | 150mg/6mL; 30/pcs  |
|              | LC3406 | 200mg/6mL; 30/pcs  |
|              | LC3407 | 500mg/6mL; 30/pcs  |
|              | LC3408 | 500mg/12mL; 20/pcs |

Other Chromatographic Consumables



The chromatographic consumables independently developed by Wayeal include ion chromatography pre-processing columns, anion-cation exchange guard columns, ghost peak trapping columns, etc., serving as effective assistants for customers in various analysis and detection fields.



**Ion Chromatography Guard Column:**  
The HS-5AGN.19-1 guard column is modified with highly cross-linked PS/DVB filler, resistant to acids and bases. With a PEEK column tube, it is free from ion contamination and has a small dead volume, effectively protecting the analytical column from contamination by solid particles, organic substances, and other impurities.

**Ion Chromatography Pre-treatment Column:**  
Utilizing high-purity PS/DVB filler, these columns are resistant to acids and bases, possess uniform particle size, low back pressure, and are suitable for manual operation. They include common pre-treatment columns such as RP column, H column, Na column, Ag column, Ba column, etc.



**Anion Capture Column:**  
Used for capturing impurity anions in pure water, reducing interference and lowering instrument baseline noise.

| Column Type and Specifications            | functional group                                                                 | Application Examples                                                                                                            |
|-------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| H Type Pre-treatment Column (1.0cc)       | Sulfonic acid                                                                    | Removal of cations (heavy metals), adjustment of solution pH.                                                                   |
| Na Type Pre-treatment Column (1.0cc)      | Na <sup>+</sup> type sulfonate                                                   | Removal of cations (heavy metals).                                                                                              |
| Ag Type Pre-treatment Column (1.0cc)      | Ag <sup>+</sup> type sulfonate                                                   | Removal of halide anions.                                                                                                       |
| Ba Type Pre-treatment Column (1.0cc)      | Ba <sup>2+</sup> type sulfonate                                                  | Removal of SO <sub>4</sub> <sup>2-</sup>                                                                                        |
| Ag-H Type Pre-treatment Column (1.0cc)    | Ag <sup>+</sup> type sulfonate + sulfonic acid                                   | Removal of halide anions, removal of excess Ag <sup>+</sup>                                                                     |
| Ag-Na Type Pre-treatment Column (1.0cc)   | Ag <sup>+</sup> type sulfonate + Na <sup>+</sup> type sulfonate                  | Removal of halide anions.<br>Removal of cations (heavy metals).                                                                 |
| Ba-H Type Pre-treatment Column (1.0cc)    | Ba <sup>2+</sup> type sulfonate + sulfonic acid                                  | Removal of SO <sub>4</sub> <sup>2-</sup> , removal of excess Ba <sup>2+</sup> .                                                 |
| Ba-Ag-H Type Pre-treatment Column (2.5cc) | Ba <sup>2+</sup> type sulfonate + Ag <sup>+</sup> type sulfonate + sulfonic acid | Removal of SO <sub>4</sub> <sup>2-</sup> , removal of halide anions, removal of excess Ba <sup>2+</sup> and Ag <sup>+</sup> .   |
| C18 Type Pre-treatment Column (1.0cc)     | Reverse phase C18                                                                | Desalination and removal of organic matter for small to medium-sized molecules, pH 2-8.                                         |
| RP Type Pre-treatment Column (1.0cc)      | Polystyrene/divinylbenzene copolymer                                             | Removal of hydrophobic compounds, especially unsaturated compounds. And aromatic compounds; removal of organic matter, pH 0-14. |

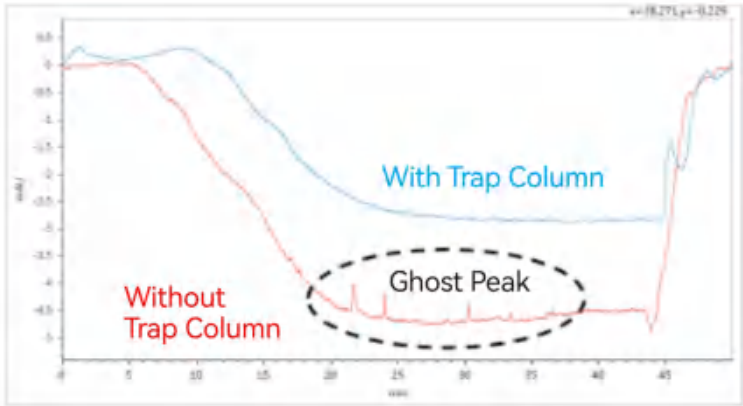
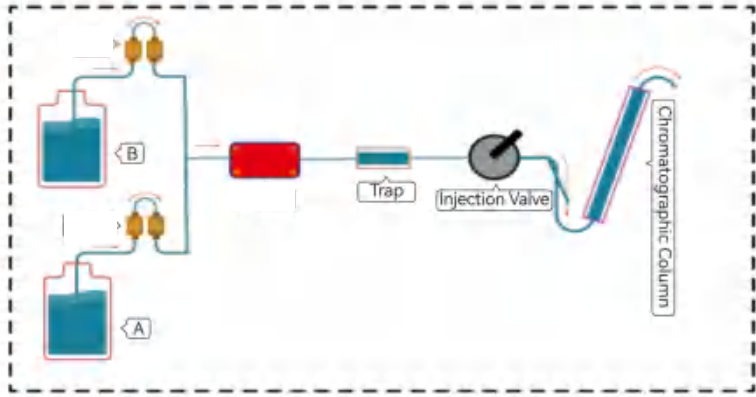
Note: other specifications are available for sale and accept customization.

Liquid chromatography ghost peak trapping column:

Filled with high-purity packing material, with a large surface area and strong adsorption capacity, capable of effectively removing non-polar and weakly polar impurities from the mobile phase, especially in mobile phases containing buffer salts and acidic substances, reducing the occurrence of ghost peaks. Long service life, suitable for gradient elution in liquid chromatography, widely used in the field of pharmaceutical quality control.



Installation schematic diagram of ghost peak trap column



Ghost Peak Trap Column

Other products and consumables

| Category of the product                 | Art.No    | Name                                                  | Model                                | Specifications                                                                               |
|-----------------------------------------|-----------|-------------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------|
| Liquid phase / guard column             | LC0801    | Liquid phase direct connection C18 guard column       | Nova Z-Guard C18, with core          | 3*4mm                                                                                        |
| Liquid phase / guard column core        | LC0801-01 | Liquid phase direct connection protection column core | C18                                  | 3*4mm                                                                                        |
| Liquid phase / guard column             | LC0802    | Liquid phase tube connected C18 guard column          | Nova G-Guard C18, with core          | 4.6*10mm                                                                                     |
| Liquid phase / guard column core        | LC0802-01 | Liquid phase tube connected protection column core    | C18                                  | 4.6*10mm                                                                                     |
| Liquid phase / Ghost Peak capture colum | LC0901    | Ghost Peak Capture Pillar GRColumn                    | GRColumn                             | 4.6×50mm                                                                                     |
| Liquid phase / online filter            | LC1001    | Liquid phase online filter                            | LC-Precolumn Filter                  | 3.5mm, stainless steel, direct connection, pressure resistant 70MPa, with one filter element |
| Liquid phase/online filter element      | LC1001-1  | Liquid phase online filter element                    | LC-Precolumn Filter replacement frit | 3.5*1.5mm, stainless steel, filter accuracy 0.5μm, PEEK outer ring                           |
| Liquid phase/sample vials               | V0101     | 2ml brown screw-cap sample bottle                     | /                                    | Scale writing, 9*11.6*32mm, 100/box                                                          |
| Liquid phase/sample vial cap            | V0201     | Pre-assemble the blue threaded opening cover          | /                                    | White FTFE, red silicone pad, 9mm, 100/ package                                              |
| Liquid phase/sample vial cap            | V0202     | Preassemble the blue threaded opening cover           | /                                    | Open red FTFE, white silicone pad, 9mm, 100/bag                                              |

| Category of the product                   | Art.No   | Name | Model | Specifications                                                                                        |
|-------------------------------------------|----------|------|-------|-------------------------------------------------------------------------------------------------------|
| Anion trapping column                     | IC0601   | /    | /     | WY-ATC, 9×80mm                                                                                        |
| Anion enrichment column                   | IC0901   | /    | /     | Nova IC-AC-1, 4×50mm                                                                                  |
| Ion on-line filter                        | IC0902   | /    | /     | Nova IC-AC-2, 4×30mm                                                                                  |
| Ion on-line filter                        | IC1001   | /    | /     | IC-Precolumn Filter, 2.5mm, PEEK material, pressure 35MPa, including a filter element                 |
| Ion PEEK on-line filter cartridge         | IC1001-1 | /    | /     | IC-Precolumn Filter replacement frit, 2.5×1.6mm, PE material, filtering accuracy 2μm, PEEK outer ring |
| 2mL brown thread mouth sample bottle      | V0101    | /    | /     | Scale writing, 9×11.6×32mm, 100/ box                                                                  |
| Pre-assembled blue threaded orifice cover | V0201    | /    | /     | White FTFE, red silicone pad, 9mm, 100/ pack                                                          |
| Pre-assembled blue threaded orifice cover | V0202    | /    | /     | Pre-opened red FTFE, white silicone pad, 9mm, 100/ pack                                               |
| 2mL plastic sample bottle                 | V0102    | /    | /     | PP material transparent plastic bottle, 9mm, with scale, 100 PCS/box                                  |
| 2mL plastic sample bottle cap             | V0203    | /    | /     | Blue, 9mm, with 1.0mm thickness red film white rubber gasket, 100 PCS/bag                             |

