

WEPURE

MicroPulite® Liquid Phase Analytical Chromatography Packing Media and Analytical Column Product Manual

WePure WeChat Official Account

HPLC Packing Media

Advanced Technology More Selection of Solid Phases

Seamless Transfer from Analytical to Industrial Preparative HPLC for Global Pharmaceutical Companies

CONTENTS

About WePure ---- 01

MicroPulite® XP Chromatographic Columns: Hybrid Silica Technology for More Flexible Method Development ---- 07

MicroPulite® XP tC18 Column ---- 12

MicroPulite® XP C18 Column ---- 14

MicroPulite® XP tC8 Column ---- 15

MicroPulite® XP tC4 Column ---- 15

MicroPulite® XP RP18 Column ---- 16

MicroPulite® XP RP18 Plus Column ---- 17

MicroPulite® XP T3 Column ---- 18

MicroPulite® XP NH_2 Column ---- 19

MicroPulite® XP Phenyl-Hexyl Column ---- 20

MicroPulite® XP Amide Column ---- 21

MicroPulite® XP HILIC Column ---- 22

MicroPulite® XP HILIC-Z Column ---- 23

MicroPulite® XP Oligo tC18 Column ---- 24

MicroPulite® XP tPFP Column ---- 24

MicroPulite® XP tC18/PFP Column ---- 25

MicroPulite® XP Super tC18-AX Column ---- 26

Ordering Information ---- 27

MicroPulite® PHS XP Series – Excellent Peak Shape and Column Efficiency ---- 32

MicroPulite® PHS XP tC18 Column ---- 33

MicroPulite® PHS XP Phenyl-Hexyl Column ---- 34

MicroP ulite® PHS XP tF5 Column ---- 34

Ordering Information ---- 35

MicroPulite® Perfect Columns: Balanced Retention Solution for Polar Compounds ---- 37

MicroPulite® Perfect T3 Column ---- 38

MicroPulite® Perfect T3 SB Column ---- 39

MicroPulite® Perfect Diol Column ---- 40

MicroPulite® Perfect HILIC Column ---- 40

Ordering Information ---- 41

MicroPulite® HSS Columns: Triple-Bonded Technology with High-Strength Silica, Designed for Method Development ---- 42

MicroPulite® HSS T3 Column ---- 43

MicroPulite® HSS C18 SB Column ---- 43

Ordering Information ---- 44

MicroPulite® Gold Columns: The Preferred Cost-Effective Chromatography Columns 45
MicroPulite® Gold C18 Column 46
MicroPulite® Gold C18-SB Column 47
MicroPulite® Gold C18-AQ Column 47
MicroPulite® Gold C18-XB Column 48
MicroPulite® Gold C8 Column 49
MicroPulite® Gold C4 Column 49
MicroPulite® Gold RP18 Column 50
MicroPulite® Gold RP18 Plus Column 51
MicroPulite® Gold RP8 Plus Column 51
MicroPulite® Gold RP4 Plus Column 51
MicroPulite® Gold EC-NH_2 Column 52
MicroPulite® Gold HILIC Column 53
MicroPulite® Gold Phenyl-Hexyl Column 54
MicroPulite® Gold PFP Column 54
MicroPulite® Gold CN Column 55
Ordering Information 56
MicroPulite® Platinum Columns: Higher Loading Capacity, Better Peak Shape 59
MicroPulite® Platinum C18 Column 60
MicroPulite® Platinum C8 Column 60
Ordering Information 61
BioPulite® Series – Liquid Chromatography Columns for Bioseparation 62
BioPulite® XP Protein tC18 Column 63
BioPulite® XP Protein tC4 Column 63
BioPulite® XP Protein RP18 Column 64
BioPulite® XP Protein RP18 Plus Column 64
BioPulite® Gold Protein C18 Column 64
BioPulite® Gold Protein C4 Column 65
BioPulite® Protein Perfect SEC Column 65
Ordering Information 66
MicroPulite® Peptide Series:Designed for peptide separation 67
Guard column and in-line filter 68
Ordering Information 70
Amino Acid Analysis 72
BufferRange, LC- MS compatibility,and Cutoff wavelength of Common Buffers 75
Common solvent mixing table 76
Common solvent properties 77

About WePure

WePure has over 20 years of experience in the field of chromatography, with strong technical expertise in advanced high-pressure chromatographic packing media. The company offers a comprehensive portfolio covering the full workflow from analytical to industrial-scale purification, providing pharmaceutical companies worldwide with analytical and purification solutions for R&D, clinical development, and commercial manufacturing.

WePure operates a fully integrated in-house manufacturing process, from silica microsphere synthesis to finished columns and packing media, ensuring consistent product quality and a reliable supply chain. MicroPulite® analytical column series and PrePulite® preparative chromatographic media deliver performance comparable to leading international brands and are supplied to customers in more than 20 countries and regions.

With an annual production capacity of 25 metric tons of silica-based chromatographic packing media, WePure ensures stable supply and fast delivery. Its comprehensive product range supports key pharmaceutical applications from early research to large-scale production, enabling smooth method transfer and efficient scale-up.

Committed to delivering high cost-performance products, a dependable supply system, and responsive technical support, WePure continues to support global pharmaceutical innovation and manufacturing—benefiting patients worldwide.

Core Products

Analytical Columns



Product	Feature
1、MicroPulite® Gold Series	Preferred Choice for Cost-Effective Columns
2、MicroPulite® Platinum Series	New Standard for Pure Silica-based Columns
3、MicroPulite® XP Series	Hybrid Technology for More Flexible Method Development
4、MicroPulite® PHS XP Series	Solutions for Complex Separations
5、MicroPulite® Perfect Series	Balanced Retention for Polar Compounds
6、MicroPulite® HSS Series	Stronger Silica Coupled with Triple-Bonded Technology
7、BioPulite® Series	Suitable for Oligonucleotides, Peptides, ADC Linkers, LNPs, and More

UPLC
HPLC
Semi-Preparative

Packing Media



Product	Feature
Indsil Preparative Packing Media	The Preferred Cost-Effective Choice for Industrial Preparative Purification
Indxp Preparative Packing Media	The Top Alkali-Resistant Choice for Industrial Preparative Purification
PolyPulite Preparative Packing Media	High Mechanical Strength, Low Swelling, High Loading Capacity
Gold Packing Media	The Preferred High-Purity Silica Packing Media for Analytical to Semi-Preparative Applications
XP Packing Media	The Preferred Alkali-Resistant Packing Media for Analytical to Semi-Preparative Applications
PHS XP Packing Media	Delivers Unique Separation Selectivity, Excellent Peak Shape, and High-Performance Solutions
Customization	Fully customizable specifications including microsphere matrix, particle size, pore size, and bonded phase

》Stable Supply Supported by Complete In-House Particle Manufacturing

Guangdong Medical Valley, Nansha District, Guangzhou National-Level Incubation Park

1950m² R&D, production,and application development base

Wengyuan Innovation API Industrial Park(Guangdong)

Production Capacity: 25 Tons of Silica Packing Media, 10 Tons of Resin-based Packing Media, and 50 Tons of Functional Microspheres



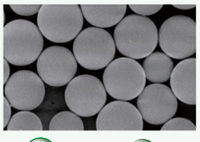


》Patented Core Technologies

Robust porous microsphere syntheses technology

Granted Invention Patents:
ZL201010207767.3 ZL201310719498.2

WePure can produce microsphere in stable and large scale, include 1.7μm-100μm high purity silica, organic-inorganic structure hybrid silica(XP) and high-strength silica(HSS), inorganic-inorganic structure hybridizeo SiZ microspheres and so on.





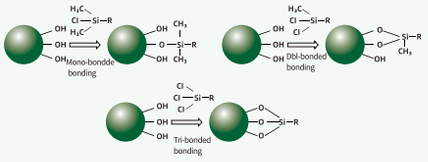


Silica Microspheres With Homogeneous Pore Structure

Advanced surface modification technology

Granted Invention Patents:
ZL201010208014.4

Featuring Mono-, Di-, and Tri- Bonded Technologies, Covering C8, C18, NH_2, Amide, Phenyl, Pentafluorophenyl (PFP), Diol, RP18, T3, and Mixed-Mode Phases.

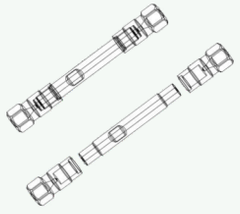


Diversified Bonded Phase; Tri-bonded Offers Enhanced Durability and Unique Selectivity

Top-notched column packing platform

Invention Patents under Substantive Examination:
202411146259.7 202411239886.5

Highly efficient and stable Column Packing technique for UPLC, UHPLC, HPLC, and Semi-Preparative Columns.



Outstanding Stability and Reproducibility of LC Columns

Advanced HPLC Packing Media Production



	High-Purity Silica	Structural Hybridization	Charged Hybridization	Mono-bonded	Tri-bonded	Column
WePure	✓	✓	✓	✓	✓	✓
International brand :W	✓	✓	✓	✓	✓	✓
International brand : A	✓			✓		✓
International brand :P				✓		✓
Local brand:N	✓			✓		✓
Local brand:S				✓		✓

Complete in-house production assures complete product controll in "raw materials + technology + quality"

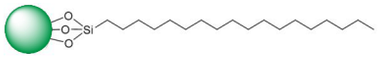
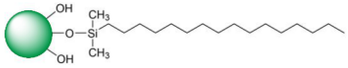
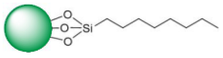
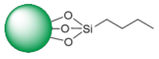
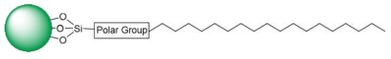
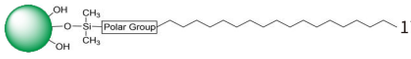
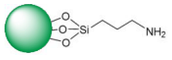
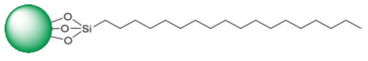
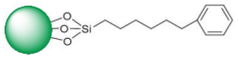
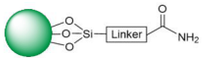
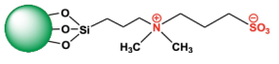
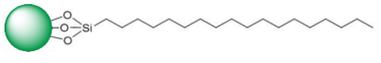
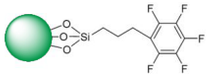
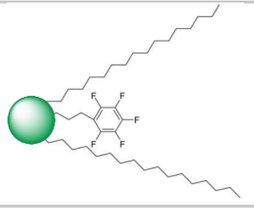
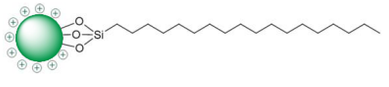
More Selections for HPLC packing Media "Seamless Transfer" for " Scale-Up"

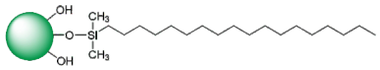
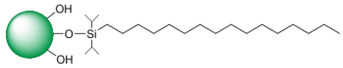
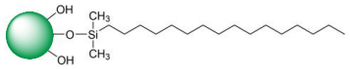
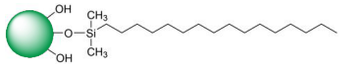
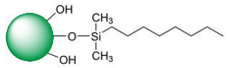
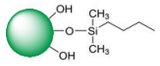
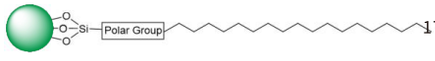
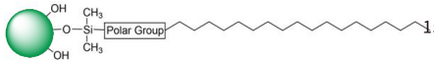
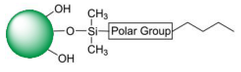
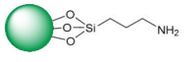
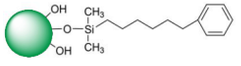
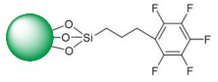
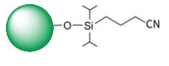
	Packing media for Analytical HPLC				Packing media for Preparative HPLC		
	High-Purity Silica	Structural Hybridization	Charged Hybridization	Seamless Transfer	High-Purity Silica	Structural Hybridization	Charged Hybridization
WePure	✓	✓	✓		✓	✓	✓
International brand :W	✓	✓	✓				
International brand: A	✓						
International brand:P	✓						
International brand:K	✓				✓		
International brand:D	✓				✓		
Local brand:S	✓				✓		
Local brand:N	✓				✓		

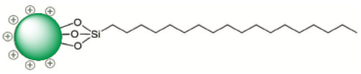
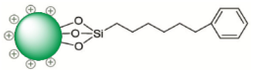
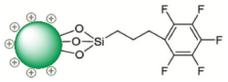
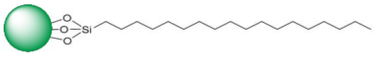
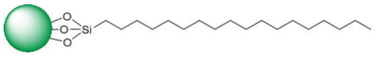
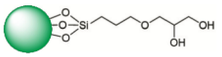
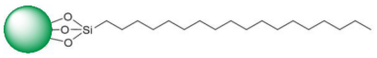
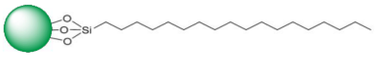
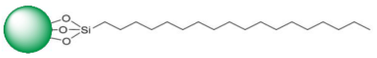
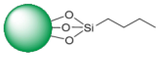
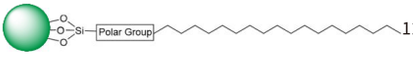
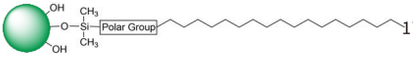
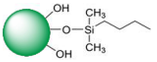
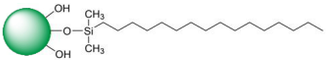
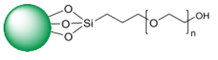
Addressing core pain points in the pharmaceutical industry: seamless process transfer from R&D to production, eliminating the need for process re-development

New Drug R&D → IND → Clinical Trials → Pilot Scale → CMC → NDA → Commercialization

》Columns Parameter Guide

Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® XP	tC18		18.0%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L1	1-12	80°C (Low pH) 60°C(High pH)
	C18		19.0%	185	Yes	130	5	L1	2-12	70°C (Low pH) 50°C(High pH)
	tC8		13.0%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L7	1-12	60°C (Low pH) 60°C(High pH)
	tC4		10.0%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L26	1-10	80°C (Low pH) 50°C(High pH)
	RP18		18.5%	185	Yes	130	1.7,2.5,3, 3.5,5,10	L1	2-11	50°C (Low pH) 45°C (High pH)
	RP18 Plus		17.5%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L1	2-11	50°C(Low pH) 45°C (High pH)
	NH_2		9.0%	185	No	130	3.5,5	L8	1-9	45°C (Low pH) 45°C (High pH)
	T3		16.0%	185	Yes	130	3.5,5,7,10	L1	1-12	80°C (Low pH) 60°C (High pH)
	Phenyl-Hexyl		15.0%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L11	1-12	80°C (Low pH) 60°C (High pH)
	Amide		13.0%	185	No	130	1.7,2.5,3, 3.5,5,7,10	L68	2-11	90°C(Low pH) 90°C (High pH)
	HILIC		-	185	-	130	1.7,2.5,3, 3.5,5,7,10	L3	1-9	45°C (Low pH) 45°C (High pH)
	HILIC-Z		17.0%	185	No	130	1.7,2.5,3, 3.5,5	L3	2-10	45°C (Low pH) 45°C (High pH)
	Oligo tC18		18.0%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	LI	1-12	80°C (Low pH) 60°C (High pH)
	tPFP		11%	185	No	130	1.7,2.5,3, 3.5,5,7,10	L43	1-8	45°C(Low pH) 45°C (High pH)
	tC18/PFP		15%	185	No	130	1.7,2.5,3, 3.5,5,7,10	L1	1-12	45°C (Low pH) 45°C (High pH)
	tC18-AX		18.0%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L78	2-10	60°C (Low pH) 60°C (High pH)
MicroPulite® Platinum	C18	Special C18	14.0%	320	Yes	100	3,3.5,5,10	L1	1-8	50°C (Low pH) 40°C (High pH)
	C8	Special C8	9.0%	320	Yes	100	3.5,5,10	L7	1-8	50°C (Low pH) 40°C(High pH)

Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® Gold	C18		18.0%	300	Yes	120	3,3.5,5,10	L1	2-8	60°C (Low pH) 40°C (High pH)
	C18-SB		11.0%	300	No	120	3.5,5	L1	2-8	60°C (Low pH) 40°C (High pH)
	C18-XB		19.0%	300	Yes	120	3,5	L1	2-8	60°C (Low pH) 40°C (High pH)
	C18-AQ		12.0%	300	Yes	120	5,10	L1	2-8	60°C (Low pH) 40°C (High pH)
	C8		10.0%	300	Yes	120	3,3.5,5,10	L7	2-8	60°C (Low pH) 40°C (High pH)
	C4		6.0%	300	Yes	120	3,3.5,5,10	L26	2-8	60°C (Low pH) 40°C (High pH)
	RP18		17.0%	300	Yes	120	3,3.5,5,10	L1	1-8	60°C (Low pH) 40°C (High pH)
	RP18 Plus		15.0%	300	Yes	120	3,3.5,5,10	L1	2-8	60°C (Low pH) 40°C (High pH)
	RP8 Plus		10.0%	300	Yes	120	3,3.5,5	L7	2-8	60°C (Low pH) 40°C (High pH)
	RP4 Plus		7.0%	300	Yes	120	3,3.5,5	L26	2-8	60°C (Low pH) 40°C (High pH)
	EC-NH_2		4.0%	300	Yes	120	3,3.5,5	L8	2-8	60°C (Low pH) 40°C (High pH)
	HILIC		-	300	-	120	3,3.5,5,10	L3	2-8	60°C (Low pH) 40°C (High pH)
	Phenyl-Hexyl		12.0%	300	Yes	120	3,3.5,5,10	L11	2-8	60°C (Low pH) 40°C (High pH)
	PFP		7.0%	300	Yes	120	3,3.5,5,10	L43	2-8	60°C (Low pH) 40°C(HighpH)
	CN		5.5%	300	Yes	120	5	L10	2-8	45°C (Low pH) 45°C (High pH)

Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® PHS XP	tC18		17.5%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L1	1-11	80°C (Low pH) 45°C (High pH)
	Phenyl-Hexyl		15.0%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L11	1-11	80°C (Low pH) 45°C (High pH)
	tF5		11.0%	185	No	130	1.7,2.5,3, 3.5,5,7,10	L43	1-8	60°C (Low pH) 45°C(HighpH)
MicroPulite® Perfect	T3		14.0%	300	Yes	120	3,5,10	L1	1-8	45°C (Low pH) 45°C (High pH)
	T3 SB		9.0%	300	No	120	3,5,10	L1	1-8	45°C (Low pH) 45°C (High pH)
	Diol		5.0%	300	Yes	120	3,5,10	L20	1-8	60°C (Low pH) 60°C (High pH)
	HILIC		-	300	-	120	3,5,10	L3	1-5	45°C (Low pH) 45°C (High pH)
MicroPulite® HSS	T3		12.0%	230	Yes	100	1.8,2.5, 3.5	L1	1-8	45°C (Low pH) 45°C (High pH)
	C18 SB		9.0%	230	No	100	3.5	L1	1-8	45°C (Low pH) 45°C (High pH)
BioPulite®	XP Protein tC18		12.0%	100	Yes	300	1.7,2.5, 3.5,5	L1	1-12	80°C (Low pH) 60°C (High pH)
	XP Protein tC4		8.0%	100	Yes	300	1.7,2.5, 3.5,5	L26	1-12	80°C(Low pH) 50°C(High pH)
	XP Protein RP18		12.0%	100	Yes	300	3.5,5	L1	2-11	50°C(LowpH) 45°C (High pH)
	XP Protein RP18 Plus		17.0%	100	Yes	300	3.5,5	L1	2-11	50°C (Low pH) 45°C (High pH)
	Gold Protein C4		1.3%	100	Yes	300	3,5	L26	2-8	60°C (Low pH) 40°C (High pH)
	Gold Protein C18		8.5%	100	Yes	300	3,5	L1	2-8	60°C (Low pH) 40°C (High pH)
	Protein Perfect SEC		-	300 100	No No	125 300	3, 5 5	L33 L33	2-8	45°C (Low pH) 45°C (High pH)

WePure chromatographic columns with 2.1 mm and 3.0 mm diameters uniformly adopt Ultra column tubes, withstanding a pressure of 1800 psi.

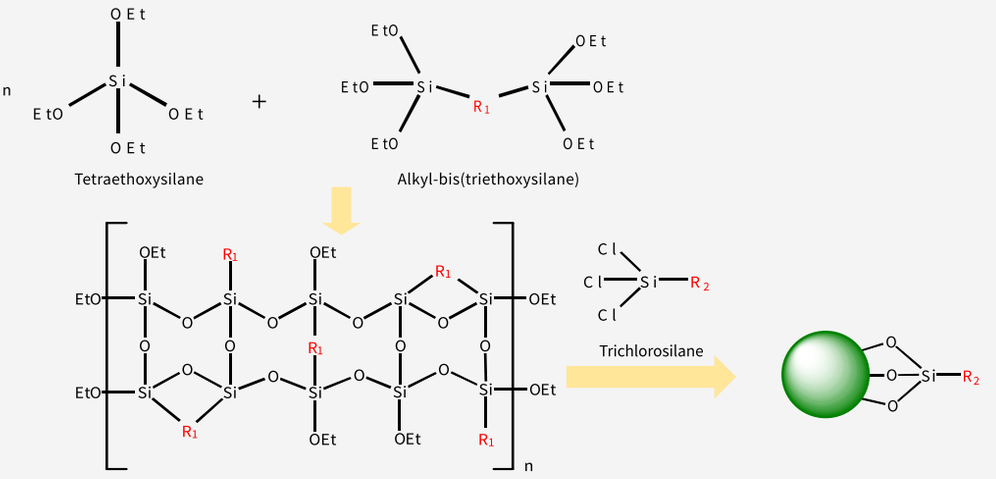
MicroPulite® XP Chromatographic Columns: Hybrid Silica Technology for More Flexible Method Development

Silica has become the most widely used packing material for chromatographic columns due to its excellent mechanical strength and easy surface modification. However, pure silica matrices are extremely unstable under high pH conditions (especially above pH 8), which shortens the service life of chromatographic columns.

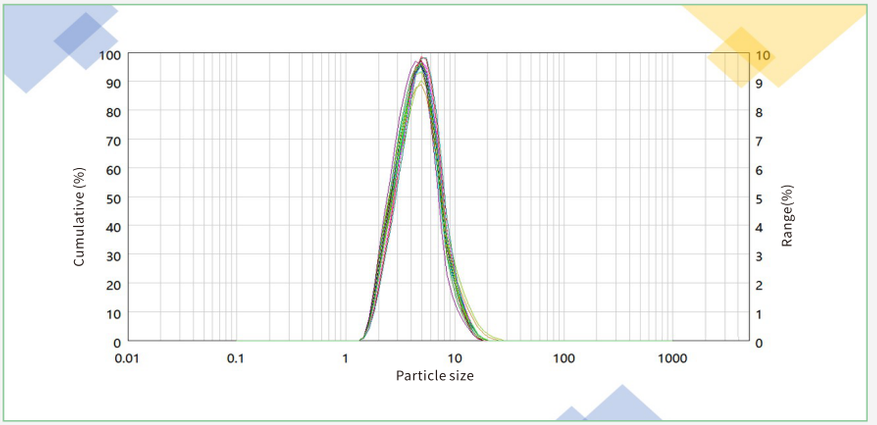
XP series columns adopt hybrid silica technology, combining the advantages of both organic and inorganic packing materials. They not only retain the characteristics of pure silica packing, but also feature the wide pH stability and low silanol activity of polymer packing materials, ensuring excellent separation performance while extending column lifetime. From analytical to preparative scale, XP series columns are compatible with all instrument platforms, and the same packing media is available in multiple specifications to ensure method continuity and transfer, thus improving work efficiency.

- Exclusive hybrid bare particle structure, extending pH tolerance range
- Patented triple-bonded modification and exclusive endcapping, ensuring high column efficiency and excellent peak symmetry
- Diverse bonded phase designs, increasing selectivity for method development and reducing development difficulty
- Strict quality control standards, ensuring batch-to-batch consistency of packing media and columns

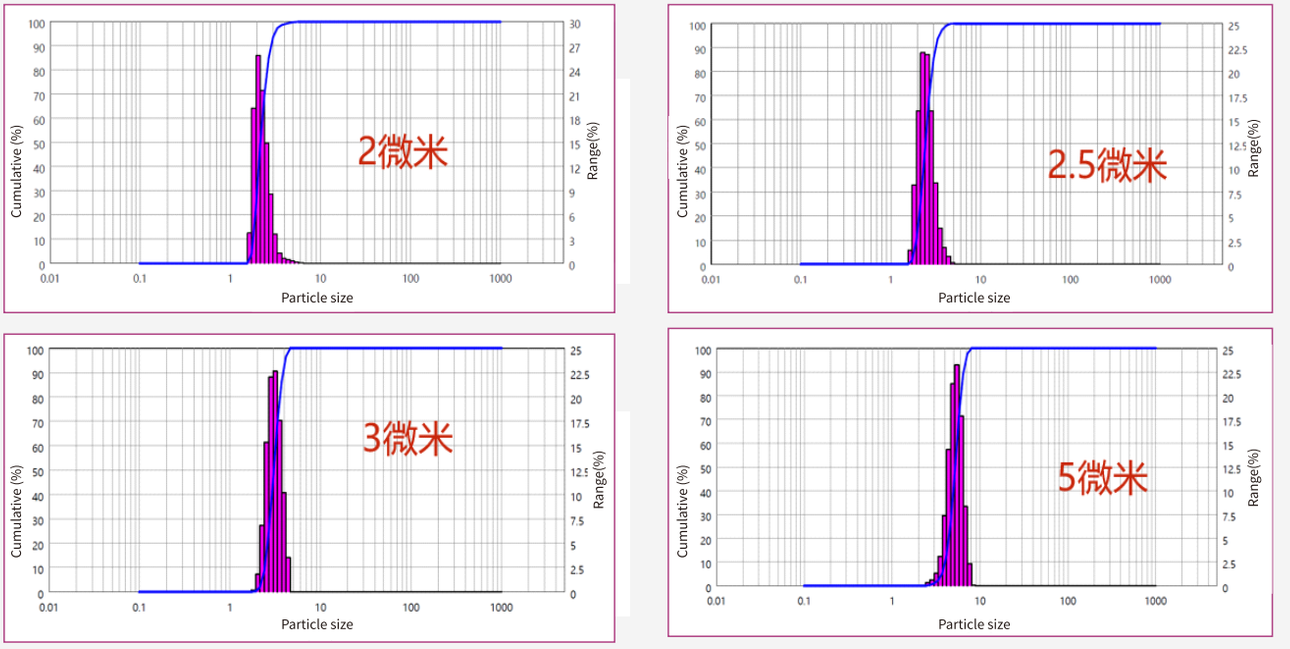
◎ Silica Matrix Classification: Organic-inorganic hybrid silica



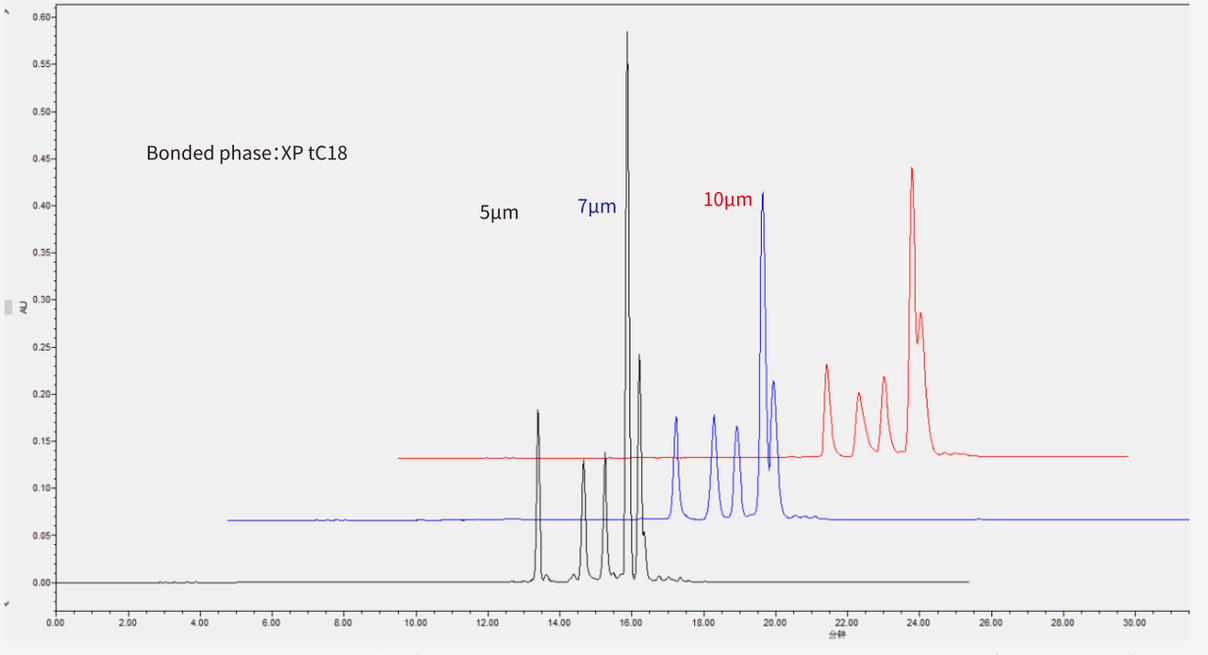
◎ Liquid Chromatography Packing Media – Particle Size Control in Production



Particle size distribution of 60 batches of synthesized silica microspheres



WePure silica synthesis delivers consistent particle size across batches, ensuring subsequent product consistency.



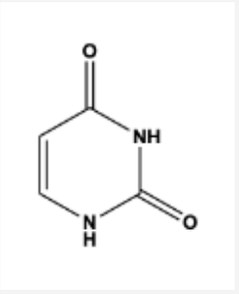
WePure provides an integrated supply of UPLC→HPLC→semi-prep HPLC →packing media, all manufactured with fully consistent synthesis processes, enabling convenient scale-up from analytical to preparative separations.

◎ Liquid Chromatography Packing Media – Batch-to-Batch Stability Test

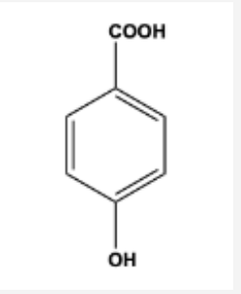
Column：MicroPulite® XP tC18 4.6*250mm 5μm

Detector：254nm；Flow rate：1.0mL/min ；Temperature：40°C

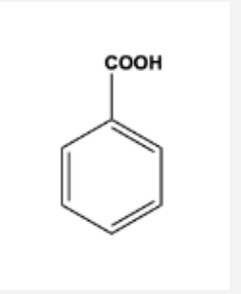
Mobile phase A: 50 mM ammonium formate, pH 3.0; Mobile phase B: methanol; Gradient elution



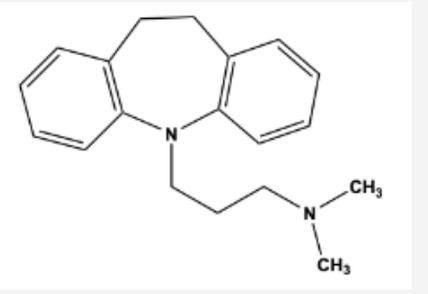
(1) Uracil



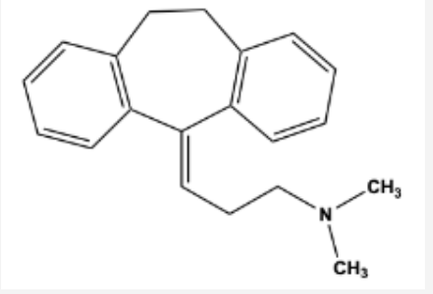
(2) 4-Hydroxybenzoic acid



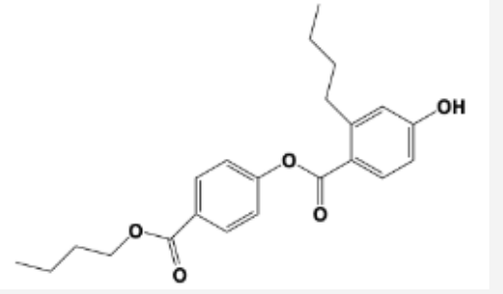
(3) Benzoic acid



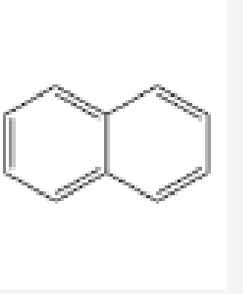
(4) Imipramine



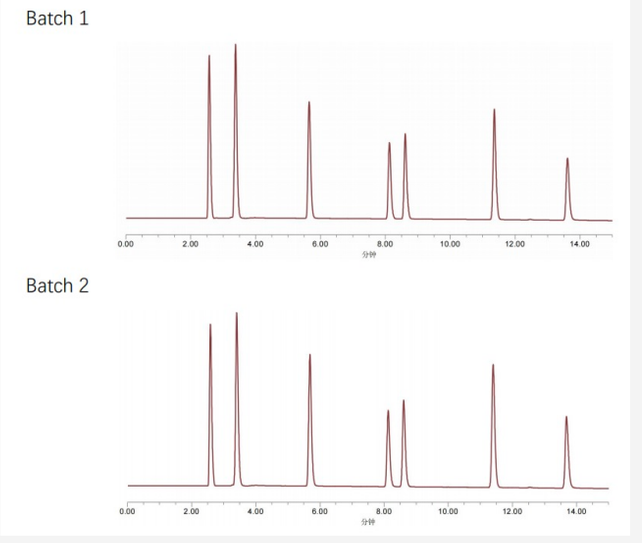
(5) Amitriptyline

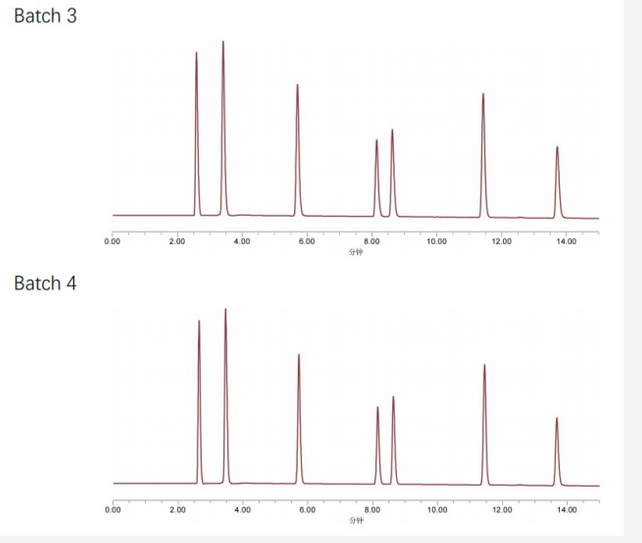


(6) Butyl p-hydroxybenzoate



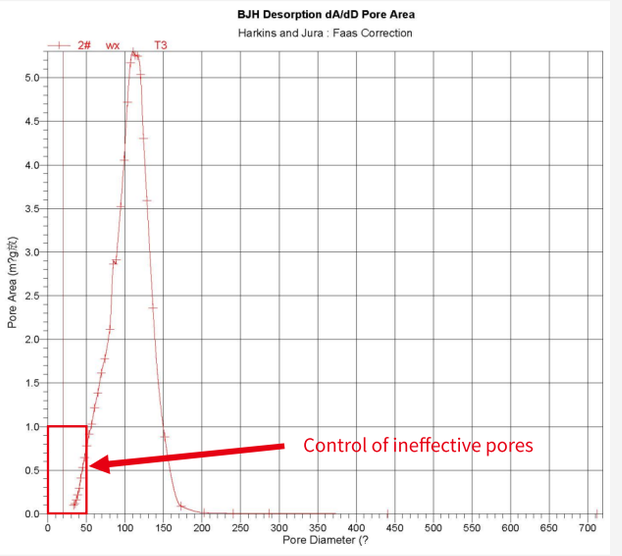
(7) Naphthalene



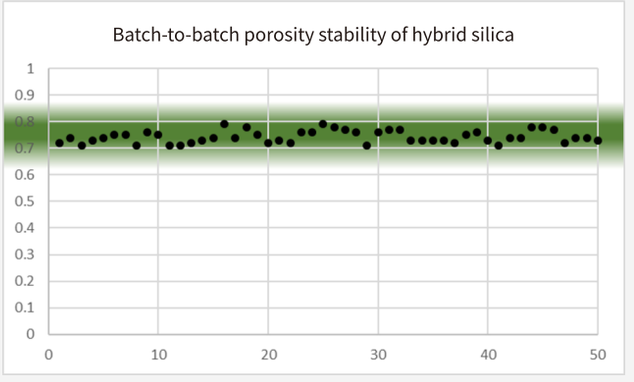


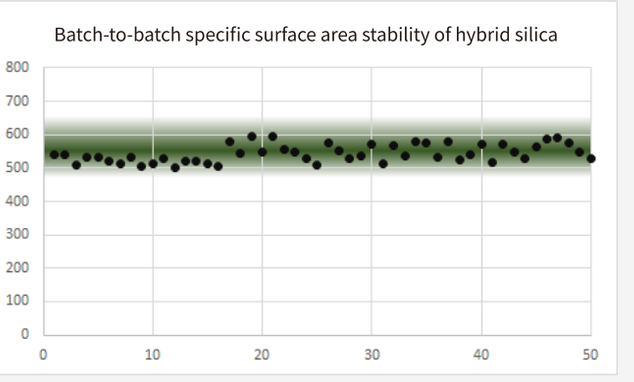
◎ Liquid Chromatography Packing Media – Pore Size Control in Production

99.9% of the surface area resides inside the pores. Control of small pores — especially the presence of ineffective pores — has a profound impact on chromatographic performance. Effective separation can only be achieved when analyte molecules enter the pores and interact fully with the packing surface. Pore size selection is therefore critical for analytical separation.

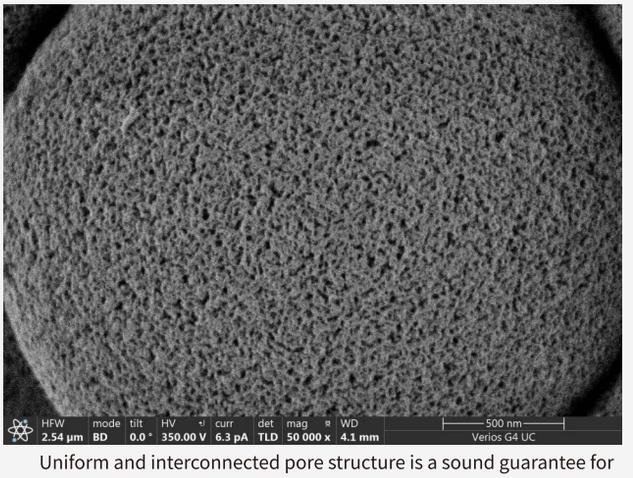


WePure 1.7 µm UPLC microstructure and pore size distribution

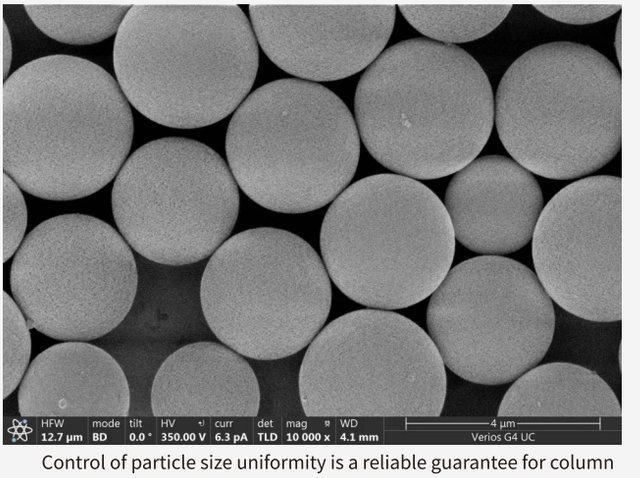




WePure control of porosity and specific surface area batch consistency

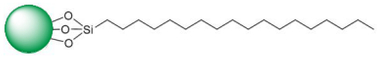
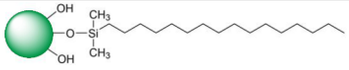
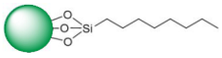
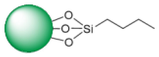
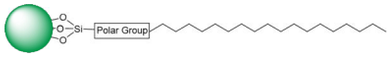
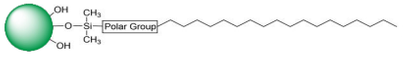
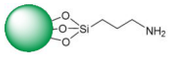
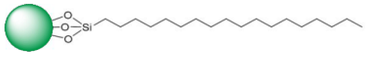
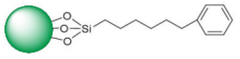
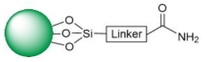
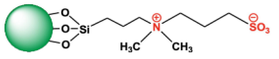
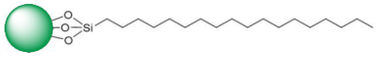
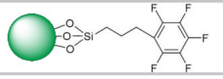
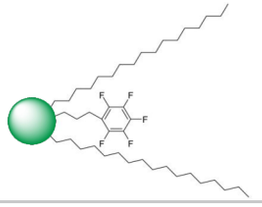
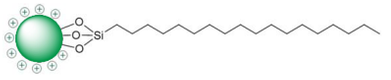


Uniform and interconnected pore structure is a sound guarantee for chromatographic performance.



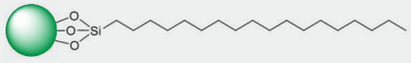
Control of particle size uniformity is a reliable guarantee for column efficiency and packing stability.

◎ XP Bonded Phase Property List

Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® XP	tC18		18%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L1	1-12	80°C (Low pH) 60°C(High pH)
	C18		19%	185	Yes	130	5	L1	2-12	70°C (Low pH) 50°C(High pH)
	tC8		13%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L7	1-12	60°C (Low pH) 60°C(High pH)
	tC4		10%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L26	1-10	80°C (Low pH) 50°C(High pH)
	RP18		18.50%	185	Yes	130	1.7,2.5,3, 3.5,5,10	L1	2-11	50°C (Low pH) 45°C (High pH)
	RP18 Plus		17.5%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L1	2-11	50°C(Low pH) 45°C (High pH)
	NH_2		9%	185	No	130	3.5,5	L8	1-9	45°C (Low pH) 45°C (High pH)
	T3		16%	185	Yes	130	3.5,5,7,10	L1	1-12	80°C (Low pH) 60°C (High pH)
	Phenyl-Hexyl		15%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L11	1-12	80°C (Low pH) 60°C (High pH)
	Amide		13%	185	No	130	1.7,2.5,3, 3.5,5,7,10	L68	2-11	90°C(Low pH) 90°C (High pH)
	HILIC		-	185	-	130	1.7,2.5,3, 3.5,5,7,10	L3	1-9	45°C (Low pH) 45°C (High pH)
	HILIC-Z		17%	185	No	130	1.7,2.5,3, 3.5,5	L3	2-10	45°C (Low pH) 45°C (High pH)
	Oligo tC18		18%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	LI	1-12	80°C (Low pH) 60°C (High pH)
	tPFP		11%	185	No	130	1.7,2.5,3, 3.5,5,7,10	L43	1-8	45°C(Low pH) 45°C (High pH)
	tC18/PFP		15%	185	No	130	1.7,2.5,3, 3.5,5,7,10	L1	1-12	45°C (Low pH) 45°C (High pH)
	tC18-AX		18.0%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L78	2-10	60°C (Low pH) 60°C (High pH)

MicroPulite® XP tC18 Column

As a general-purpose column,XP tC18 is suitable for a wide range of analytes. It can be used in a wide pH range from pH 1-12, and can tolerate higher column temperatures than silica columns, as well as be able to used under mobile phases with different concentrations of buffer salts and ion-pairing reagents, so it is the best choice for method development.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
tC18		18%	185	Yes	130Å	1.7,2.5,3,3.5 5,7,10μm	L1	1-12	80°C (Low pH) 60°C(High pH)

◎ Determination of Related Substances of Dirithromycin

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® XP tC18 5μm 250*4.6mm (Part No：XPtC18-254650)

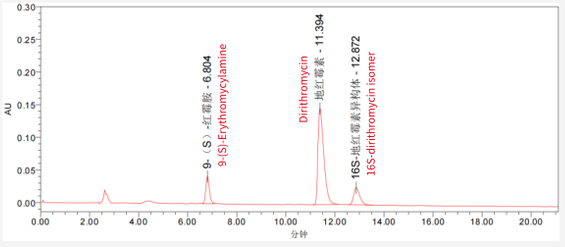
Detector：UV 205nm

Flow rate：1.0mL/min

Column temperature：30°C

Mobile phase：Phosphate buffer (dissolve 1.41 g potassium dihydrogen phosphate and 6.91 g dipotassium hydrogen phosphate in 1000 mL water) – acetonitrile – methanol (37:44:19)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
9-(S)-Erythromycylamine	6.804	425778	41724	-	10579.98	1.20
Dirithromycin	11.394	2435856	147176	13.33	10890.23	1.70
16S-dirithromycin isomer	12.872	460601	26165	3.33	12320.53	1.43

◎ Determination of 25-Hydroxyvitamin D3 and 3-epi-25-Hydroxyvitamin D3

Column：MicroPulite® XP tC18 2.1*100mm 1.7μm (Part No：XPtC18-102117)

Detector：UV 265nm

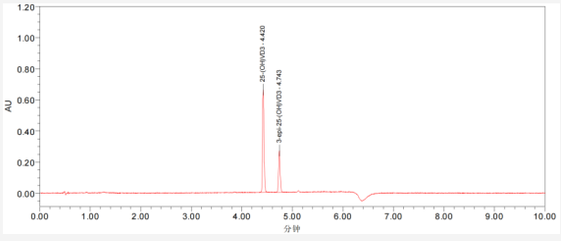
Flow rate：0.4mL/min

Column temperature

Mobile phaseA：water；Mobile phaseB：acetonitrile

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	40	60
0.5	40	60
4.5	0	100
5	0	100
5.01	40	60
10	40	60

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
25-(OH)VD3	4.420	1327812	659251	-	112406.88	1.27
3-epi-25-(0H)VD3	4.743	589191	268157	5.94	119064.70	1.02

◎ Determination of Related Substances of Methylprednisolone

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® XP tC18 4.6*150mm 3μm (Part No：XPtC18-154630)

Detector：UV 247nm

Flow rate：1.0mL/min

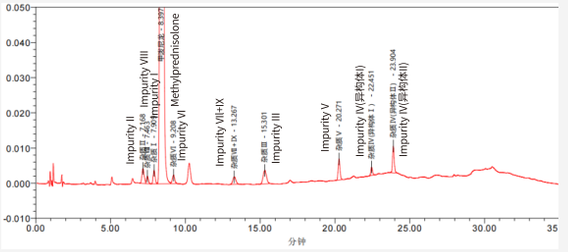
Column temperature：40°C

Mobile phaseA：Phosphoric acid – tetrahydrofuran – acetonitrile – water (0.1：1.5：10：90)

Mobile phaseB：Phosphoric acid – tetrahydrofuran – acetonitrile (0.1：1.5：100)

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	83	17
14	83	17
30	52	48
35	83	17

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Impurity II	7.168	44459	4256	-	10398.75	-
Impurity VIII	7.463	18348	2158	1.16	16594.87	-
Impurity I	7.909	34693	3833	1.92	17438.71	1.11
Methylprednisolone	8.397	9167923	944399	2.00	17603.57	1.13
Impurity VI	9.208	26213	2416	3.06	16915.46	-
Impurity VII+IX	13.267	30434	2122	12.30	18938.23	1.06
Impurity III	15.301	60272	3829	5.09	21174.35	1.06
Impurity V	20.271	50927	6005	15.51	131645.56	1.11
Impurity IV(异构体I)	22.451	18995	2400	10.25	190072.98	1.01
Impurity IV(异构体II)	23.904	59840	7657	7.20	227103.95	1.11

◎ Purity Determination of Phosphoramidite Monomer Raw Materials

Column：MicroPulite® XP tC18 5μm 250*4.6mm (Part No：XPtC18-254650)

Detector：UV 260nm

Flow rate：1.0mL/min

Column temperature：30°C

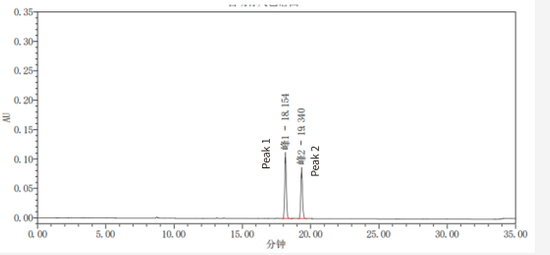
Mobile phaseA：20mMSodium bicarbonate (pH9.0)；

Mobile phaseB：Acetonitrile

Gradient Elution

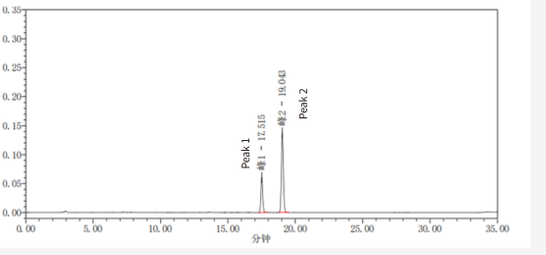
Chromatogram：

DMT -dA(bz) Phosphoramidite



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Peak 1	18.154	876841	103987	-	107075	1.1009
Peak 2	19.340	699021	78249	5.0914	107860	1.0929

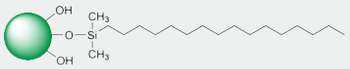
DMT -dG(bz) Phosphoramidite



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Peak 1	17.515	567985	60639	-	80457	1.0756
Peak 2	19.043	1392461	137528	5.8406	81358	1.0780

MicroPulite® XP C18 Column

Single-bonded octadecylsilane bonded hybrid silica column, general-purpose C18 with exclusive hybrid structure, improving pH and temperature tolerance.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C18		19%	185	Yes	130Å	5μm	L1	2-12	70°C (Low pH) 50°C(High pH)

◎ Determination of Related Substances of Rabeprazole

Column：MicroPulite® XP C18 5μm 250*4.6mm (Part No：XPC18-254650)

Detector：UV 280nm

Flow rate：1.0mL/min

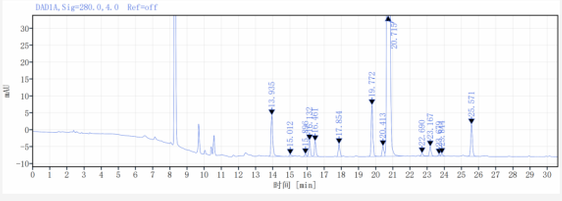
Column temperature：45°C

Mobile phaseA：0.025mol/LDipotassium hydrogen phosphate solution (pH adjusted to 7.0 with phosphoric acid) – acetonitrile

Mobile phaseB：Methanol

Mobile phaseC：Acetonitrile

Time (min)	Mobile phase A (%)	Mobile phase B (%)	Mobile phase B (%)
0	100	0	0
2	100	0	0
7	85	0	15
27	30	40	30
32	15	55	30
45	15	55	30
46	100	0	0
55	100	0	0



Peak name	R.T. (min)	Peak area	Peak width (min)	Peak height	USP Resolution (Rs)	USP Plate Count (N)	Tailing factor
	13.935	87.33	0.92	12.14	-	97091	1.39
	15.012	4.35	0.32	0.46	5.00	56118	1.38
	15.896	4.30	0.28	0.66	4.14	132675	1.05
	16.132	29.42	0.31	4.75	1.38	154348	1.16
	16.461	29.26	0.46	4.50	1.96	152113	1.23
	17.854	25.26	0.32	3.68	7.96	155276	1.18
	19.772	102.36	0.69	15.17	10.76	202757	1.17
Impurity H	20.413	22.30	0.31	3.01	3.42	168602	1.07
Rabeprazole	20.715	8774.9	1.00	1259.66	1.60	204330	1.12
	22.690	7.76	0.46	0.86	9.91	178599	1.73
	23.167	20.89	0.48	2.86	2.34	238669	1.18
	23.679	3.14	0.26	0.50	2.76	268772	0.89
	23.844	5.39	0.33	0.69	0.85	210620	1.39
	25.571	67.67	0.60	9.43	8.74	298942	1.13

◎ Determination of Related Substances of Tulathromycin

Column：MicroPulite® XP C18 4.6*250mm 5μm (Part No：XPC18-254650)

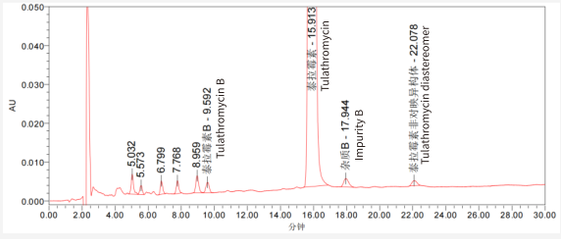
Detector：205nm

Flow rate：1.0mL/min

Column temperature：40°C

Mobile phase：75 mM potassium dihydrogen phosphate buffer (pH adjusted to 7.7 with potassium hydroxide) – methanol – acetonitrile = 35:8:57

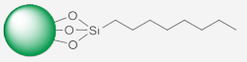
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	% Area	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
	5.032	52844	5167	0.53	-	6850.71	1.46
	5.573	24316	2343	0.24	2.05	6607.16	-
	6.799	33358	3486	0.33	4.57	10952.74	1.15
	7.768	34204	3311	0.34	3.72	13335.54	1.08
	8.959	52856	4418	0.53	4.12	12700.83	1.20
Tulathromycin B	9.592	37924	2723	0.38	1.84	9060.76	0.99
Tulathromycin	15.913	9718010	512569	96.92	14.46	15916.72	0.99
Impurity B	17.944	45787	2190	0.46	3.85	16212.84	1.29
Tulathromycin diastereomer	22.078	27581	1346	0.28	7.27	20833.90	1.19

MicroPulite® XP tC8 Column

XP tC8 can be used for a wide range of analytes in the pH 1-12, and provides good peak shape, column efficiency and chemical stability for compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
tC8		13%	185	Yes	130Å	1.7,2.5,3, 3.5,5,7,10μm	L7	1-12	60°C (Low pH) 60°C(High pH)

◎ Determination of Related Substances of Paracetamol

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® XP tC8 5μm 250*4.6mm (Part No：XPtC08-254650)

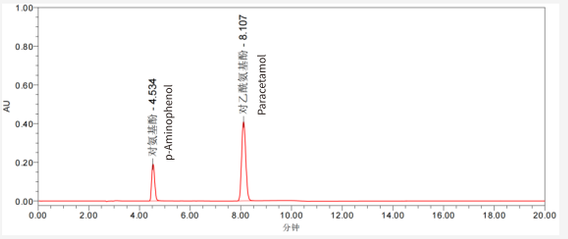
Detector：UV 245nm

Flow rate：1.0mL/min

Column temperature：40°C

Mobile phase：Phosphate buffer (dissolve 8.95 g disodium hydrogen phosphate and 3.9 g sodium dihydrogen phosphate in water, dilute to 1000 mL, add 12 mL 10% tetrabutylammonium hydroxide solution) – methanol (90:10)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
p-Aminophenol	4.534	1597911	190646	-	7051.50	1.18
Paracetamol	8.107	4636867	408486	13.51	11711.49	1.12

◎ Content Determination of Minwei Eye Drops

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® XP tC8 5μm 250*4.6mm (Part No：XPtC08-254650)

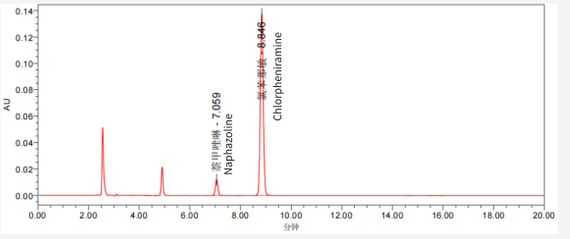
Detector：UV 280nm

Flow rate：1.0mL/min

Column temperature：30°C

Mobile phase：Sodium octanesulfonate solution (dissolve 2.16 g sodium octanesulfonate and 3.8 g anhydrous citric acid in 900 mL water, adjust pH to 3.0 with 1 mol/L sodium hydroxide, dilute to 1000 mL with water, mix well) – acetonitrile (130:70)

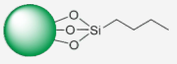
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	ChP Plate Count (N)	USP Tailing
Naphazoline	7.059	82671	11973	-	24143.639	1.03
Chlorpheniramine	8.846	1132669	137571	9.02	26550.333	1.02

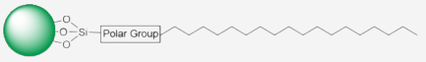
MicroPulite® XP tC4 Column

XP tC4 is a butylsilane-bonded hybrid silica column , used in the pH 1-10 for the separation of stronger hydrophobic substances in small molecules, as well as for the reverse-phase analysis of large molecules such as proteins.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
tC4		10%	185	Yes	130Å	1.7,2.5,3,3.5, 5,7,10μm	L26	1-10	80°C (Low pH) 50°C(High pH)

MicroPulite® XP RP18 Column

Although the XP RP18 and RP18 Plus have different polar embedded group, but they are compatible and tolerant to 100% water based on the same principler. The XP RP18 has the triple bonded technology, reduces the loss of the bonded phase under high aqueous phase conditions and extends the column life .

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
RP18		18. 5%	185	Yes	130Å	1.7,2.5,3, 3.5,5,10μm	L1	2-11	50°C (Low pH) 45°C(High pH)

◎ Determination of Related Substances in Mometasone Furoate Cream

Method: USP

Column：MicroPulite® XP RP18 4.6*250mm 5μm

Detector：UV 254nm

Flow rate：2.0 mL/min

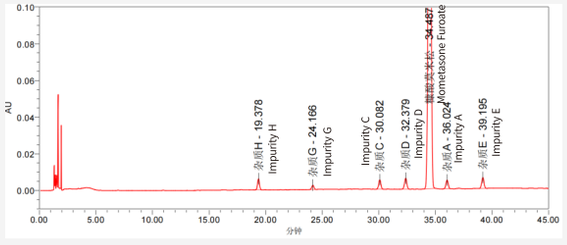
Column temperature：30°C

Mobile phaseA：water

Mobile phaseB：Acetonitrile

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	70	30
2	70	30
45	45	55
46	70	30
50	70	30

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Impurity H	19.378	73753	6049	-	57271.79	0.98
Impurity G	24.166	32856	2381	13.94	68488.51	0.98
Impurity C	30.082	68730	5090	16.36	112187.33	0.96
Impurity D	32.379	83589	5999	6.32	121408.25	1.01
Mometasone Furoate	34.487	6634639	459007	5.63	130256.43	0.99
Impurity A	36.024	67129	4751	4.08	147810.88	0.95
Impurity E	39.195	84287	5961	8.47	173548.00	0.98

◎ Content Determination of Amoxicillin

Column：XP RP18 3.5μm 50*4.6mm (Part No：XPR18-054635)

Detector：UV 230nm

Flow rate：1.0mL/min

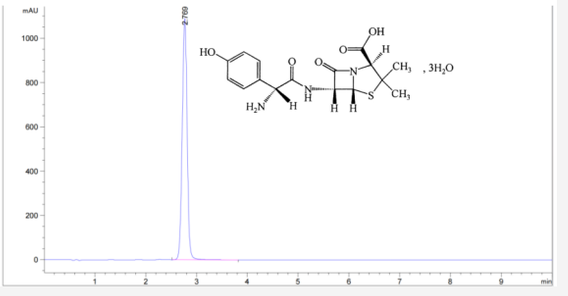
Column temperature：30°C

Mobile phaseA：0.1mol/L Sodium dihydrogen phosphate buffer

Mobile phaseB：0.1mol/L Sodium dihydrogen phosphate buffer

(pH 4.15) – methanol (75:25), isocratic elution with mobile phase A – mobile phase B (98:2)

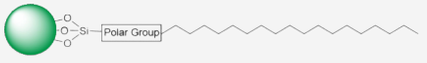
Chromatogram：



Name	R.T. (min)	Area (μV·s)	Height (μV)	Symmetry factor	Plate Count (N)	Peak width (min)
-	2.769	7309.13721	1089.03223	1.03	4040	0.1025

MicroPulite® XP RP18 Plus Column

With the polar embedded group in the bonded phase, XP RP18Plus is compatible and tolerant of 100% aqueous phases and is stable in the pH 2-11 range. The polar embedded group also has a shielding of the silanol group on the silica, thus the column provide good peak shape for basic compounds, and XP RP18Plus selectivity is also different from XP tC18.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
RP18 Plus		17.5%	185	Yes	130Å	1.7,2.5,3,3.5, 5,7,10μm	L1	2-11	50°C (Low pH) 45°C(High pH)

◎ Analysis of 22 Nucleic Acid Bases, Nucleosides and Nucleotides

Column：MicroPulite® XP RP18 Plus 4.6*250mm 5μm (Part No：XPR18P-254650)

Detector：UV 260nm

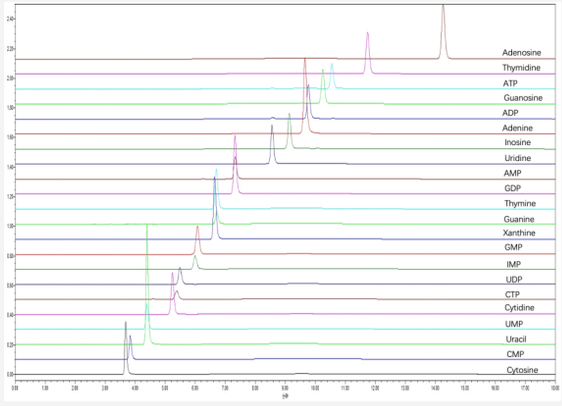
Flow rate：1.0 mL/min

Column temperature：30°C

Mobile phase：Mobile phaseA 50mM TEAA (pH7.0)；Mobile phaseB Acetonitrile

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	100	0
20	90	10

Chromatogram：



◎ Determination of 5-Hydroxymethylfurfural in Tinidazole and Glucose Injection

Column：MicroPulite® XP RP18 Plus 4.6*250mm 5μm (Part No：XPR18P-254650)

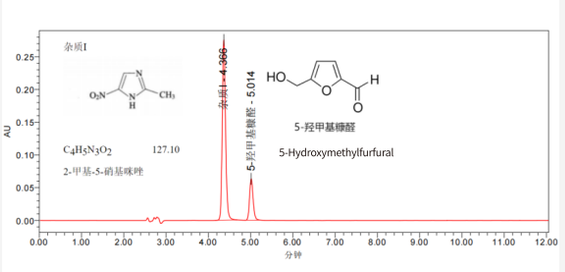
Detector：UV 284nm

Flow rate：1mL/min

Column temperature：30°C

Mobile phase：50 mM potassium dihydrogen phosphate (pH adjusted to 3.5 with phosphoric acid)-methanol=(80:20)

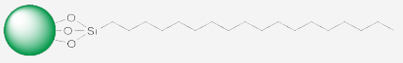
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Impurity I	4.366	1488579	275347	-	15739.83	1.16
5-Hydroxymethylfurfural	5.014	369561	63236	4.50	17310.52	1.15

MicroPulite® XP T3 Column

Triple-bonded technology, compatible with 100% aqueous phase, with an ultra-wide pH tolerance range of 1–12 and high temperature resistance up to 80°C. Significantly enhances retention of polar compounds; the hybrid matrix ensures long column lifetime. Suitable for separation and analysis of strongly polar compounds in high-aqueous systems and method development across a wide pH range, providing a long-term stable, high-retention separation solution for polar compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
T3		16%	185	Yes	130Å	3.5,5,7 10μm	L1	1-12	80°C (Low pH) 60°C(High pH)

◎ Detection of Water-soluble Vitamins

Column：MicroPulite® XP T3 250*4.6mm 5μm (Part No：XPT3-254650)

Detector：UV 265nm

Flow rate：1.0mL/min

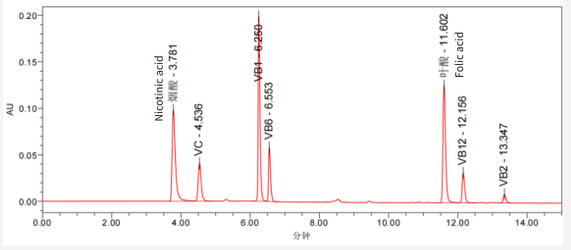
Column temperature：30°C

Mobile phase：Phase A: 20 mM ammonium formate (pH 3.0);

Phase B: acetonitrile

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	100	0
15	70	30

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Nicotinic acid	3.781	655363	98061	-	8473.52	1.68
VC	4.536	244967	40431	4.82	13821.22	1.22
VB1	6.250	710027	198771	14.19	75744.29	1.58
VB6	6.553	234147	58189	3.14	61681.71	1.48
Folic acid	11.602	661457	125639	42.59	116895.19	1.34
VB12	12.156	165773	32166	4.18	130656.40	1.29
Vb2	13.347	49212	9290	8.87	148863.85	1.32

◎ Determination of Related Substances of Kanamycin Sulfate

Column：MicroPulite® XP T3 4.6*250mm 5μm (Part No：XPT3-254650)

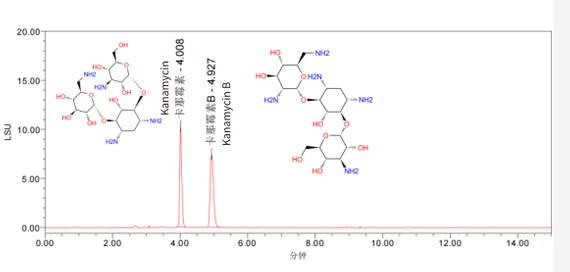
Detector：ELSD (Drift tube temperature 100°C, carrier gas flow rate 3.0 L/min)

Flow rate：1.0 mL/min

Column temperature：30°C

Mobile phase：0.2mol/LTrifluoroacetic acid solution – methanol (95:5)

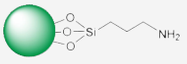
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Kanamycin	4.008	43000	10275	-	21851.43	1.42
Kanamycin B	4.927	51764	7485	6.33	12544.19	1.33

MicroPulite® XP NH_2 Column

How to extend the amido columns life is a major challenge, because the amido easily fall off from the silica surface. XP NH_2 adopt hybrid silica and triple bonded technology, can use in pH 1-9 and has a longer column life .The column can be used in both normal phase and HILIC modes of action, and is suitable for the analysis of compounds such as saccharides, steroids and other compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
NH_2		9%	185	No	130Å	3.5,5μm	L8	1-9	45°C (Low pH) 45°C(High pH)

◎ Determination of Xylitol, Sorbitol, Maltitol and Erythritol in Food

Methodology：GB 5009.279-2016

Column：MicroPulite® XP NH_2 4.6*250mm 5μm（Part No：XPNH-254650）

Detector：RID，30°C

Flow rate：1.0 mL/min

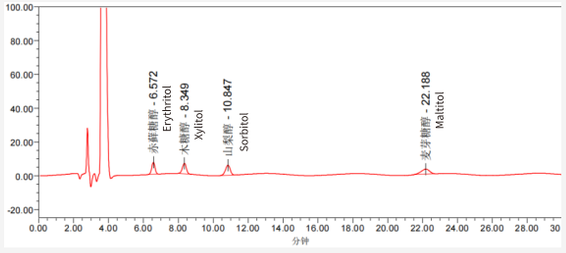
Column temperature：30°C

Mobile phase：Acetonitrile : water=（80:20）

Chromatogram：

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	100	0
15	70	30

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Erythritol	6.572	95364	7119	-	5627.34	0.94
Xylitol	8.349	99721	6279	4.61	6433.77	0.99
Sorbitol	10.847	112478	5940	5.42	7548.35	0.90
Maltitol	22.188	97079	2896	15.98	9579.05	0.84

◎ Separation of Related Impurities of Glucosamine Sulfate

Column：MicroPulite® XP NH_2 4.6*250mm 5μm（Part No：XPNH-254650）

Detector：UV 195nm

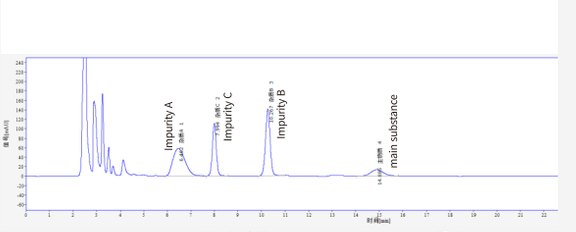
Flow rate：1mL/min

Column temperature：35°C

Mobile phase：Acetonitrile – buffer solution=（70：30，V/V）

（Buffer: dissolve 3.5 g dipotassium hydrogen phosphate and 0.25 mL ammonia in water, dilute to 1000 mL, adjust pH to 7.5 with phosphoric acid）

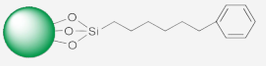
Chromatogram：



Peak name	R.T. (min)	Peak width at 0.05 peak height	Capacity factor	Resolution	Plate count (N/m)	Tailing factor
Impurity A	6.462	1.070	1.609	3.870	2868	1.257
Impurity C	7.994	0.382	2.227	2.432	47172	1.029
Impurity B	10.267	0.463	3.144	6.966	52588	1.011
main substance	14.885	1.155	5.008	6.921	14860	1.101

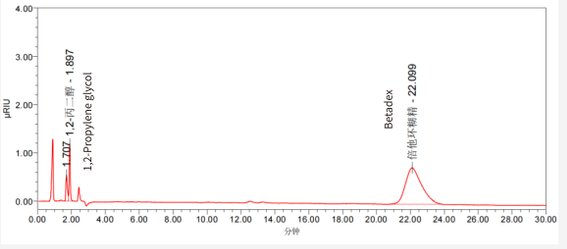
MicroPulite® XP Phenyl-Hexyl Column

XP Phenyl-Hexyl is a triple bonded phenyl column with phenyl-hexyl group bonded to hybird silica. Compared with phenyl bonded to silica , it has a wider pH tolerance range (pH 1-12) and better chemical stability of the bonded phase. It provides different selectivity from straight-chain alkane columns such as C18 or C8, and is suitable for the analysis of aromatic compounds and amines.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
Phenyl-Hexyl		15%	185	Yes	130Å	1.7, 2.5, 3, 3.5, 5, 7, 10μm	L11	1-12	80°C (Low pH) 60°C(High pH)

◎ Determination of Related Substances of Hydroxypropyl Betadex

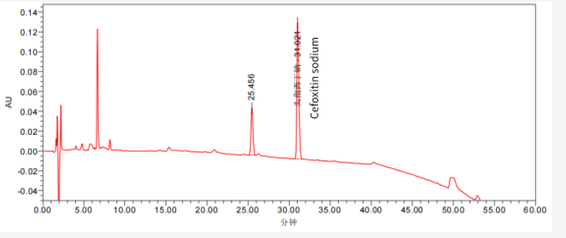
Methodology：Pharmacopoeia of the People's Republic of China
Column：MicroPulite® XP Phenyl-Hexyl 5μm 150*4.6mm
Detector：Refractive index detector T=40°C
Flow rate：1.5mL/min
Column temperature：40°C
Mobile phase：Pure water
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
-	1.707	3343	538	-	1545.65	-
1,2-Propylene glycol	1.897	5414	1188	1.36	4263.27	-
Betadex	22.099	50125	754	21.91	2290.49	1.30

◎ Determination of Related Substances of Cefoxitin Sodium

Methodology：Pharmacopoeia of the People's Republic of China 2025
Column：MicroPulite® XP Phenyl-Hexyl 4.6*150mm 3.5μm
Detector：UV 235nm
Flow rate：1.0mL/min
Column temperature：30°C
Mobile phase：Phase A: water (pH adjusted to 2.7 with formic acid);
Phase B: acetonitrile (gradient elution per pharmacopoeia method)
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
-	25.456	801991	47812	-	53105.81	1.10
Cefoxitin sodium	31.021	2402515	137440	12.34	70267.76	1.40

MicroPulite® XP Amide Column

XP Amide can separate and analysis strong polar compounds in HILIC mode, which are not retained by C18 . Based on hybrid particles,XP Amide can be used with a wider range of pH mobile phases (pH 2-11) to meet the needs for separation of strongly polar compounds such as acid, basic, and neutral.

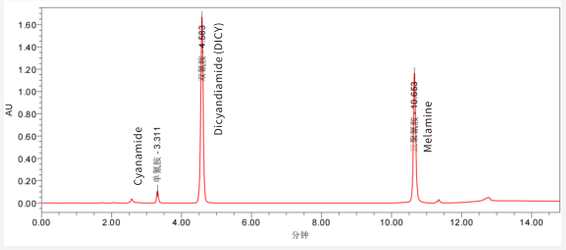
Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
Amide		13%	185	No	130Å	1.7,2.5,3,3.5 5,7,10μm	L68	2-11	90°C (Low pH) 90°C(High pH)

◎ Analysis of Cyanoguanidine, Dicyandiamide and Melamine

Column：MicroPulite® XP Amide 4.6*250mm 5μm (Part No：XPA-254650)
Detector：UV 210nm
Flow rate：1.0mL/min
Column temperature：30°C
Mobile phase:Phase A: 0.1% ammonia solution; Phase B: acetonitrile

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	10	90
5	10	90
7	30	70

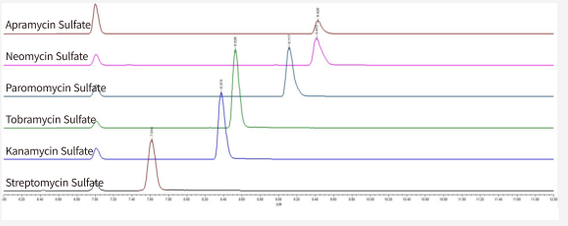
Chromatogram：



◎ Analysis of Aminoglycosides on Amide Column

Column：MicroPulite® XP Amide 3.5μm 150*4.6mm (Part No：XPA-154635)
Detector：ELSD
Flow rate：1.0mL/min
Column temperature：40°C
Mobile phase：Phase A: acetonitrile; Phase B: 250 mM ammonium acetate (pH 4.0)

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	70	30
15	40	60

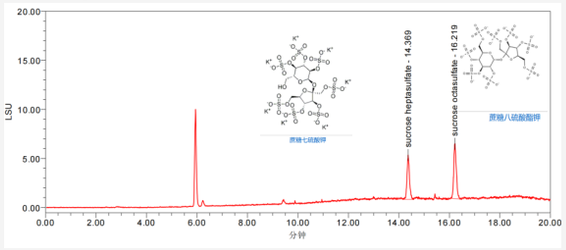


◎ Analysis of Sucrose Heptasulfate and Sucrose Octasulfate

Column：MicroPulite® XP Amide 4.6*250mm 5μm (Part No：XPA-254650)
Detector：ELSD
Flow rate：1.0mL/min
Column temperature：40°C
Mobile phase：Phase A: acetonitrile; Phase B: 50 mM ammonium formate solution

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	70	30
15	40	60

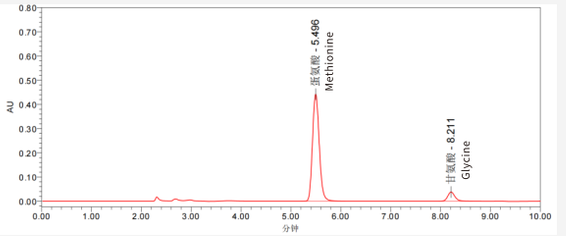
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Sucrose heptasulfate, potassium salt	14.369	30858	4524	-	100452.47	1.19
Potassium sucrose octasulfate	16.219	39882	5613	10.59	103040.88	1.23

◎ Liquid Phase Analysis of Glycine and Methionine

Column：MicroPulite® XP Amide 5μm 250*4.6mm (Part No：XPA-254650)
Detector：UV 200nm
Flow rate：1.0mL/min
Column temperature：25°C
Mobile phase：0.05 mol/L potassium dihydrogen phosphate (pH 2.8) – acetonitrile = 30:70
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Methionine	5.496	4171909	442091	-	7983.24	1.16
Glycine	8.211	375284	37846	10.84	16245.42	1.16

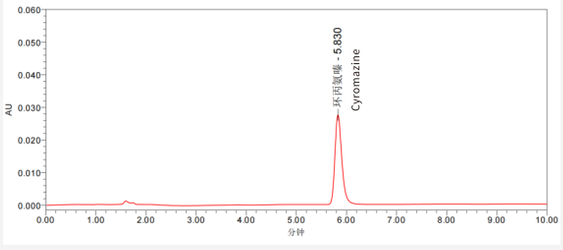
MicroPulite® XP HILIC Column

As unbonded hybrid silica,XP HILIC has excellent chemical stability in the pH 1-9 for use in normal phase and HILIC conditions. XP HILIC can increase the retention of polar compounds in HILIC mode, especially polar basic and neutral compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
HILIC		-	185	-	130Å	1.7, 2.5, 3, 3.5, 5, 7, 10μm	L3	1-9	45°C (Low pH) 45°C(High pH)

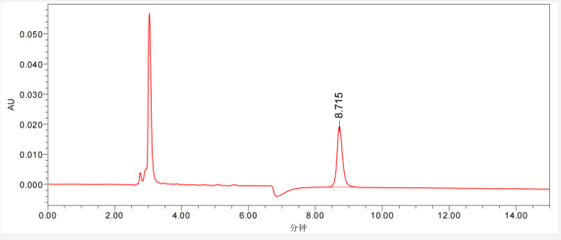
◎ Determination of Cyromazine Residues in Animal-derived Foods

Methodology：GB 31658.12-2021
Column：MicroPulite® XP HILIC 2.1*150mm 3.5μm (Part No：XPH-152135)
Detector：UV 214nm
Flow rate：0.3mL/min
Column temperature：30°C
Mobile phase Acetonitrile – 25 mM ammonium acetate
Chromatogram



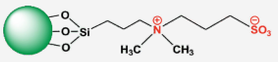
◎ Content Determination of (2-Carboxyethyl)dimethylsulfonium Bromide

Column：MicroPulite® XP HILIC 5μm 250*4.6mm (Part No：XPH-254650)
Detector：UV 205nm
Flow rate：1.0mL/min
Column temperature：40°C
Mobile phase：Acetonitrile – 20 mM dipotassium hydrogen phosphate (pH adjusted to 7.0 with phosphoric acid)
Chromatogram：



MicroPulite® XP HILIC-Z Column

Hybrid silica matrix bonded with sulfobetaine zwitterions, offering differentiated selectivity compared with conventional HILIC and Amide columns. Significantly enhances retention of polar compounds, suitable for separation of carbohydrates, organic acids, metabolites, amino acids and other strongly polar analytes, providing a dedicated zwitterionic hydrophilic separation solution.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
HILIC-Z		17%	185	No	130Å	1.7, 2.5, 3, 3.5, 5,μm	L3	2-10	45°C (Low pH) 45°C(High pH)

◎ Determination of Various Organic Acids Using a HILIC-Z Column

Column：MicroPulite® XP HILIC-Z 4.6*150mm 3.0μm (Part No：XPHZ-154630)

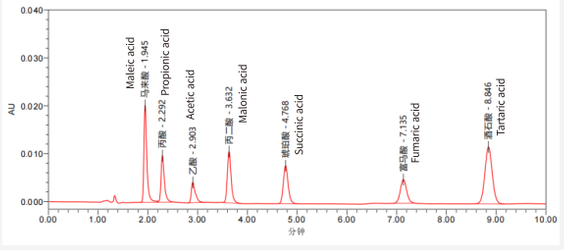
Detector：UV 210nm

Flow rate：1.0 mL/min

Column temperature：40°C

Mobile phase：Acetonitrile – 0.02 mol/L dipotassium hydrogen phosphate (pH adjusted to 6.0 with phosphoric acid)=(72:28)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Maleic acid	1.945	82501	20255	-	6089.67	1.51
Propionic acid	2.292	45743	9753	3.30	6273.24	1.49
Acetic acid	2.903	23586	4249	4.93	6538.91	1.62
Malonic acid	3 .632	57631	10726	5.41	11310.15	1.29
Succinic acid	4.768	53043	7932	7.41	12095.26	1.18
Fumaric acid	7.135	44078	4956	11.79	15374.19	1.09
Tartaric acid	8.846	122284	11880	6.87	17068.87	1.05

◎Determination of Six Sugar Alcohols on HILIC-Z Column

Column：MicroPulite® XP HILIC-Z 4.6*150mm 3.0μm (Part No：XPHZ-154630)

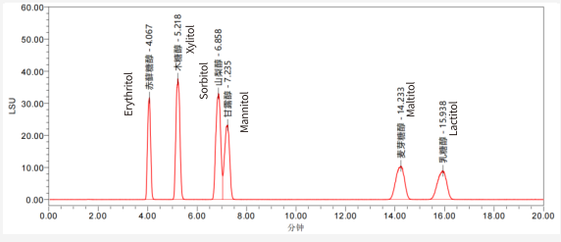
Detector：ELSD

Flow rate：1.0 mL/min

Column temperature：40°C

Mobile phase：Acetonitrile – water=(80:20)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Erythritol	4.067	273796	31759	-	5048.70	0.97
Xylitol	5.218	420085	37658	4.16	4927.80	1.08
Sorbitol	6.858	450220	33079	4.73	5077.32	
Mannitol	7.235	332643	23223	0.96	5410.70	
Maltitol	14.233	252953	10482	12.90	9622.27	0.90
Lactitol	15.938	228375	8945	2.44	9052.36	0.87

◎ Retention Test of Nucleosides and Bases in Hydrophilic Mode

Column：XP HILIC-Z 3μm 150*4.6mm (Part No：XPHZ-154630)

Detector：UV 260nm

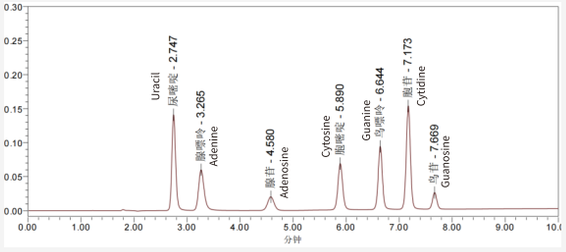
Flow rate：1.0mL/min

Column temperature：30°C

Mobile phase A: 50 mM ammonium formate (pH adjusted to 3.0 with formic acid); Mobile phase B: acetonitrile

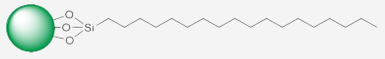
Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	15	85
2	15	85
10	40	60

Chromatogram：



MicroPulite® XP Oligo tC18 Column

Hybird silica particle has good tolerance to high temperature, high pH, and high salt. Reverse phase analysis Oligonucleotides requires ion pair reagent ,pH higher than 7 and high temperature , XP Oligo tC18 can meet these strict conditions, and is the good choice for reverse phase columns for oligonucleotide analysis.

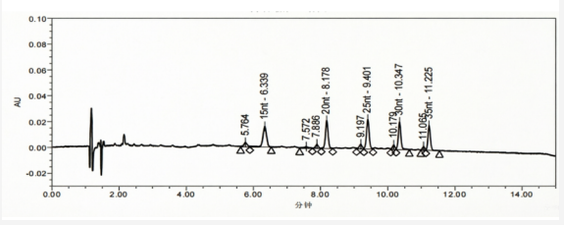
Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
Oligo tC18		18%	185	Yes	130Å	1.7, 2.5, 3, 3.5, 5,7,10μm	L1	1-12	80°C (Low pH) 60°C(High pH)

◎ Analysis of 15~35 nt Oligonucleotides

Column：MicroPulite® XP Oligo tC18 1.7μm 100*2.1mm (Part No：XPOtC18-102117)
Detector：UV 260nm
Flow rate：0.2mL/min
Column temperature：60°C
Mobile phase A: 100 mM TEAA solution;
Mobile phase B: 100 mM TEAA solution – acetonitrile (80:20)

Time (min)	Mobile phase A (%)	Mobile phase B (%)
0	50	50
12	36	64
15	50	50

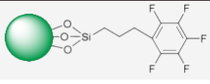
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing	USP Resolution (Rs)
	5.764	25329	3587	3.57	19243	0.9219	
15nt	6.339	124739	16098	17.56	17330	0.8710	2.9103
	7.572	14143	1377	1.99	37953		4.2271
	7.886	21217	3575	2.99	54462	0.9203	1.1158
20nt	8.178	120227	21859	16.92	56801	1.0308	1.8195
	9.197	25659	4027	3.61	39643		6.7876
25nt	9.401	127714	23203	17.98	70840	1.0173	1.3720
	10.179	19783	3z789	2.78	90458		4.8759
30nt	10.347	114509	21446	16.12	90334	0.9955	1.0762
	11.065	14503	3090	2.04	114668		5.0690
35nt	11.225	102644	19587	14.45	113559	1.0839	1.1182

MicroPulite® XP tPFP Column

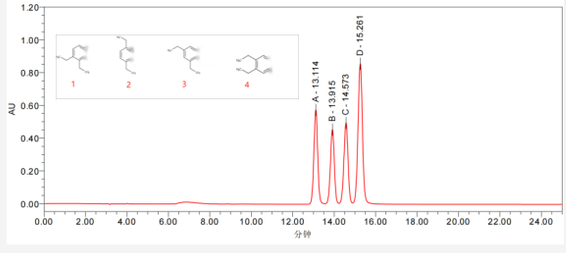
XP tPFP can enhance the retention of polar compounds , and provide a different selectivity from C18, Phenyl-Hexyl. XP tPFP is suitable for the analysis of aromatic compounds, halogenated compounds, and planar position isomers.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
tPFP		11%	185	No	130Å	1.7, 2.5, 3, 3.5, 5,7,10μm	L43	1-8	45°C (Low pH) 45°C(High pH)

◎ Separation of a Diethyl Positional Isomer Compound

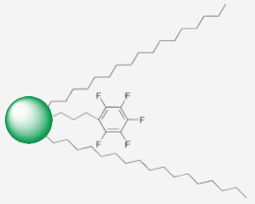
Column：MicroPulite® XP tPFP 4.6*250mm 3.5μm (Part No：XPtPFP-254635)
Detector：UV 210nm
Flow rate：1.0 mL/min
Column temperature：40°C
Mobile phase：N/A

Chromatogram：



MicroPulite® XP tC18/PFP Column

XP tC18/PFP is mix mode of C18 and PFP, it has the hydrophobic effect of C18 and the selectivity of PFP. XP tC18/PFP has different selectivity from tC18 and PFP, which is affeced by multiple mode,such as π-π interactions, dipole-dipole, hydrogen bonding and so on. The fully structured hybrid silica matrix with unique triple bonded technology,that make tC18/PFP stable in pH 1-12 and have excellent chemical stability and column life.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
tC18/PFP		15%	185	No	130Å	1.7, 2.5, 3, 3.5, 5,7,10μm	L1	1-12	45°C (Low pH) 45°C(High pH)

◎ Separation of Methylbiphenyl Positional Isomers

Column：MicroPulite® XP tC18/PFP 4.6*250mm 5μm (Part No：XPtFP18-254650)

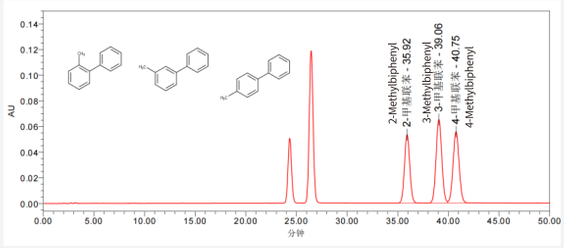
Detector：UV 240nm

Flow rate：1.0mL/min

Column temperature：30°C

Mobile phase：Acetonitrile – water= (45：55)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
2-Methylbiphenyl	35.920	1926899	53260	-	22305.27	1.05
3-Methylbiphenyl	39.061	2565215	65098	3.15	22507.92	1.04
4-Methylbiphenyl	40.752	2309299	55541	1.58	21796.50	1.04

◎ Determination of Related Substances of Diosmin

Methodology：USP

Column：MicroPulite® XP tC18/PFP 3.0μm 100*4.6mm

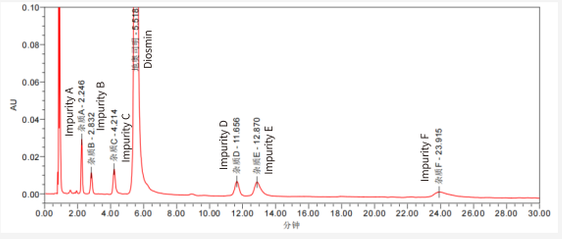
Detector：UV 275nm

Flow rate：1.5mL/min

Column temperature：40°C

Mobile phase：Acetonitrile – glacial acetic acid – methanol – water (2：6：28：66)

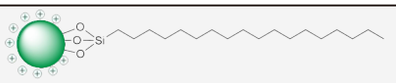
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Impurity A	2.246	164359	29304	-	4125.22	1.13
Impurity B	2.832	91258	11501	3.39	3075.07	1.08
Impurity C	4.214	129411	13336	6.24	4765.16	1.18
Diosmin	5.518	7476639	615451	4.91	5605.17	1.25
Impurity D	11.656	141895	7616	15.81	9146.58	1.04
Impurity E	12.870	194920	7279	2.09	5297.94	1.30
Impurity F	23.915	136124	2492	10.48	4051.26	1.55

MicroPulite® XP Super tC18-AX Column

Mixed-mode reversed-phase / anion exchange, compatible with 100% aqueous phase, pH tolerance 2–10. Enhances retention of polar acidic compounds while improving peak shape of basic compounds. Suitable for simultaneous separation of polar acidic and basic analytes and differentiated method development, enabling simultaneous optimized separation of both acidic and basic compounds on a single column.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
tC18-AX		18%	185	Yes	130Å	1.7, 2.5, 3, 3.5, 5,7,10μm	L78	2-10	60°C (Low pH) 60°C(High pH)

◎ Peak Shape Comparison of Four Alkyl Quaternary Ammonium Salts on Different C18 Columns

Detector：ELSD (Conditions: gas flow rate 2.0 L/min, evaporation temperature 70°C)

Flow rate：1.0 mL/min

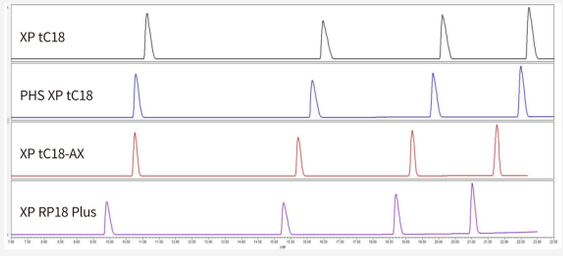
Column temperature：45°C

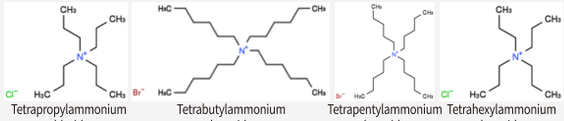
Mobile phase：

T/min	Phase A: 0.1% trifluoroacetic acid	Phase B: acetonitrile
0	95	5
25	15	85

※ All columns: 5 μm, 250 × 4.6 mm

Chromatogram：





Tetrapropylammonium chloride | Tetrabutylammonium bromide | Tetrapentylammonium bromide | Tetrahexylammonium bromide

Tailing factor	Tetrapropylammonium chloride	Tetrabutylammonium bromide	Tetrapentylammonium bromide	Tetrahexylammonium bromide
XP tC18	1.63	2.22	2.15	1.81
PHS XP tC18	1.66	1.98	1.82	1.74
XP tC18-AX	1.39	1.60	1.30	1.00
XP RP18 Plus	1.95	2.08	1.55	1.63

◎ Determination of Related Substances in Gentamicin Sulfate Eye Drops

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® XP tC18-AX 4.6*250mm 5μm

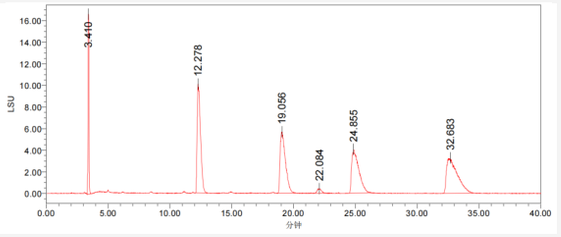
Detector：Evaporative light scattering detector (Waters 2424, evaporation temperature 100°C, gas flow rate 2.5 L/min)

Flow rate：0.8mL/min

Column temperature：30°C

Mobile phase：0.2mol/LTrifluoroacetic acid solution – methanol (96：4)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
-	3.410	86944	16678	-	9145.95	1.24
C1a	12.278	189936	10080	27.32	9734.19	2.09
C2	19.056	169277	5679	10.50	11307.26	1.96
Micronomicin	22.084	10020	427	4.27	29151.73	1 13
C2a	24.855	161934	4052	3.25	7127.72	2.35
C1	32.683	197935	3302	5.92	7467.87	2.09

Ordering Information

◎ XP Series 1.7µm

Size	XP tC18	XP tC8	XP tC4	XP RP18	XP RP18 Plus	XP Phenyl-Hexyl	XP Amide
30x 2.1mm	UXPtC18-032117	UXPtC08-032117	UXPtC04-032117	UXPR18-032117	UXPR18P-032117	UXPPH-032117	UXPA-032117
50x 2.1 mm	UXPtC18-052117	UXPtC08-052117	UXPtC04-052117	UXPR18-052117	UXPR18P-052117	UXPPH-052117	UXPA-052117
100x 2.1 mm	UXPtC18-102117	UXPtC08-102117	UXPtC04-102117	UXPR18-102117	UXPR18P-102117	UXPPH-102117	UXPA-102117
150 x 2.1 mm	UXPtC18-152117	UXPtC08-152117	UXPtC04-152117	UXPR18-152117	UXPR18P-152117	UXPPH-152117	UXPA-152117
30 x 3.0 mm	UXPtC18-033017	UXPtC08-033017	UXPtC04-033017	UXPR18-033017	UXPR18P-033017	UXPPH-033017	UXPA-033017
50 x 3.0 mm	UXPtC18-053017	UXPtC08-053017	UXPtC04-053017	UXPR18-053017	UXPR18P-053017	UXPPH-053017	UXPA-053017
100 x 3.0 mm	UXPtC18-103017	UXPtC08-103017	UXPtC04-103017	UXPR18-103017	UXPR18P-103017	UXPPH-103017	UXPA-103017
150 x 3.0 mm	UXPtC18-153017	UXPtC08-153017	UXPtC04-153017	UXPR18-153017	UXPR18P-153017	UXPPH-153017	UXPA-153017

Size	XP HILIC	XP Oligo tC18	XP tPFP	XP tC18/PFP	XP tC18/AX	XP HILIC-Z
30x 2.1mm	UXPH-032117	UXPOtC18-032117	UXPtPFP-032117	UXPtFP18-032117	S-XPtC18AX-052117	UXPHZ-052117
50x 2.1 mm	UXPH-052117	UXPOtC18-052117	UXPtPFP-052117	UXPtFP18-052117	S-XPtC18AX-102117	UXPHZ-102117
100x 2.1 mm	UXPH-102117	UXPOtC18-102117	UXPtPFP-102117	UXPtFP18-102117	S-XPtC18AX-152117	UXPHZ-152117
150 x 2.1 mm	UXPH-152117	UXPOtC18-152117	UXPtPFP-152117	UXPtFP18-152117	S-XPtC18AX-033017	UXPHZ-033017
30 x 3.0 mm	UXPH-033017	UXPOtC18-033017	UXPtPFP-033017	UXPtFP18-033017	S-XPtC18AX-053017	UXPHZ-053017
50 x 3.0 mm	UXPH-053017	UXPOtC18-053017	UXPtPFP-053017	UXPtFP18-053017	S-XPtC18AX-103017	UXPHZ-103017
100 x 3.0 mm	UXPH-103017	UXPOtC18-103017	UXPtPFP-103017	UXPtFP18-103017	S-XPtC18AX-153017	UXPHZ-153017
150 x 3.0 mm	UXPH-153017	UXPOtC18-153017	UXPtPFP-153017	UXPtFP18-153017	S-XPtC18AX-052117	UXPHZ-052117

◎ XP Series 2.5µm

Size	XP tC18	XP tC8	XP tC4	XP RP18	XP RP18 Plus	XP Phenyl-Hexyl	XP Amide
30x 2.1 mm	UXPtC18-032125	UXPtC08-032125	UXPtC04-032125	UXPR18-032125	UXPR18P-032125	UXPPH-032125	UXPA-032125
50x 2.1 mm	UXPtC18-052125	UXPtC08-052125	UXPtC04-052125	UXPR18-052125	UXPR18P-052125	UXPPH-052125	UXPA-052125
100x 2.1 mm	UXPtC18-102125	UXPtC08-102125	UXPtC04-102125	UXPR18-102125	UXPR18P-102125	UXPPH-102125	UXPA-102125
150 x 2.1 mm	UXPtC18-152125	UXPtC08-152125	UXPtC04-152125	UXPR18-152125	UXPR18P-152125	UXPPH-152125	UXPA-152125
30 x 3.0 mm	UXPtC18-033025	UXPtC08-033025	UXPtC04-033025	UXPR18-033025	UXPR18P-033025	UXPPH-033025	UXPA-033025
50 x 3.0 mm	UXPtC18-053025	UXPtC08-053025	UXPtC04-053025	UXPR18-053025	UXPR18P-053025	UXPPH-053025	UXPA-053025
100 x 3.0 mm	UXPtC18-103025	UXPtC08-103025	UXPtC04-103025	UXPR18-103025	UXPR18P-103025	UXPPH-103025	UXPA-103025
150 x 3.0 mm	UXPtC18-153025	UXPtC08-153025	UXPtC04-153025	UXPR18-153025	UXPR18P-153025	UXPPH-153025	UXPA-153025
250 x 3.0 mm	UXPtC18-253025	UXPtC08-253025	UXPtC04-253025	UXPR18-253025	UXPR18P-253025	UXPPH-253025	UXPA-253025
30 x 4.6 mm	XPtC18-034625	XPtC08-034625	XPtC04-034625	XPR18-034625	XPR18P-034625	XPPH-034625	XPA-034625
50 x 4.6 mm	XPtC18-054625	XPtC08-054625	XPtC04-054625	XPR18-054625	XPR18P-054625	XPPH-054625	XPA-054625
100 x 4.6 mm	XPtC18-104625	XPtC08-104625	XPtC04-104625	XPR18-104625	XPR18P-104625	XPPH-104625	XPA-104625
150 x 4.6 mm	XPtC18-154625	XPtC08-154625	XPtC04-154625	XPR18-154625	XPR18P-154625	XPPH-154625	XPA-154625
200 x 4.6 mm	XPtC18-204625	XPtC08-204625	XPtC04-204625	XPR18-204625	XPR18P-204625	XPPH-204625	XPA-204625
250 x 4.6 mm	XPtC18-254625	XPtC08-254625	XPtC04-254625	XPR18-254625	XPR18P-254625	XPPH-254625	XPA-254625

Size	XP HILIC	XP Oligo tC18	XP tPFP	XP tC18/PFP	XP tC18/AX	XP HILIC-Z
30x 2.1 mm	UXPH-032125	UXPOtC18-032125	UXPtPFP-032125	UXPtFP18-032125	–	–
50x 2.1 mm	UXPH-052125	UXPOtC18-052125	UXPtPFP-052125	UXPtFP18-052125	S-XPtC18AX-052125	UXPHZ-052125
100x 2.1 mm	UXPH-102125	UXPOtC18-102125	UXPtPFP-102125	UXPtFP18-102125	S-XPtC18AX-102125	UXPHZ-102125
150 x 2.1 mm	UXPH-152125	UXPOtC18-152125	UXPtPFP-152125	UXPtFP18-152125	S-XPtC18AX-152125	UXPHZ-152125
30 x 3.0 mm	UXPH-033025	UXPOtC18-033025	UXPtPFP-033025	UXPtFP18-033025	S-XPtC18AX-033025	UXPHZ-033025
50 x 3.0 mm	UXPH-053025	UXPOtC18-053025	UXPtPFP-053025	UXPtFP18-053025	S-XPtC18AX-053025	UXPHZ-053025
100 x 3.0 mm	UXPH-103025	UXPOtC18-103025	UXPtPFP-103025	UXPtFP18-103025	S-XPtC18AX-103025	UXPHZ-103025
150 x 3.0 mm	UXPH-153025	UXPOtC18-153025	UXPtPFP-153025	UXPtFP18-153025	S-XPtC18AX-153025	UXPHZ-153025
250 x 3.0 mm	UXPH-253025	UXPOtC18-253025	UXPtPFP-253025	UXPtFP18-253025	S-XPtC18AX-253025	UXPHZ-253025
30 x 4.6 mm	XPH-034625	XPOtC18-034625	XPtPFP-034625	XPtFP18-034625	S-XPtC18AX-034625	XPHZ-034625
50 x 4.6 mm	XPH-054625	XPOtC18-054625	XPtPFP-054625	XPtFP18-054625	S-XPtC18AX-054625	XPHZ-054625
100 x 4.6 mm	XPH-104625	XPOtC18-104625	XPtPFP-104625	XPtFP18-104625	S-XPtC18AX-104625	XPHZ-104625
150 x 4.6 mm	XPH-154625	XPOtC18-154625	XPtPFP-154625	XPtFP18-154625	S-XPtC18AX-154625	XPHZ-154625
200 x 4.6 mm	XPH-204625	XPOtC18-204625	XPtPFP-204625	XPtFP18-204625	S-XPtC18AX-204625	XPHZ-204625
250 x 4.6 mm	XPH-254625	XPOtC18-254625	XPtPFP-254625	XPtFP18-254625	S-XPtC18AX-254625	XPHZ-254625

◎ XP Series 3µm

Size	XP tC18	XP tC8	XP tC4	XP RP18	XP RP18 Plus	XP Phenyl-Hexyl	XP Amide
30x 2.1 mm	UXPtC18-032130	UXPtC08-032130	UXPtC04-032130	UXPR18P-032130	UXPR18P-032130	UXPPH-032130	UXPA-032130
50x 2.1 mm	UXPtC18-052130	UXPtC08-052130	UXPtC04-052130	UXPR18P-052130	UXPR18P-052130	UXPPH-052130	UXPA-052130
100x 2.1 mm	UXPtC18-102130	UXPtC08-102130	UXPtC04-102130	UXPR18P-102130	UXPR18P-102130	UXPPH-102130	UXPA-102130
150 x 2.1 mm	UXPtC18-152130	UXPtC08-152130	UXPtC04-152130	UXPR18P-152130	UXPR18P-152130	UXPPH-152130	UXPA-152130
30 x 3.0 mm	UXPtC18-033030	UXPtC08-033030	UXPtC04-033030	UXPR18P-033030	UXPR18P-033030	UXPPH-033030	UXPA-033030
50 x 3.0 mm	UXPtC18-053030	UXPtC08-053030	UXPtC04-053030	UXPR18P-053030	UXPR18P-053030	UXPPH-053030	UXPA-053030
100 x 3.0 mm	UXPtC18-103030	UXPtC08-103030	UXPtC04-103030	UXPR18P-103030	UXPR18P-103030	UXPPH-103030	UXPA-103030
150 x 3.0 mm	UXPtC18-153030	UXPtC08-153030	UXPtC04-153030	UXPR18P-153030	UXPR18P-153030	UXPPH-153030	UXPA-153030
250 x 3.0 mm	UXPtC18-253030	UXPtC08-253030	UXPtC04-253030	UXPR18P-253030	UXPR18P-253030	UXPPH-253030	UXPA-253030
30 x 4.6 mm	XPtC18-034630	XPtC08-034630	XPtC04-034630	XPR18P-034630	XPR18P-034630	XPPH-034630	XPA-034630
50 x 4.6 mm	XPtC18-054630	XPtC08-054630	XPtC04-054630	XPR18P-054630	XPR18P-054630	XPPH-054630	XPA-054630
100 x 4.6 mm	XPtC18-104630	XPtC08-104630	XPtC04-104630	XPR18P-104630	XPR18P-104630	XPPH-104630	XPA-104630
150 x 4.6 mm	XPtC18-154630	XPtC08-154630	XPtC04-154630	XPR18P-154630	XPR18P-154630	XPPH-154630	XPA-154630
200 x 4.6 mm	XPtC18-204630	XPtC08-204630	XPtC04-204630	XPR18P-204630	XPR18P-204630	XPPH-204630	XPA-204630
250 x 4.6 mm	XPtC18-254630	XPtC08-254630	XPtC04-254630	XPR18P-254630	XPR18P-254630	XPPH-254630	XPA-254630

Size	XP HILIC	XP Oligo tC18	XP tPFP	XP tC18/PFP	XP tC18/AX	XP HILIC-Z
30x 2.1 mm	UXPH-032130	UXPOtC18-032130	UXPtPFP-032130	UXPtFP18-032130	S-XPtC18AX-032130	UXPHZ-032130
50x 2.1 mm	UXPH-052130	UXPOtC18-052130	UXPtPFP-052130	UXPtFP18-052130	S-XPtC18AX-052130	UXPHZ-052130
100x 2.1 mm	UXPH-102130	UXPOtC18-102130	UXPtPFP-102130	UXPtFP18-102130	S-XPtC18AX-102130	UXPHZ-102130
150 x 2.1 mm	UXPH-152130	UXPOtC18-152130	UXPtPFP-152130	UXPtFP18-152130	S-XPtC18AX-152130	UXPHZ-152130
30 x 3.0 mm	UXPH-033030	UXPOtC18-033030	UXPtPFP-033030	UXPtFP18-033030	S-XPtC18AX-033030	UXPHZ-033030
50 x 3.0 mm	UXPH-053030	UXPOtC18-053030	UXPtPFP-053030	UXPtFP18-053030	S-XPtC18AX-053030	UXPHZ-053030
100 x 3.0 mm	UXPH-103030	UXPOtC18-103030	UXPtPFP-103030	UXPtFP18-103030	S-XPtC18AX-103030	UXPHZ-103030
150 x 3.0 mm	UXPH-153030	UXPOtC18-153030	UXPtPFP-153030	UXPtFP18-153030	S-XPtC18AX-153030	UXPHZ-153030
250 x 3.0 mm	UXPH-253030	UXPOtC18-253030	UXPtPFP-253030	UXPtFP18-253030	S-XPtC18AX-253030	UXPHZ-253030
30 x 4.6 mm	XPH-034630	XPOtC18-034630	XPtPFP-034630	XPtFP18-034630	S-XPtC18AX-034630	XPHZ-034630
50 x 4.6 mm	XPH-054630	XPOtC18-054630	XPtPFP-054630	XPtFP18-054630	S-XPtC18AX-054630	XPHZ-054630
100 x 4.6 mm	XPH-104630	XPOtC18-104630	XPtPFP-104630	XPtFP18-104630	S-XPtC18AX-104630	XPHZ-104630
150 x 4.6 mm	XPH-154630	XPOtC18-154630	XPtPFP-154630	XPtFP18-154630	S-XPtC18AX-154630	XPHZ-154630
200 x 4.6 mm	XPH-204630	XPOtC18-204630	XPtPFP-204630	XPtFP18-204630	S-XPtC18AX-204630	XPHZ-204630
250 x 4.6 mm	XPH-254630	XPOtC18-254630	XPtPFP-254630	XPtFP18-254630	S-XPtC18AX-254630	XPHZ-254630

◎ XP Series 3.5µm

Size	XP tC18	XP tC8	XP tC4	XP RP18	XP RP18 Plus	XP T3	XP NH_2	XP Phenyl-Hexyl
30x 2.1 mm	UXPtC18-032135	UXPtC08-032135	UXPtC04-032135	UXPR18-032135	UXPR18P-032135	UXPT3-032135	UXPNH-032135	UXPPH-032135
50x 2.1 mm	UXPtC18-052135	UXPtC08-052135	UXPtC04-052135	UXPR18-052135	UXPR18P-052135	UXPT3-052135	UXPNH-052135	UXPPH-052135
100x 2.1 mm	UXPtC18-102135	UXPtC08-102135	UXPtC04-102135	UXPR18-102135	UXPR18P-102135	UXPT3-102135	UXPNH-102135	UXPPH-102135
150 x 2.1 mm	UXPtC18-152135	UXPtC08-152135	UXPtC04-152135	UXPR18-152135	UXPR18P-152135	UXPT3-152135	UXPNH-152135	UXPPH-152135
30 x 3.0 mm	UXPtC18-033035	UXPtC08-033035	UXPtC04-033035	UXPR18-033035	UXPR18P-033035	UXPT3-033035	UXPNH-033035	UXPPH-033035
50 x 3.0 mm	UXPtC18-053035	UXPtC08-053035	UXPtC04-053035	UXPR18-053035	UXPR18P-053035	UXPT3-053035	UXPNH-053035	UXPPH-053035
100 x 3.0 mm	UXPtC18-103035	UXPtC08-103035	UXPtC04-103035	UXPR18-103035	UXPR18P-103035	UXPT3-103035	UXPNH-103035	UXPPH-103035
150 x 3.0 mm	UXPtC18-153035	UXPtC08-153035	UXPtC04-153035	UXPR18-153035	UXPR18P-153035	UXPT3-153035	UXPNH-153035	UXPPH-153035
250 x 3.0 mm	UXPtC18-253035	UXPtC08-253035	UXPtC04-253035	UXPR18-253035	UXPR18P-253035	UXPT3-253035	UXPNH-253035	UXPPH-253035
30 x 4.6 mm	XPtC18-034635	XPtC08-034635	XPtC04-034635	XPR18-034635	XPR18P-034635	XPT3-034635	XPNH-034635	XPPH-034635
50 x 4.6 mm	XPtC18-054635	XPtC08-054635	XPtC04-054635	XPR18-054635	XPR18P-054635	XPT3-054635	XPNH-054635	XPPH-054635
100 x 4.6 mm	XPtC18-104635	XPtC08-104635	XPtC04-104635	XPR18-104635	XPR18P-104635	XPT3-104635	XPNH-104635	XPPH-104635
150 x 4.6 mm	XPtC18-154635	XPtC08-154635	XPtC04-154635	XPR18-154635	XPR18P-154635	XPT3-154635	XPNH-154635	XPPH-154635
200 x 4.6 mm	XPtC18-204635	XPtC08-204635	XPtC04-204635	XPR18-204635	XPR18P-204635	XPT3-204635	XPNH-204635	XPPH-204635
250 x 4.6 mm	XPtC18-254635	XPtC08-254635	XPtC04-254635	XPR18-254635	XPR18P-254635	XPT3-254635	XPNH-254635	XPPH-254635

Size	XP Amide	XP HILIC	XP Oligo tC18	XP tPFP	XP tC18/PFP	XP tC18/AX	XP HILIC-Z
30x 2.1 mm	UXPA-032135	UXPH-032135	UXPOtC18-032135	UXPtPFP-032135	UXPtFP18-032135	S-XPtC18AX-032135	UXPHZ-032135
50x 2.1 mm	UXPA-052135	UXPH-052135	UXPOtC18-052135	UXPtPFP-052135	UXPtFP18-052135	S-XPtC18AX-052135	UXPHZ-052135
100x 2.1 mm	UXPA-102135	UXPH-102135	UXPOtC18-102135	UXPtPFP-102135	UXPtFP18-102135	S-XPtC18AX-102135	UXPHZ-102135
150 x 2.1 mm	UXPA-152135	UXPH-152135	UXPOtC18-152135	UXPtPFP-152135	UXPtFP18-152135	S-XPtC18AX-152135	UXPHZ-152135
30 x 3.0 mm	UXPA-033035	UXPH-033035	UXPOtC18-033035	UXPtPFP-033035	UXPtFP18-033035	S-XPtC18AX-033035	UXPHZ-033035
50 x 3.0 mm	UXPA-053035	UXPH-053035	UXPOtC18-053035	UXPtPFP-053035	UXPtFP18-053035	S-XPtC18AX-053035	UXPHZ-053035
100 x 3.0 mm	UXPA-103035	UXPH-103035	UXPOtC18-103035	UXPtPFP-103035	UXPtFP18-103035	S-XPtC18AX-103035	UXPHZ-103035
150 x 3.0 mm	UXPA-153035	UXPH-153035	UXPOtC18-153035	UXPtPFP-153035	UXPtFP18-153035	S-XPtC18AX-153035	UXPHZ-153035
250 x 3.0 mm	UXPA-253035	UXPH-253035	UXPOtC18-253035	UXPtPFP-253035	UXPtFP18-253035	S-XPtC18AX-253035	UXPHZ-253035
30 x 4.6 mm	XPA-034635	XPH-034635	XPOtC18-034635	XPtPFP-034635	XPtFP18-034635	S-XPtC18AX-034635	XPHZ-034635
50 x 4.6 mm	XPA-054635	XPH-054635	XPOtC18-054635	XPtPFP-054635	XPtFP18-054635	S-XPtC18AX-054635	XPHZ-054635
100 x 4.6 mm	XPA-104635	XPH-104635	XPOtC18-104635	XPtPFP-104635	XPtFP18-104635	S-XPtC18AX-104635	XPHZ-104635
150 x 4.6 mm	XPA-154635	XPH-154635	XPOtC18-154635	XPtPFP-154635	XPtFP18-154635	S-XPtC18AX-154635	XPHZ-154635
200 x 4.6 mm	XPA-204635	XPH-204635	XPOtC18-204635	XPtPFP-204635	XPtFP18-204635	S-XPtC18AX-204635	XPHZ-204635
250 x 4.6 mm	XPA-254635	XPH-254635	XPOtC18-254635	XPtPFP-254635	XPtFP18-254635	S-XPtC18AX-254635	XPHZ-254635

◎ XP Series 5µm

Size	XP tC18	XP tC8	XP tC4	XP RP18	XP RP18 Plus	XP T3	XP NH_2	XP Phenyl-Hexyl
30x 2.1 mm	UXPtC18-032150	UXPtC08-032150	UXPtC04-032150	UXPR18-032150	UXPR18P-032150	UXPT3-032150	UXPNH-032150	UXPPH-032150
50x 2.1 mm	UXPtC18-052150	UXPtC08-052150	UXPtC04-052150	UXPR18-052150	UXPR18P-052150	UXPT3-052150	UXPNH-052150	UXPPH-052150
100x 2.1 mm	UXPtC18-102150	UXPtC08-102150	UXPtC04-102150	UXPR18-102150	UXPR18P-102150	UXPT3-102150	UXPNH-102150	UXPPH-102150
150 x 2.1 mm	UXPtC18-152150	UXPtC08-152150	UXPtC04-152150	UXPR18-152150	UXPR18P-152150	UXPT3-152150	UXPNH-152150	UXPPH-152150
30 x 3.0 mm	UXPtC18-033050	UXPtC08-033050	UXPtC04-033050	UXPR18-033050	UXPR18P-033050	UXPT3-033050	UXPNH-033050	UXPPH-033050
50 x 3.0 mm	UXPtC18-053050	UXPtC08-053050	UXPtC04-053050	UXPR18-053050	UXPR18P-053050	UXPT3-053050	UXPNH-053050	UXPPH-053050
100 x 3.0 mm	UXPtC18-103050	UXPtC08-103050	UXPtC04-103050	UXPR18-103050	UXPR18P-103050	UXPT3-103050	UXPNH-103050	UXPPH-103050
150 x 3.0 mm	UXPtC18-153050	UXPtC08-153050	UXPtC04-153050	UXPR18-153050	UXPR18P-153050	UXPT3-153050	UXPNH-153050	UXPPH-153050
250 x 3.0 mm	UXPtC18-253050	UXPtC08-253050	UXPtC04-253050	UXPR18-253050	UXPR18P-253050	UXPT3-253050	UXPNH-253050	UXPPH-253050
30 x 4.6 mm	XPtC18-034650	XPtC08-034650	XPtC04-034650	XPR18-034650	XPR18P-034650	XPT3-034650	XPNH-034650	XPPH-034650
50 x 4.6 mm	XPtC18-054650	XPtC08-054650	XPtC04-054650	XPR18-054650	XPR18P-054650	XPT3-054650	XPNH-054650	XPPH-054650
100 x 4.6 mm	XPtC18-104650	XPtC08-104650	XPtC04-104650	XPR18-104650	XPR18P-104650	XPT3-104650	XPNH-104650	XPPH-104650
150 x 4.6 mm	XPtC18-154650	XPtC08-154650	XPtC04-154650	XPR18-154650	XPR18P-154650	XPT3-154650	XPNH-154650	XPPH-154650
200 x 4.6 mm	XPtC18-204650	XPtC08-204650	XPtC04-204650	XPR18-204650	XPR18P-204650	XPT3-204650	XPNH-204650	XPPH-204650
250 x 4.6 mm	XPtC18-254650	XPtC08-254650	XPtC04-254650	XPR18-254650	XPR18P-254650	XPT3-254650	XPNH-254650	XPPH-254650

Size	XP Amide	XP HILIC	XP Oligo tC18	XP tPFP	XP tC18/PFP	XP tC18/AX	XP HILIC-Z	XP C18
30x 2.1 mm	UXPA-032150	UXPH-032150	UXPOtC18-032150	UXPtPFP-032150	UXPtFP18-032150	S-XPtC18AX-032150	UXPHZ-032150	XPC18-032150
50x 2.1 mm	UXPA-052150	UXPH-052150	UXPOtC18-052150	UXPtPFP-052150	UXPtFP18-052150	S-XPtC18AX-052150	UXPHZ-052150	XPC18-052150
100x 2.1 mm	UXPA-102150	UXPH-102150	UXPOtC18-102150	UXPtPFP-102150	UXPtFP18-102150	S-XPtC18AX-102150	UXPHZ-102150	XPC18-102150
150 x 2.1 mm	UXPA-152150	UXPH-152150	UXPOtC18-152150	UXPtPFP-152150	UXPtFP18-152150	S-XPtC18AX-152150	UXPHZ-152150	XPC18-152150
30 x 3.0 mm	UXPA-033050	UXPH-033050	UXPOtC18-033050	UXPtPFP-033050	UXPtFP18-033050	S-XPtC18AX-033050	UXPHZ-033050	XPC18-033050
50 x 3.0 mm	UXPA-053050	UXPH-053050	UXPOtC18-053050	UXPtPFP-053050	UXPtFP18-053050	S-XPtC18AX-053050	UXPHZ-053050	XPC18-053050
100 x 3.0 mm	UXPA-103050	UXPH-103050	UXPOtC18-103050	UXPtPFP-103050	UXPtFP18-103050	S-XPtC18AX-103050	UXPHZ-103050	XPC18-103050
150 x 3.0 mm	UXPA-153050	UXPH-153050	UXPOtC18-153050	UXPtPFP-153050	UXPtFP18-153050	S-XPtC18AX-153050	UXPHZ-153050	XPC18-153050
250 x 3.0 mm	UXPA-253050	UXPH-253050	UXPOtC18-253050	UXPtPFP-253050	UXPtFP18-253050	S-XPtC18AX-253050	UXPHZ-253050	XPC18-253050
30 x 4.6 mm	XPA-034650	XPH-034650	XPOtC18-034650	XPtPFP-034650	XPtFP18-034650	S-XPtC18AX-034650	XPHZ-034650	XPC18-034650
50 x 4.6 mm	XPA-054650	XPH-054650	XPOtC18-054650	XPtPFP-054650	XPtFP18-054650	S-XPtC18AX-054650	XPHZ-054650	XPC18-054650
100 x 4.6 mm	XPA-104650	XPH-104650	XPOtC18-104650	XPtPFP-104650	XPtFP18-104650	S-XPtC18AX-104650	XPHZ-104650	XPC18-104650
150 x 4.6 mm	XPA-154650	XPH-154650	XPOtC18-154650	XPtPFP-154650	XPtFP18-154650	S-XPtC18AX-154650	XPHZ-154650	XPC18-154650
200 x 4.6 mm	XPA-204650	XPH-204650	XPOtC18-204650	XPtPFP-204650	XPtFP18-204650	S-XPtC18AX-204650	XPHZ-204650	XPC18-204650
250 x 4.6 mm	XPA-254650	XPH-254650	XPOtC18-254650	XPtPFP-254650	XPtFP18-254650	S-XPtC18AX-254650	XPHZ-254650	XPC18-254650

◎ XP Series Preparative Columns 5µm

Size	XP tC18	XP tC8	XP tC4	XP RP18	XP RP18 Plus	XP T3	XP Phenyl-Hexyl
50 x 10mm	XPtC18-0510050	-	-	-	-	-	-
100 x 10mm	XPtC18-1010050	-	-	-	-	-	-
150 x 10 mm	XPtC18-1510050	XPtC08-1510050	XPtC04-1510050	XPR18-1510050	XPR18P-1510050	XPT3-1510050	XPPH-1510050
250 x 10 mm	XPtC18-2510050	XPtC08-2510050	XPtC04-2510050	XPR18-2510050	XPR18P-2510050	XPT3-2510050	XPPH-2510050
150 x 20 mm	XPtC18-1520050	XPtC08-1520050	XPtC04-1520050	XPR18-1520050	XPR18P-1520050	XPT3-1520050	XPPH-1520050
250 x 20 mm	XPtC18-2520050	XPtC08-2520050	XPtC04-2520050	XPR18-2520050	XPR18P-2520050	XPT3-2520050	XPPH-2520050
150 x 21.2 mm	XPtC18-1521250	XPtC08-1521250	XPtC04-1521250	XPR18-1521250	XPR18P-1521250	XPT3-1521250	XPPH-1521250
250 x 21.2 mm	XPtC18-2521250	XPtC08-2521250	XPtC04-2521250	XPR18-2521250	XPR18P-2521250	XPT3-2521250	XPPH-2521250
150 x 30 mm	XPtC18-1530050	XPtC08-1530050	XPtC04-1530050	XPR18-1530050	XPR18P-1530050	XPT3-1530050	XPPH-1530050
250 x 30 mm	XPtC18-2530050	XPtC08-2530050	XPtC04-2530050	XPR18-2530050	XPR18P-2530050	XPT3-2530050	XPPH-2530050
150 x 50 mm	XPtC18-1550050	XPtC08-1550050	XPtC04-1550050	XPR18-1550050	XPR18P-1550050	XPT3-1550050	XPPH-1550050
250 x 50 mm	XPtC18-2550050	XPtC08-2550050	XPtC04-2550050	XPR18-2550050	XPR18P-2550050	XPT3-2550050	XPPH-2550050

Size	XP Amide	XP HILIC	XP Oligo tC18	XP tPFP	XP tC18/PFP	XP tC18/AX
50 x 10mm	-	-	-	-	-	-
100 x 10mm	-	-	-	-	-	-
150 x 10 mm	XPA-1510050	XPH-1510050	XPOtC18-1510050	XPtPFP-1510050	XPtFP18-1510050	XPtC18AX-1510050
250 x 10 mm	XPA-2510050	XPH-2510050	XPOtC18-2510050	XPtPFP-2510050	XPtFP18-2510050	XPtC18AX-2510050
150 x 20 mm	XPA-1520050	XPH-1520050	XPOtC18-1520050	XPtPFP-1520050	XPtFP18-1520050	XPtC18AX-1520050
250 x 20 mm	XPA-2520050	XPH-2520050	XPOtC18-2520050	XPtPFP-2520050	XPtFP18-2520050	XPtC18AX-2520050
150 x 21.2 mm	XPA-1521250	XPH-1521250	XPOtC18-1521250	XPtPFP-1521250	XPtFP18-1521250	XPtC18AX-1521250
250 x 21.2 mm	XPA-2521250	XPH-2521250	XPOtC18-2521250	XPtPFP-2521250	XPtFP18-2521250	XPtC18AX-2521250
150 x 30 mm	XPA-1530050	XPH-1530050	XPOtC18-1530050	XPtPFP-1530050	XPtFP18-1530050	XPtC18AX-1530050
250 x 30 mm	XPA-2530050	XPH-2530050	XPOtC18-2530050	XPtPFP-2530050	XPtFP18-2530050	XPtC18AX-2530050
150 x 50 mm	XPA-1550050	XPH-1550050	XPOtC18-1550050	XPtPFP-1550050	XPtFP18-1550050	XPtC18AX-1550050
250 x 50 mm	XPA-2550050	XPH-2550050	XPOtC18-2550050	XPtPFP-2550050	XPtFP18-2550050	XPtC18AX-2550050

◎ XP Series Preparative Columns 7µm

Size	XP tC18	XP tC8	XP tC4	XP RP18 Plus	XP T3	XP Phenyl-Hexyl	XP Amide
150 x 10 mm	XPtC18-1510070	XPtC08-1510070	XPtC04-1510070	XPR18P-1510070	XPT3-1510070	XPPH-1510070	XPA-1510070
250 x 10 mm	XPtC18-2510070	XPtC08-2510070	XPtC04-2510070	XPR18P-2510070	XPT3-2510070	XPPH-2510070	XPA-2510070
150 x 20 mm	XPtC18-1520070	XPtC08-1520070	XPtC04-1520070	XPR18P-1520070	XPT3-1520070	XPPH-1520070	XPA-1520070
250 x 20 mm	XPtC18-2520070	XPtC08-2520070	XPtC04-2520070	XPR18P-2520070	XPT3-2520070	XPPH-2520070	XPA-2520070
150 x 21.2 mm	XPtC18-1521270	XPtC08-1521270	XPtC04-1521270	XPR18P-1521270	XPT3-1521270	XPPH-1521270	XPA-1521270
250 x 21.2 mm	XPtC18-2521270	XPtC08-2521270	XPtC04-2521270	XPR18P-2521270	XPT3-2521270	XPPH-2521270	XPA-2521270
150 x 30 mm	XPtC18-1530070	XPtC08-1530070	XPtC04-1530070	XPR18P-1530070	XPT3-1530070	XPPH-1530070	XPA-1530070
250 x 30 mm	XPtC18-2530070	XPtC08-2530070	XPtC04-2530070	XPR18P-2530070	XPT3-2530070	XPPH-2530070	XPA-2530070
150 x 50 mm	XPtC18-1550070	XPtC08-1550070	XPtC04-1550070	XPR18P-1550070	XPT3-1550070	XPPH-1550070	XPA-1550070
250 x 50 mm	XPtC18-2550070	XPtC08-2550070	XPtC04-2550070	XPR18P-2550070	XPT3-2550070	XPPH-2550070	XPA-2550070

Size	XP HILIC	XP Oligo tC18	XP tPFP	XP tC18/PFP	XP tC18/AX
150 x 10 mm	XPH-1510070	XPOtC18-1510070	XPtPFP-1510070	XPtFP18-1510070	XPtC18AX-1510070
250 x 10 mm	XPH-2510070	XPOtC18-2510070	XPtPFP-2510070	XPtFP18-2510070	XPtC18AX-2510070
150 x 20 mm	XPH-1520070	XPOtC18-1520070	XPtPFP-1520070	XPtFP18-1520070	XPtC18AX-1520070
250 x 20 mm	XPH-2520070	XPOtC18-2520070	XPtPFP-2520070	XPtFP18-2520070	XPtC18AX-2520070
150 x 21.2 mm	XPH-1521270	XPOtC18-1521270	XPtPFP-1521270	XPtFP18-1521270	XPtC18AX-1521270
250 x 21.2 mm	XPH-2521270	XPOtC18-2521270	XPtPFP-2521270	XPtFP18-2521270	XPtC18AX-2521270
150 x 30 mm	XPH-1530070	XPOtC18-1530070	XPtPFP-1530070	XPtFP18-1530070	XPtC18AX-1530070
250 x 30 mm	XPH-2530070	XPOtC18-2530070	XPtPFP-2530070	XPtFP18-2530070	XPtC18AX-2530070
150 x 50 mm	XPH-1550070	XPOtC18-1550070	XPtPFP-1550070	XPtFP18-1550070	XPtC18AX-1550070
250 x 50 mm	XPH-2550070	XPOtC18-2550070	XPtPFP-2550070	XPtFP18-2550070	XPtC18AX-2550070

◎ XP Series Preparative Columns 10µm

Size	XP tC18	XP tC8	XP tC4	XP RP18	XP RP18 Plus	XP T3	XP Phenyl-Hexyl
150 x 10 mm	XPtC18-15100100	XPtC08-15100100	XPtC04-15100100	XPR18-15100100	XPR18P-15100100	XPT3-15100100	XPPH-15100100
250 x 10 mm	XPtC18-25100100	XPtC08-25100100	XPtC04-25100100	XPR18-25100100	XPR18P-25100100	XPT3-25100100	XPPH-25100100
150 x 20 mm	XPtC18-15200100	XPtC08-15200100	XPtC04-15200100	XPR18-15200100	XPR18P-15200100	XPT3-15200100	XPPH-15200100
250 x 20 mm	XPtC18-25200100	XPtC08-25200100	XPtC04-25200100	XPR18-25200100	XPR18P-25200100	XPT3-25200100	XPPH-25200100
150 x 21.2 mm	XPtC18-15212100	XPtC08-15212100	XPtC04-15212100	XPR18-15212100	XPR18P-15212100	XPT3-15212100	XPPH-15212100
250 x 21.2 mm	XPtC18-25212100	XPtC08-25212100	XPtC04-25212100	XPR18-25212100	XPR18P-25212100	XPT3-25212100	XPPH-25212100
150 x 30 mm	XPtC18-15300100	XPtC08-15300100	XPtC04-15300100	XPR18-15300100	XPR18P-15300100	XPT3-15300100	XPPH-15300100
250 x 30 mm	XPtC18-25300100	XPtC08-25300100	XPtC04-25300100	XPR18-25300100	XPR18P-25300100	XPT3-25300100	XPPH-25300100
150 x 50 mm	XPtC18-15500100	XPtC08-15500100	XPtC04-15500100	XPR18-15500100	XPR18P-15500100	XPT3-15500100	XPPH-15500100
250 x 50 mm	XPtC18-25500100	XPtC08-25500100	XPtC04-25500100	XPR18-25500100	XPR18P-25500100	XPT3-25500100	XPPH-25500100

Size	XP Amide	XP HILIC	XP Oligo tC18	XP tPFP	XP tC18/PFP	XP tC18/AX
150 x 10 mm	XPA-15100100	XPH-15100100	XPOtC18-15100100	XPtPFP-15100100	XPtFP18-15100100	XPtC18AX-15100100
250 x 10 mm	XPA-25100100	XPH-25100100	XPOtC18-25100100	XPtPFP-25100100	XPtFP18-25100100	XPtC18AX-25100100
150 x 20 mm	XPA-15200100	XPH-15200100	XPOtC18-15200100	XPtPFP-15200100	XPtFP18-15200100	XPtC18AX-15200100
250 x 20 mm	XPA-25200100	XPH-25200100	XPOtC18-25200100	XPtPFP-25200100	XPtFP18-25200100	XPtC18AX-25200100
150 x 21.2 mm	XPA-15212100	XPH-15212100	XPOtC18-15212100	XPtPFP-15212100	XPtFP18-15212100	XPtC18AX-15212100
250 x 21.2 mm	XPA-25212100	XPH-25212100	XPOtC18-25212100	XPtPFP-25212100	XPtFP18-25212100	XPtC18AX-25212100
150 x 30 mm	XPA-15300100	XPH-15300100	XPOtC18-15300100	XPtPFP-15300100	XPtFP18-15300100	XPtC18AX-15300100
250 x 30 mm	XPA-25300100	XPH-25300100	XPOtC18-25300100	XPtPFP-25300100	XPtFP18-25300100	XPtC18AX-25300100
150 x 50 mm	XPA-15500100	XPH-15500100	XPOtC18-15500100	XPtPFP-15500100	XPtFP18-15500100	XPtC18AX-15500100
250 x 50 mm	XPA-25500100	XPH-25500100	XPOtC18-25500100	XPtPFP-25500100	XPtFP18-25500100	XPtC18AX-25500100

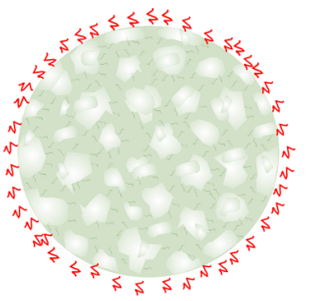
MicroPulite® PHS XP Series – Excellent Peak Shape and Column Efficiency

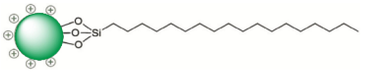
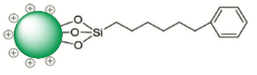
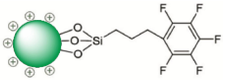
PHS XP series columns adopt surface-charged hybrid silica technology, delivering symmetrical and superior peak shapes for basic compounds.

The slight positive surface charge repels ionized basic analytes in low-ionic-strength separation systems, inhibiting ion-exchange interactions between basic compounds and residual silanol groups, thus improving peak shape of basic analytes.

This series is available in specifications covering UPLC/UHPLC, HPLC and preparative chromatography, enabling more efficient and seamless method development and transfer.

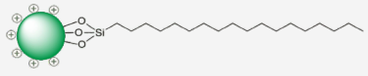
- Excellent peak shape and sample loading capacity for basic analytes in neutral -to-acidic systems
- pH 1–11 wide pH range for convenient method development and screening
- Rapid pH switching equilibrium during LC-MS analysis
- Especially suitable for LC-MS analysis of basic analytes and peptides, e.g. structural identification, DMPK, veterinary drug residues, etc.



Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® PHS XP	tC18		17.5%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L1	1-11	80°C (Low pH) 45°C (High pH)
	Phenyl-Hexyl		15%	185	Yes	130	1.7,2.5,3, 3.5,5,7,10	L11	1-11	80°C (Low pH) 45°C (High pH)
	tF5		11%	185	No	130	1.7,2.5,3, 3.5,5,7,10	L43	1-8	60°C (Low pH) 45°C(HighpH)

MicroPulite® PHS XP tC18 Column

PHS XP tC18 is a general-purpose C18 , due to its low level of positive charge on the surface, it improves the tailing factor of basic compounds under low ionic strength mobile phase without ion pair reagents (e.g., 0.1% formic acid). So PHS XP tC18 has superior peak shape, large sample loading and peak capacity for basic compounds.PHS XP tC18 is stable in pH 1-11,is suitable for the analysis of basic compounds, and especially performs well for peptide loading and peak shape.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
PHS tC18		17.5%	185	Yes	130Å	1.7, 2.5, 3, 3.5, 5,7,10μm	L1	1-11	80°C (Low pH) 45°C(High pH)

◎ Determination of Related Substances of Lincomycin Hydrochloride

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® PHS XP tC18 4.6*250mm 5.0μm

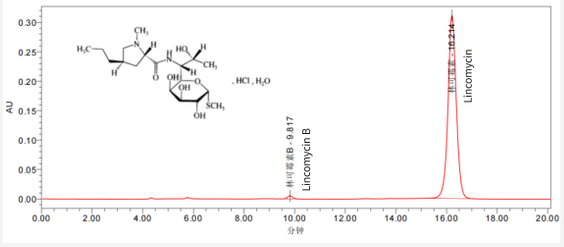
Detector：UV 214nm

Flow rate：0.6mL/min

Column temperature：40°C

Mobile phase：0.05mol/LBorax solution (pH adjusted to 6.1 with phosphoric acid) – methanol (1:1)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Lincomycin B	9.817	75207	5215	-	11025.28	1.07
Lincomycin	16.214	7041682	310712	13.59	12448.52	1.03

◎ Determination of Related Substances of Gabapentin

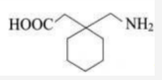
Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® PHS XP tC18 4.6*150mm 5.0μm

Detector：UV 210nm

Flow rate：1.5mL/min

Column temperature：40





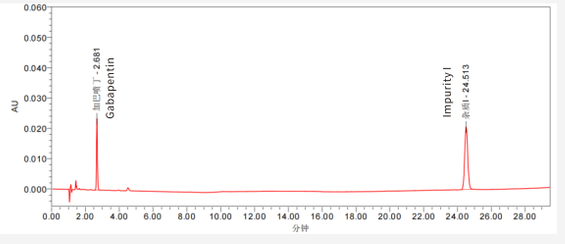
Mobile phase：

Phase A: phosphate buffer (dissolve 1.2 g potassium dihydrogen phosphate in 940 mL water, pH adjusted to 6.9 with potassium hydroxide) – acetonitrile = 94:6

Phase B: phosphate buffer (dissolve 1.2 g potassium dihydrogen phosphate in 940 mL water, pH adjusted to 6.9 with potassium hydroxide) – acetonitrile = 7:3

T/min	A /%	B /%
0	100	0
7	100	0
45	0	100

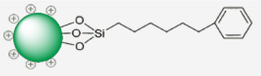
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Gabapentin	2.681	91694	23570	-	11073.26	1.10
Impurity I	24.513	259261	20604	101.05	86337.69	1.07

MicroPulite® PHS XP Phenyl-Hexyl Column

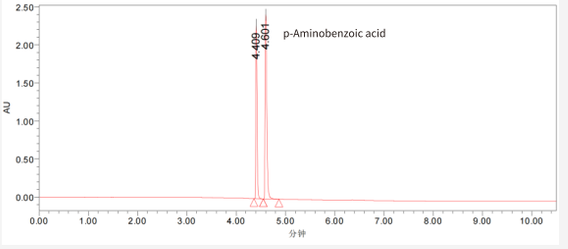
PHS XP Phenyl-Hexyl provides selectivity complementary to straight-chain C18, hybrid silica technology enhances chemical resistance, it can use in pH 1-11 range. The characteristic of surface charge improves peak shape and loading of basic compounds, PHS XP Phenyl-Hexyl is suitable for the analysis of aromatic compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
PHS Phenyl -Hexyl		15%	185	Yes	130Å	1.7, 2.5, 3, 3.5, 5,7,10μm	L11	1-11	80°C (Low pH) 45°C(High pH)

◎ Separation of p-Aminobenzoic Acid and Related Impurities

Column：MicroPulite® PHS XP Phenyl-Hexyl 1.7μm 100*2.1mm
Detector：UV 296nm
Flow rate：0.3 mL/min
Column temperature：25°C
Mobile phase：Acetonitrile – 0.3% triethylamine solution (pH adjusted to 3.0 with phosphoric acid)

Chromatogram：

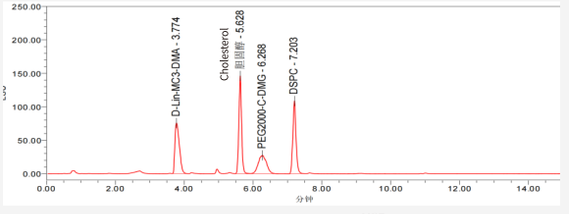


Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
-	4.409	4074631	2285197	-	152083.88	1.46
4-Aminobenzoic acid	4.601	5690064	2420747	3.61	102185.09	1.55

◎ Detection of Four Lipids on Surface-Charged Hybrid Silica Phenyl Column

Column：PHS XP Phenyl-Hexyl 3.5μm 50*4.6mm (Part No：PHSPH-054635)
Detector：ELSD (waters 2424)
Flow rate：1.0 mL/min
Column temperature：50°C
Mobile phase A: water (with 0.1% formic acid); Mobile phase B: acetonitrile (with 0.1% formic acid)

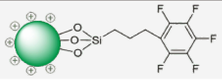
Mobile phase A (%)	Time (min)	Mobile phase B (%)
0	40	60
8	0	100
9	0	100
9.1	40	60
15	40	60



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
D-Lin-MC3-DMA	3.774	678493	75599	-	3983.14	1.67
Cholesterol	5.628	806340	146320	9.57	22559.13	1.05
PEG2000-C-DMG	6.268	460981	27538	2.16	2705.33	1.05
DSPC	7.203	692972	108894	3.07	26648.42	1.08

MicroPulite® PHS XP tF5 Column

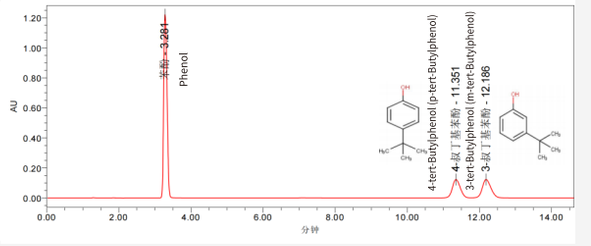
PHS XP tF5 is a surface charged pentafluorophenyl column, suitable for the analysis of aromatic compounds, halogenated compounds, and planar position isomers.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
PHS tF5		11%	185	No	130Å	1.7, 2.5, 3, 3.5, 5,7,10μm	L43	1-8	60°C (Low pH) 45°C(High pH)

◎ Separation of tert-Butylphenol Positional Isomers

Column：MicroPulite® PHS XP F5 3.5μm 150*4.6mm
Detector：UV 270nm
Flow rate：1mL/min
Column temperature：40°C
Mobile phase：Methanol : 0.5% acetic acid solution = 35:65

Chromatogram：



Ordering Information

◎ PHS XP Series 1.7µm

Size	PHS XP tC18	PHS XP Phenyl-Hexyl	PHS XP tF5
50x 2.1 mm	UXPtC18P-052117	UPHSPH-052117	UPHStF5-052117
100x 2.1 mm	UXPtC18P-102117	UPHSPH-102117	UPHStF5-102117
150 x 2.1 mm	UXPtC18P-152117	UPHSPH-152117	UPHStF5-152117
30 x 3.0 mm	UXPtC18P-033017	UPHSPH-033017	UPHStF5-033017
50 x 3.0 mm	UXPtC18P-053017	UPHSPH-053017	UPHStF5-053017
100 x 3.0 mm	UXPtC18P-103017	UPHSPH-103017	UPHStF5-103017
150 x 3.0 mm	UXPtC18P-153017	UPHSPH-153017	UPHStF5-153017

◎ PHS XP Series 2.5µm

Size	PHS XP tC18	PHS XP Phenyl-Hexyl	PHS XP tF5
30x 2.1 mm	UXPtC18P-032125	UPHSPH-032125	UPHStF5-032125
50x 2.1 mm	UXPtC18P-052125	UPHSPH-052125	UPHStF5-052125
100x 2.1 mm	UXPtC18P-102125	UPHSPH-102125	UPHStF5-102125
150 x 2.1 mm	UXPtC18P-152125	UPHSPH-152125	UPHStF5-152125
30 x 3.0 mm	UXPtC18P-033025	UPHSPH-033025	UPHStF5-033025
50 x 3.0 mm	UXPtC18P-053025	UPHSPH-053025	UPHStF5-053025
100 x 3.0 mm	UXPtC18P-103025	UPHSPH-103025	UPHStF5-103025
150 x 3.0 mm	UXPtC18P-153025	UPHSPH-153025	UPHStF5-153025
250 x 3.0 mm	UXPtC18P-253025	UPHSPH-253025	UPHStF5-253025
30 x 4.6 mm	XPtC18P-034625	PHSPH-034625	PHStF5-034625
50 x 4.6 mm	XPtC18P-054625	PHSPH-054625	PHStF5-054625
100 x 4.6 mm	XPtC18P-104625	PHSPH-104625	PHStF5-104625
150 x 4.6 mm	XPtC18P-154625	PHSPH-154625	PHStF5-154625
200 x 4.6 mm	XPtC18P-204625	PHSPH-204625	PHStF5-204625
250 x 4.6 mm	XPtC18P-254625	PHSPH-254625	PHStF5-254625

◎ PHS XP Series 3µm

Size	PHS XP tC18	PHS XP Phenyl-Hexyl	PHS XP tF5
30x 2.1 mm	UXPtC18P-032130	UPHSPH-032130	UPHStF5-032130
50x 2.1 mm	UXPtC18P-052130	UPHSPH-052130	UPHStF5-052130
100x 2.1 mm	UXPtC18P-102130	UPHSPH-102130	UPHStF5-102130
150 x 2.1 mm	UXPtC18P-152130	UPHSPH-152130	UPHStF5-152130
30 x 3.0 mm	UXPtC18P-033030	UPHSPH-033030	UPHStF5-033030
50 x 3.0 mm	UXPtC18P-053030	UPHSPH-053030	UPHStF5-053030
100 x 3.0 mm	UXPtC18P-103030	UPHSPH-103030	UPHStF5-103030
150 x 3.0 mm	UXPtC18P-153030	UPHSPH-153030	UPHStF5-153030
250 x 3.0 mm	UXPtC18P-253030	UPHSPH-253030	UPHStF5-253030
30 x 4.6 mm	XPtC18P-034630	PHSPH-034630	PHStF5-034630
50 x 4.6 mm	XPtC18P-054630	PHSPH-054630	PHStF5-054630
100 x 4.6 mm	XPtC18P-104630	PHSPH-104630	PHStF5-104630
150 x 4.6 mm	XPtC18P-154630	PHSPH-154630	PHStF5-154630
200 x 4.6 mm	XPtC18P-204630	PHSPH-204630	PHStF5-204630
250 x 4.6 mm	XPtC18P-254630	PHSPH-254630	PHStF5-254630

◎ PHS XP Series 3.5µm

Size	PHS XP tC18	PHS XP Phenyl-Hexyl	PHS XP tF5
30x 2.1 mm	UXPtC18P-032135	UPHSPH-032135	UPHStF5-032135
50x 2.1 mm	UXPtC18P-052135	UPHSPH-052135	UPHStF5-052135
100x 2.1 mm	UXPtC18P-102135	UPHSPH-102135	UPHStF5-102135
150 x 2.1 mm	UXPtC18P-152135	UPHSPH-152135	UPHStF5-152135
30 x 3.0 mm	UXPtC18P-033035	UPHSPH-033035	UPHStF5-033035
50 x 3.0 mm	UXPtC18P-053035	UPHSPH-053035	UPHStF5-053035
100 x 3.0 mm	UXPtC18P-103035	UPHSPH-103035	UPHStF5-103035
150 x 3.0 mm	UXPtC18P-153035	UPHSPH-153035	UPHStF5-153035
250 x 3.0 mm	UXPtC18P-253035	UPHSPH-253035	UPHStF5-253035
30 x 4.6 mm	XPtC18P-034635	PHSPH-034635	PHStF5-034635
50 x 4.6 mm	XPtC18P-054635	PHSPH-054635	PHStF5-054635
100 x 4.6 mm	XPtC18P-104635	PHSPH-104635	PHStF5-104635
150 x 4.6 mm	XPtC18P-154635	PHSPH-154635	PHStF5-154635
200 x 4.6 mm	XPtC18P-204635	PHSPH-204635	PHStF5-204635
250 x 4.6 mm	XPtC18P-254635	PHSPH-254635	PHStF5-254635

◎ PHS XP Series 5µm

Size	PHS XP tC18	PHS XP Phenyl-Hexyl	PHS XP tF5
30x 2.1 mm	UXPtC18P-032150	UPHSPH-032150	UPHStF5-032150
50x 2.1 mm	UXPtC18P-052150	UPHSPH-052150	UPHStF5-052150
100x 2.1 mm	UXPtC18P-102150	UPHSPH-102150	UPHStF5-102150
150 x 2.1 mm	UXPtC18P-152150	UPHSPH-152150	UPHStF5-152150
30 x 3.0 mm	UXPtC18P-033050	UPHSPH-033050	UPHStF5-033050
50 x 3.0 mm	UXPtC18P-053050	UPHSPH-053050	UPHStF5-053050
100 x 3.0 mm	UXPtC18P-103050	UPHSPH-103050	UPHStF5-103050
150 x 3.0 mm	UXPtC18P-153050	UPHSPH-153050	UPHStF5-153050
250 x 3.0 mm	UXPtC18P-253050	UPHSPH-253050	UPHStF5-253050
30 x 4.6 mm	XPtC18P-034650	PHSPH-034650	PHStF5-034650
50 x 4.6 mm	XPtC18P-054650	PHSPH-054650	PHStF5-054650
100 x 4.6 mm	XPtC18P-104650	PHSPH-104650	PHStF5-104650
150 x 4.6 mm	XPtC18P-154650	PHSPH-154650	PHStF5-154650
200 x 4.6 mm	XPtC18P-204650	PHSPH-204650	PHStF5-204650
250 x 4.6 mm	XPtC18P-254650	PHSPH-254650	PHStF5-254650

◎ PHS XP Series Preparative Columns 5µm

Size	PHS XP tC18	PHS XP Phenyl-Hexyl	PHS XP tF5
150 x 10 mm	XPtC18P-1510050	PHSPH-1510050	PHStF5-1510050
250 x 10 mm	XPtC18P-2510050	PHSPH-2510050	PHStF5-2510050
150 x 20 mm	XPtC18P-1520050	PHSPH-1520050	PHStF5-1520050
250 x 20 mm	XPtC18P-2520050	PHSPH-2520050	PHStF5-2520050
150 x 21.2 mm	XPtC18P-1521250	PHSPH-1521250	PHStF5-1521250
250 x 21.2 mm	XPtC18P-2521250	PHSPH-2521250	PHStF5-2521250
150 x 30 mm	XPtC18P-1530050	PHSPH-1530050	PHStF5-1530050
250 x 30 mm	XPtC18P-2530050	PHSPH-2530050	PHStF5-2530050
150 x 50 mm	XPtC18P-1550050	PHSPH-1550050	PHStF5-1550050
250 x 50 mm	XPtC18P-2550050	PHSPH-2550050	PHStF5-2550050

◎ PHS XP Series Preparative Columns 7µm

Size	PHS XP tC18	PHS XP Phenyl-Hexyl	PHS XP tF5
150 x 10 mm	XPtC18P-1510070	PHSPH-1510070	PHStF5-1510070
250 x 10 mm	XPtC18P-2510070	PHSPH-2510070	PHStF5-2510070
150 x 20 mm	XPtC18P-1520070	PHSPH-1520070	PHStF5-1520070
250 x 20 mm	XPtC18P-2520070	PHSPH-2520070	PHStF5-2520070
150 x 21.2 mm	XPtC18P-1521270	PHSPH-1521270	PHStF5-1521270
250 x 21.2 mm	XPtC18P-2521270	PHSPH-2521270	PHStF5-2521270
150 x 30 mm	XPtC18P-1530070	PHSPH-1530070	PHStF5-1530070
250 x 30 mm	XPtC18P-2530070	PHSPH-2530070	PHStF5-2530070
150 x 50 mm	XPtC18P-1550070	PHSPH-1550070	PHStF5-1550070
250 x 50 mm	XPtC18P-2550070	PHSPH-2550070	PHStF5-2550070

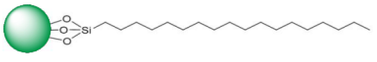
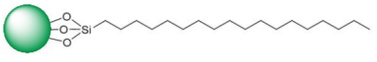
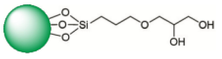
◎PHS XP Series Preparative Columns 10µm

Size	PHS XP tC18	PHS XP Phenyl-Hexyl	PHS XP tF5
150 x 10 mm	XPtC18P-15100100	PHSPH-15100100	PHStF5-15100100
250 x 10 mm	XPtC18P-25100100	PHSPH-25100100	PHStF5-25100100
150 x 20 mm	XPtC18P-15200100	PHSPH-15200100	PHStF5-15200100
250 x 20 mm	XPtC18P-25200100	PHSPH-25200100	PHStF5-25200100
150 x 21.2 mm	XPtC18P-15212100	PHSPH-15212100	PHStF5-15212100
250 x 21.2 mm	XPtC18P-25212100	PHSPH-25212100	PHStF5-25212100
150 x 30 mm	XPtC18P-15300100	PHSPH-15300100	PHStF5-15300100
250 x 30 mm	XPtC18P-25300100	PHSPH-25300100	PHStF5-25300100
150 x 50 mm	XPtC18P-15500100	PHSPH-15500100	PHStF5-15500100
250 x 50 mm	XPtC18P-25500100	PHSPH-25500100	PHStF5-25500100

MicroPulite® Perfect Columns: Balanced Retention Solution for Polar Compounds

Perfect series columns are designed for polar compound analysis, retaining and separating polar analytes under reversed-phase or HILIC conditions. With WePure's exclusive endcapping technology, they deliver superior peak shapes.

- Enhances retention of polar compounds while maintaining moderate retention for medium and strongly hydrophobic compounds
- Aligns with state-of-the-art bonding and endcapping technologies, LC-MS compatible
- Compatible with 100% aqueous mobile phase
- Excellent separation reproducibility

Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® Perfect	T3		14%	300	Yes	120	3,5,10	L1	1-8	45°C (Low pH) 45°C (High pH)
	T3 SB		9%	300	No	120	3,5,10	L1	1-8	45°C (Low pH) 45°C (High pH)
	Diol		5%	300	Yes	120	3,5,10	L20	1-8	60°C (Low pH) 60°C (High pH)
	HILIC		-	300	-	120	3,5,10	L3	1-5	45°C (Low pH) 45°C (High pH)

MicroPulite® Perfect T3 Column

Perfect T3 is also general purpose C18,compatible with 100% aqueous mobile phase. With unique triple bonded and endcapped technology, the column has better tolerance in 100% aqueous mobile phase, and maximize retention of polar compounds under reversed phase conditions. Perfect T3 analysis 13 organic carboxylic acids, the result shows that all compounds are ideally retained with excellent peak shapes, making it the best choice of polar analytes in the carboxylic acid group.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
T3		14%	300	Yes	100Å	3,5,10μm	L1	1-8	45°C (Low pH) 45°C(High pH)

◎ Determination of Related Substances of Ipratropium Bromide

Methodology：EP

Column：MicroPulite® Perfect T3 4.6*75mm 3μm (Part No：PFTT3-074630)

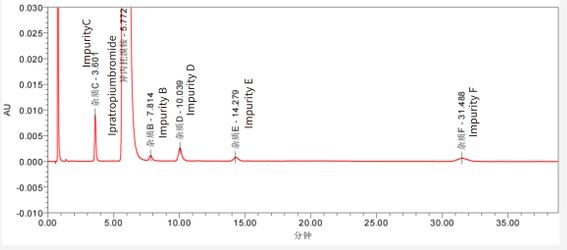
Detector：UV 220 nm

Flow rate：1.5 mL/min

Column temperature：30°C

Mobile phase：Phosphate buffer (dissolve 12.4 g sodium dihydrogen phosphate and 1.7 g tetrapropylammonium chloride in water, dilute to 870 mL, pH adjusted to 5.5 with 0.5 mol/L disodium hydrogen phosphate solution) – methanol = 87:13

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Impurity C	3.601	63943	9054	-	6448.29	1.13
Ipratropium bromide	5.772	15253223	685687	5.58	1418.28	2.15
Impurity B	7.814	15673	10120	4.16	6047.48	
Impurity D	10.039	45151	2497	5.33	7588.35	1.28
Impurity E	14.279	16339	700	7.88	8358.59	1.11
Impurity F	31.488	24443	536	18.10	8632.73	1.16

◎ Lactic Acid Content Determination in Sodium Lactate Ringer's Injection

Methodology：USP

Column：MicroPulite® Perfect T3 4.6*100mm 3μm (Part No：PFTT3-104630)

Detector：UV 210 nm

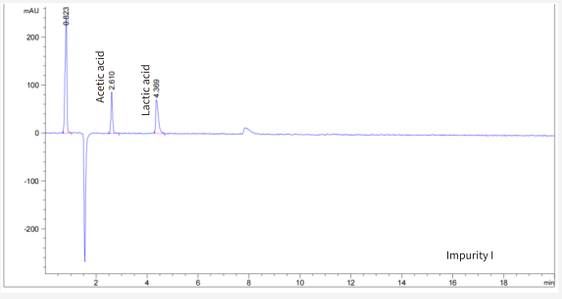
Flow rate：1.0 mL/min

Column temperature：25°C

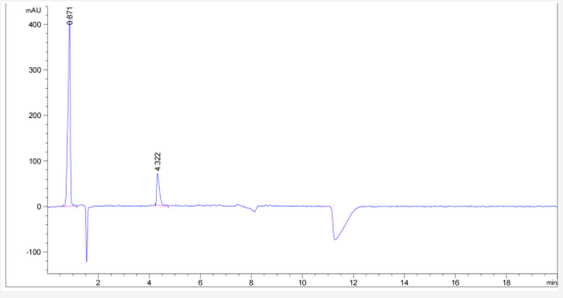
Mobile phase：Dicyclohexylamine – formic acid – water (1:1:998)

Chromatogram：

System suitability chromatogram

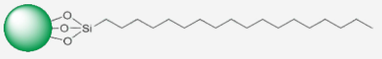


Test sample chromatogram



MicroPulite® Perfect T3 SB Column

Perfect T3 SB is an uncapped C18 column,compatible with 100% aqueous mobile phase.It can enhance the retention of polar compounds (especially basic compounds), due to the presence of free silanol groups on the surface. When the column used in acidic mobile phase conditions, because uncapped prevent hydrolysis of capped reagents, perfect T3 SB has a longer column life and good reproducibility at the low pH.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
T3 SB		9%	300	No	120Å	3,5,10μm	L1	1-8	45°C (Low pH) 45°C(High pH)

◎ Content Determination of Cefoxitin Sodium

Methodology：Pharmacopoeia of the People's Republic of China 2025

Column：MicroPulite® Perfect T3 SB 4.6*150mm 5μm

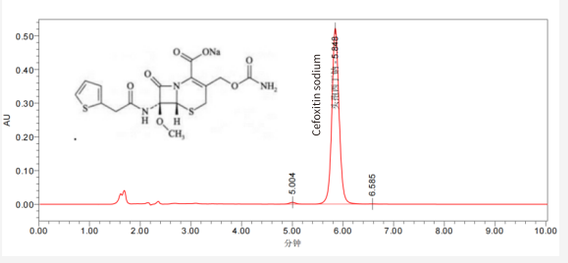
Detector：UV 254 nm

Flow rate：1.0 ml/min

Column temperature：30°C

Mobile phase：Water – acetonitrile – glacial acetic acid (81:19:1)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
-	5.004	46951	5444	-	8552.82	1.00
Cefoxitin sodium	5.848	5197272	521828	3.63	8458.95	1.06
-	6.585	5318	519	2.74	7566.16	

◎ Separation of o-, m-, p-Methylaniline Isomers

Column：MicroPulite® Perfect T3 SB 4.6*150mm 5μm

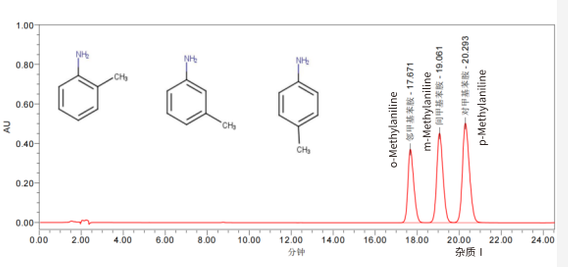
Detector：UV 254 nm

Flow rate：1.0 mL/min

Column temperature：45°C

Mobile phase：Acetonitrile – 0.05 mol/L ammonium acetate solution (10：90)

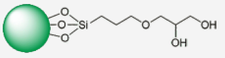
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
o-Methylaniline	17.671	7212341	372152	-	18687.43	1.26
m-Methylaniline	19.061	9448108	453361	2.65	19064.81	1.15
p-Methylaniline	20.293	11587181	503821	2.16	17683.41	1.22

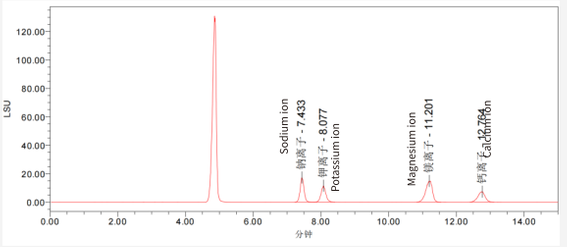
MicroPulite® Perfect Diol Column

Perfect Diol is made of dihydroxypropylsilane-bonded silica particles, it can be used in normal phase and HILIC modes. As normal phase column, Perfect Diol is similar to silica and amido column ,and polarity of diol is weaker than silica (stronger than amino). It is suitable for the analysis of peptides, proteins, and polar compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
Diol		5%	300	Yes	120Å	3,5,10μm	L20	1-8	60°C (Low pH) 60°C(High pH)

◎ Separation of Four Metal Ions on Perfect Diol Column

Column：MicroPulite® Perfect Diol 4.6*250mm 5.0μm (Part No：PFTD-254650)
Detector：ELSD (Evaporative light scattering detector (ELSD))
Flow rate：1.0 mL/min
Column temperature：30°C
Mobile phase：Acetonitrile – 0.2 mol/L ammonium formate (pH3.0) =75:25
Chromatogram：



Analyte	R.T. (min)	Area (μV·s)	Height (μV)	USP resolution	USP theoretical plate count	USP tailing factor
钠离子	7.433	136279	17261	-	18456.28	1.12
钾离子	8.077	11210	11484	2.89	21615.85	1.04
镁离子	11.201	204013	14883	10.33	20889.40	0.87
钙离子	12.764	106885	7339	4.21	15921.78	0.88

MicroPulite® Perfect HILIC Column

Perfect HILIC can retain and separate polar compounds in HILIC mode, especially for strongly polar basic compounds;it can also be used as silica column in normal phase.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
HILIC		-	300	-	120Å	3,5,10μm	L3	1-5	45°C (Low pH) 45°C(High pH)

Ordering Information

◎ Perfect Series 3µm

Size	Perfect T3	Perfect Diol	Perfect HILIC	Perfect T3 SB
30x 2.1 mm	UPFTT3-032130	UPFTD-032130	UPFTH-032130	UPFTT3SB-032130
50x 2.1 mm	UPFTT3-052130	UPFTD-052130	UPFTH-052130	UPFTT3SB-052130
100x 2.1 mm	UPFTT3-102130	UPFTD-102130	UPFTH-102130	UPFTT3SB-102130
150 x 2.1 mm	UPFTT3-152130	UPFTD-152130	UPFTH-152130	UPFTT3SB-152130
30 x 3.0 mm	UPFTT3-033030	UPFTD-033030	UPFTH-033030	UPFTT3SB-033030
50 x 3.0 mm	UPFTT3-053030	UPFTD-053030	UPFTH-053030	UPFTT3SB-053030
100 x 3.0 mm	UPFTT3-103030	UPFTD-103030	UPFTH-103030	UPFTT3SB-103030
150 x 3.0 mm	UPFTT3-153030	UPFTD-153030	UPFTH-153030	UPFTT3SB-153030
250 x 3.0 mm	UPFTT3-253030	UPFTD-253030	UPFTH-253030	UPFTT3SB-253030
30 x 4.6 mm	PFTT3-034630	PFTD-034630	PFTH-034630	PFTT3SB-034630
50 x 4.6 mm	PFTT3-054630	PFTD-054630	PFTH-054630	PFTT3SB-054630
100 x 4.6 mm	PFTT3-104630	PFTD-104630	PFTH-104630	PFTT3SB-104630
150 x 4.6 mm	PFTT3-154630	PFTD-154630	PFTH-154630	PFTT3SB-154630
200 x 4.6 mm	PFTT3-204630	PFTD-204630	PFTH-204630	PFTT3SB-204630
250 x 4.6 mm	PFTT3-254630	PFTD-254630	PFTH-254630	PFTT3SB-254630

◎ Perfect Series 5µm

Size	Perfect T3	Perfect Diol	Perfect HILIC	Perfect T3 SB
30x 2.1 mm	UPFTT3-032150	UPFTD-032150	UPFTH-032150	UPFTT3SB-032150
50x 2.1 mm	UPFTT3-052150	UPFTD-052150	UPFTH-052150	UPFTT3SB-052150
100x 2.1 mm	UPFTT3-102150	UPFTD-102150	UPFTH-102150	UPFTT3SB-102150
150 x 2.1 mm	UPFTT3-152150	UPFTD-152150	UPFTH-152150	UPFTT3SB-152150
30 x 3.0 mm	UPFTT3-033050	UPFTD-033050	UPFTH-033050	UPFTT3SB-033050
50 x 3.0 mm	UPFTT3-053050	UPFTD-053050	UPFTH-053050	UPFTT3SB-053050
100 x 3.0 mm	UPFTT3-103050	UPFTD-103050	UPFTH-103050	UPFTT3SB-103050
150 x 3.0 mm	UPFTT3-153050	UPFTD-153050	UPFTH-153050	UPFTT3SB-153050
250 x 3.0 mm	UPFTT3-253050	UPFTD-253050	UPFTH-253050	UPFTT3SB-253050
30 x 4.6 mm	PFTT3-034650	PFTD-034650	PFTH-034650	PFTT3SB-034650
50 x 4.6 mm	PFTT3-054650	PFTD-054650	PFTH-054650	PFTT3SB-054650
100 x 4.6 mm	PFTT3-104650	PFTD-104650	PFTH-104650	PFTT3SB-104650
150 x 4.6 mm	PFTT3-154650	PFTD-154650	PFTH-154650	PFTT3SB-154650
200 x 4.6 mm	PFTT3-204650	PFTD-204650	PFTH-204650	PFTT3SB-204650
250 x 4.6 mm	PFTT3-254650	PFTD-254650	PFTH-254650	PFTT3SB-254650

◎ Perfect Series Preparative Columns 5µm

Size	Perfect T3	Perfect Diol	Perfect HILIC	Perfect T3 SB
150 x 10 mm	PFTT3-1510050	PFTD-1510050	PFTH-1510050	PFTT3SB-1510050
250 x 10 mm	PFTT3-2510050	PFTD-2510050	PFTH-2510050	PFTT3SB-2510050
150 x 20 mm	PFTT3-1520050	PFTD-1520050	PFTH-1520050	PFTT3SB-1520050
250 x 20 mm	PFTT3-2520050	PFTD-2520050	PFTH-2520050	PFTT3SB-2520050
150 x 21.2 mm	PFTT3-1521250	PFTD-1521250	PFTH-1521250	PFTT3SB-1521250
250 x 21.2 mm	PFTT3-2521250	PFTD-2521250	PFTH-2521250	PFTT3SB-2521250
150 x 30 mm	PFTT3-1530050	PFTD-1530050	PFTH-1530050	PFTT3SB-1530050
250 x 30 mm	PFTT3-2530050	PFTD-2530050	PFTH-2530050	PFTT3SB-2530050
150 x 50 mm	PFTT3-1550050	PFTD-1550050	PFTH-1550050	PFTT3SB-1550050
250 x 50 mm	PFTT3-2550050	PFTD-2550050	PFTH-2550050	PFTT3SB-2550050

◎ Perfect Series Preparative Columns 10µm

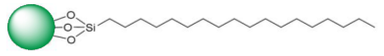
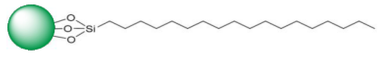
Size	Perfect T3	Perfect Diol	Perfect HILIC	Perfect T3 SB
150 x 10 mm	PFTT3-15100100	PFTD-15100100	PFTH-15100100	PFTT3SB-15100100
250 x 10 mm	PFTT3-25100100	PFTD-25100100	PFTH-25100100	PFTT3SB-25100100
150 x 20 mm	PFTT3-15200100	PFTD-15200100	PFTH-15200100	PFTT3SB-15200100
250 x 20 mm	PFTT3-25200100	PFTD-25200100	PFTH-25200100	PFTT3SB-25200100
150 x 21.2 mm	PFTT3-15212100	PFTD-15212100	PFTH-15212100	PFTT3SB-15212100
250 x 21.2 mm	PFTT3-25212100	PFTD-25212100	PFTH-25212100	PFTT3SB-25212100
150 x 30 mm	PFTT3-15300100	PFTD-15300100	PFTH-15300100	PFTT3SB-15300100
250 x 30 mm	PFTT3-25300100	PFTD-25300100	PFTH-25300100	PFTT3SB-25300100
150 x 50 mm	PFTT3-15500100	PFTD-15500100	PFTH-15500100	PFTT3SB-15500100
250 x 50 mm	PFTT3-25500100	PFTD-25500100	PFTH-25500100	PFTT3SB-25500100

MicroPulite® HSS Columns: Triple-Bonded Technology with High-Strength Silica, Designed for Method Development

WePure HSS high-strength silica analytical packing media combined with triple-bonded technology withstands a wider pressure range.

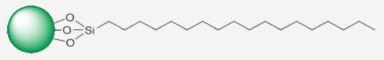
Broad compatibility with analytes of various properties, compatible with 100% aqueous phase, excellent tolerance to acidic conditions, extremely low column bleeding, and exclusive endcapping technology for superior peak shapes.

- Higher silane affinity, enhancing retention of polar compounds and reducing retention of strongly hydrophobic analytes
- Designed for rapid method development, shortening development time and reducing costs
- Higher mechanical strength and broader selectivity

Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® HSS	T3		12%	230	Yes	100	1.8,2.5, 3.5	L1	1-8	45°C (Low pH) 45°C (High pH)
	C18 SB		9%	230	No	100	3.5	L1	1-8	45°C (Low pH) 45°C (High pH)

MicroPulite® HSS T3 Column

HSS T3 is also a general-purpose C18, compatible with 100% aqueous phase, and significantly enhances the retention of polar compounds under reverse phase condition. And low-carbon loading design of HSS T3 can reduce the retention of hydrophobic compounds, HSS T3 is suitable for the research of traditional Chinese medicines (TCMs) and Chinese medicines formulas, as well as for the research of metabolomics.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
T3		12%	230	Yes	100Å	1.8, 2.5, 3.5μm	L1	1-8	45°C (Low pH) 45°C(High pH)

◎Determination of Related Substances of Metoclopramide Hydrochloride

Column：MicroPulite® HSS T3 1.8μm 100*4.6mm

Detector：UV 254nm

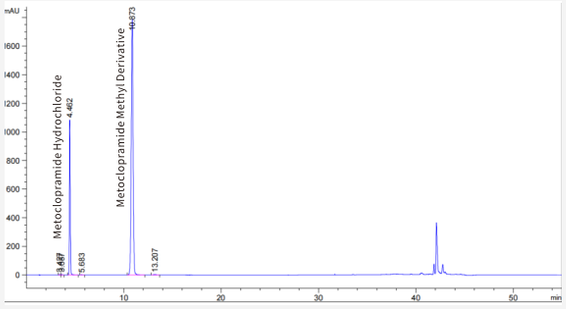
Flow rate：1.0mL/min

Column temperature：35°C

Mobile phase：Phase A: 0.01 mol/L potassium dihydrogen phosphate (pH adjusted to 3.0 with phosphoric acid); Phase B: acetonitrile

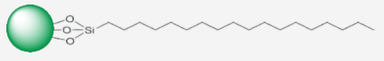
Time	A%	B%
0	77	23
20	77	23
30	50	50
40	80	20
43	80	20
44	77	23
55	77	23

Chromatogram：



MicroPulite® HSS C18 SB Column

High-strength silica matrix with non-endcapped design, excellent stability under low pH conditions. Improves retention of basic compounds in low-pH systems and offers differentiated selectivity from HSS T3. Suitable for separation analysis and method development of basic compounds in low-pH mobile phases, providing dedicated separation selectivity for basic analytes under low-pH conditions.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C18 SB		9%	230	No	100Å	3.5μm	L1	1-8	45°C (Low pH) 45°C(High pH)

◎ Content Determination of Potassium Sorbate

Column：MicroPulite® HSS C18-SB 3.5μm 150*4.6mm (Part No：HSC18SB-154635)

Detector：UV 264nm

Flow rate：1.0mL/min

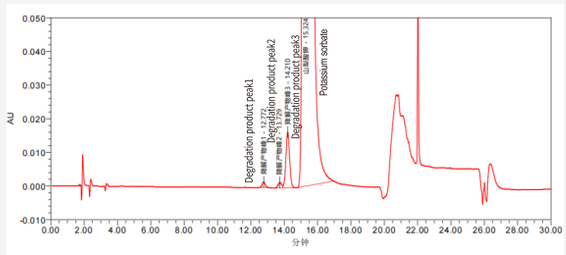
Column temperature：40°C

Mobile phase：Phase A: 0.1% trifluoroacetic acid aqueous solution;

Phase B: 0.1% trifluoroacetic acid methanol solution

Time	A%	B%
0	75	25
17.0	75	25
18.0	5	95
23.0	5	95
23.1	75	25
30.0	75	25

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Degradation product peak1	12.772	21857	1651	-	21154.74	1.08
Degradation product peak2	13.729	23800	1621	2.51	17130.97	
Degradation product peak3	14.210	255252	16588	1.19	19888.60	1.02
Potassium sorbate	15.324	71667613	2943464	2.12	13953.09	1.27

Ordering Information

◎HSS Series 1.8µm

Size	HSS T3
50x 2.1 mm	UHST3-052118
100x 2.1 mm	UHST3-102118
150 x 2.1 mm	UHST3-152118
30 x 3.0 mm	UHST3-033018
50 x 3.0 mm	UHST3-053018
100 x 3.0 mm	UHST3-103018
150 x 3.0 mm	UHST3-153018

◎ HSS Series 2.5µm

Size	HSS T3
30x 2.1 mm	UHST3-032125
50x 2.1 mm	UHST3-052125
100x 2.1 mm	UHST3-102125
150 x 2.1 mm	UHST3-152125
30 x 3.0 mm	UHST3-033025
50 x 3.0 mm	UHST3-053025
100 x 3.0 mm	UHST3-103025
150 x 3.0 mm	UHST3-153025
250 x 3.0 mm	UHST3-253025
30 x 4.6 mm	HST3-034625
50 x 4.6 mm	HST3-054625
100 x 4.6 mm	HST3-104625
150 x 4.6 mm	HST3-154625
200 x 4.6 mm	HST3-204625
250 x 4.6 mm	HST3-254625

◎ HSS Series 3.5µm

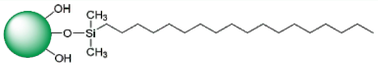
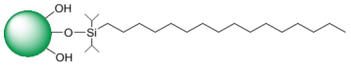
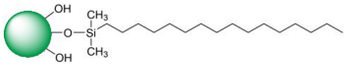
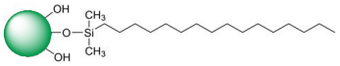
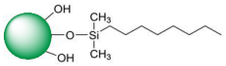
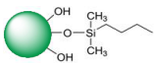
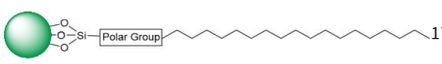
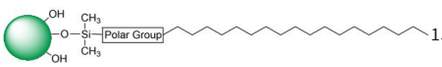
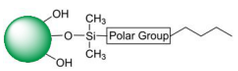
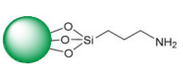
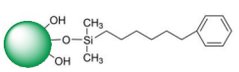
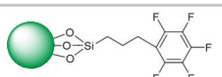
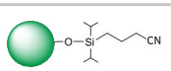
Size	HSS T3	HSS C18-SB
30x 2.1 mm	UHST3-032135	UHSC18SB-032135
50x 2.1 mm	UHST3-052135	UHSC18SB-052135
100x 2.1 mm	UHST3-102135	UHSC18SB-102135
150 x 2.1 mm	UHST3-152135	UHSC18SB-152135
30 x 3.0 mm	UHST3-033035	UHSC18SB-033035
50 x 3.0 mm	UHST3-053035	UHSC18SB-053035
100 x 3.0 mm	UHST3-103035	UHSC18SB-103035
150 x 3.0 mm	UHST3-153035	UHSC18SB-153035
250 x 3.0 mm	UHST3-253035	UHSC18SB-253035
30 x 4.6 mm	HST3-034635	HSC18SB-034635
50 x 4.6 mm	HST3-054635	HSC18SB-054635
100 x 4.6 mm	HST3-104635	HSC18SB-104635
150 x 4.6 mm	HST3-154635	HSC18SB-154635
200 x 4.6 mm	HST3-204635	HSC18SB-204635
250 x 4.6 mm	HST3-254635	HSC18SB-254635

MicroPulite® Gold Columns: The Preferred Cost-Effective Chromatography Columns

Gold series columns use high-purity silica microspheres as packing media, manufactured under the strict ISO 9001 quality control system, ensuring excellent peak shape as well as outstanding batch-to-batch stability and reproducibility.

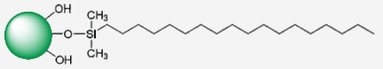
The Gold series offers a variety of bonded phases including C18, C8 and amino, making it the preferred cost-effective choice for routine analytical testing.

- Made of high-purity silica through a strictly controlled manufacturing process
- General-purpose columns with good column-to-column and batch-to-batch reproducibility
- Widely applied in chemical pharmaceuticals, traditional Chinese medicine, environmental testing and food safety testing

Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® Gold	C18		18%	300	Yes	120	3,3.5,5,10	L1	2-8	60°C (Low pH) 40°C (High pH)
	C18-SB		11%	300	No	120	3.5,5	L1	2-8	60°C (Low pH) 40°C (High pH)
	C18-XB		19%	300	Yes	120	3,5	L1	2-8	60°C (Low pH) 40°C (High pH)
	C18-AQ		12%	300	Yes	120	5	L1	2-8	60°C (Low pH) 40°C (High pH)
	C8		10%	300	Yes	120	3,3.5,5,10	L7	2-8	60°C (Low pH) 40°C (High pH)
	C4		6%	300	Yes	120	3,3.5,5,10	L26	2-8	60°C (Low pH) 40°C (High pH)
	RP18		17%	300	Yes	120	3,3.5,5,10	L1	1-8	60°C (Low pH) 40°C (High pH)
	RP18 Plus		15%	300	Yes	120	3,3.5,5,10	L1	2-8	60°C (Low pH) 40°C (High pH)
	RP8 Plus		10%	300	Yes	120	3,3.5,5	L7	2-8	60°C (Low pH) 40°C (High pH)
	RP4 Plus		7%	300	Yes	120	3,3.5,5	L26	2-8	60°C (Low pH) 40°C (High pH)
	EC-NH_2		4%	300	Yes	120	3,3.5,5	L8	2-8	60°C (Low pH) 40°C (High pH)
	HILIC		-	300	-	120	3,3.5,5,10	L3	2-8	60°C (Low pH) 40°C (High pH)
	Phenyl-Hexyl		12%	300	Yes	120	3,3.5,5,10	L11	2-8	60°C (Low pH) 40°C (High pH)
	PFP		7%	300	Yes	120	3,3.5,5,10	L43	2-8	60°C (Low pH) 40°C(HighpH)
	CN		5.5%	300	Yes	120	5	L10	2-8	45°C (Low pH) 45°C (High pH)

MicroPulite® Gold C18 Column

As a general purpose C18 column, Gold C18 not only provides symmetrical peak shape, excellent separation and good batch stability, but also has a super cost-effective price, which can meet the daily analytical needs in different fields such as pharmaceutical, food, environment and chemical industry.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C18		18%	300	Yes	120Å	3, 3.5, 5,10μm	L1	2-8	60°C (Low pH) 40°C(High pH)

◎ Determination of Bile Acids in Artificial Calculus Bovis

Methodology：Pharmacopoeia of the People's Republic of China 2025

Column：MicroPulite® Gold C18 4.6*250mm 5.0μm (Part No：GDC18-254650)

Detector：ELSD

Flow rate：1.0mL/min

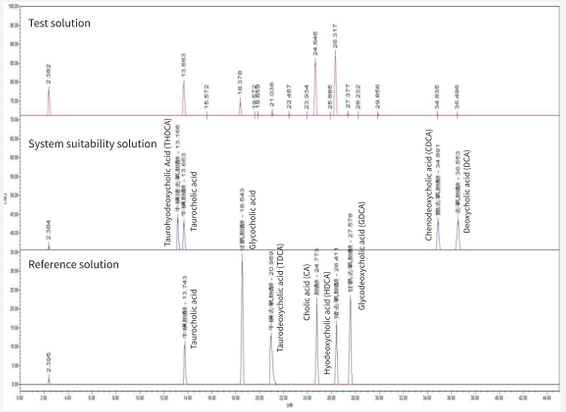
Column temperature：30°C

Mobile phaseA：Acetonitrile

Mobile phaseB：0.2% Trifluoroacetic acid solution

Time	A%	B%
0→30	25→52	75→48
30→45	52	48

Chromatogram：



◎ Determination of p-Hydroxybenzoate Esters in Food

Methodology：GB 5009.31-2025

Column：MicroPulite® Gold C18 4.6*150mm 3.0μm (Part No：GDC18-154630)

Detector：UV 254nm

Flow rate：0.7mL/min

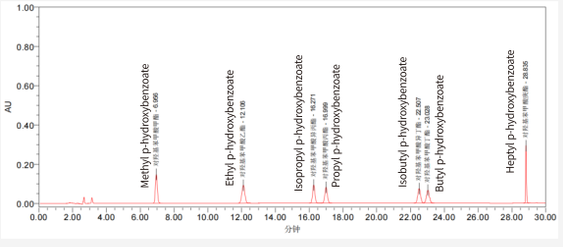
Column temperature：35°C

Mobile phaseA：Acetonitrile

Mobile phaseB：0.1% phosphoric acid solution

Time	A%	B%
0	30	70
8	30	70
10	40	60
14	40	60
19	45	55
23	45	55
24	90	10
28	90	10
28.1	30	70
30	30	70

Chromatogram：

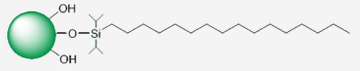


Peak name	R.T. (min)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Methyl p-hydroxybenzoate	6.956	-	16314.56	1.09
Ethyl p-hydroxybenzoate	12.106	19.00	22079.41	1.00
Isopropyl p-hydroxybenzoate	16.271	14.52	67766.21	1.03
Propyl p-hydroxybenzoate	16.999	2.80	62840.39	1.02
Isobutyl p-hydroxybenzoate	22.507	19.15	86427.45	1.01
Butyl p-hydroxybenzoate	23.028	1.68	84413.31	1.01
Heptyl p-hydroxybenzoate	28.835	28.63	1615765.99	1.12

MicroPulite® Gold C18-SB Column

Non-endcapped design with excellent tolerance under low pH conditions, extending column service life; delivers excellent peak shapes for acidic, basic and neutral compounds, with outstanding reproducibility at low pH.

Suitable for routine analysis and method development of compounds in acidic mobile phase systems, solving the industry pain points of short column lifetime and poor peak shape under low-pH conditions.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C18-SB		11%	300	No	120Å	3.5, 5μm	L1	2-8	60°C (Low pH) 40°C(High pH)

◎ Content Determination of Relinqing Granules

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® Gold C18-SB 4.6*250mm 5.0μm (Part No：GDC18SB-254650)

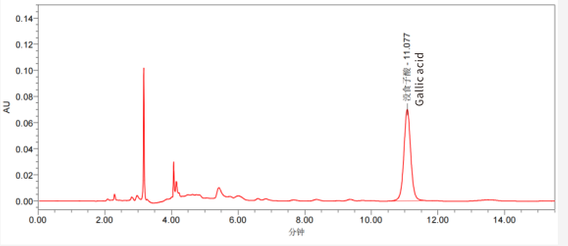
Detector：UV 272nm

Flow rate：1mL/min

Column temperature：30°C

Mobile phase：Methanol – water – dimethylformamide – glacial acetic acid =(1:95:3:1)

Chromatogram：

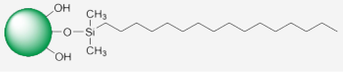


Peak name	R.T. (min)	Area (μV·s)	Height (μV)	ChP Tailing factor	ChP Plate Count (N)
Gallic acid	11.077	997127	70066	1.03	14795.31

MicroPulite® Gold C18-AQ Column

High-purity silica matrix with polar-group endcapping technology, compatible with 100% aqueous phase; longer column lifetime and stable peak performance under high-aqueous conditions.

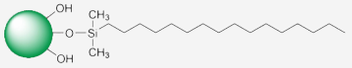
Suitable for separation and analysis of highly polar compounds in high-aqueous mobile phases, solving the problems of hydrophobic collapse and insufficient retention under high-aqueous conditions.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C18-AQ		12%	300	Yes	120Å	5, 10μm	L1	2-8	60°C (Low pH) 40°C(High pH)

MicroPulite® Gold C18-XB Column

Ultra-pure silica matrix with special bonding technology, delivering excellent peak shape, reproducibility and stability; general-purpose C18 column for efficient separation of small molecules.

Suitable for routine analysis of small molecules in pharmaceutical, food, environmental and chemical industries, providing a stable and reliable general-purpose solution for small molecule analysis.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
C18-XB		19%	300	Yes	120Å	3,5μm	L1	2-8	60°C (Low pH) 40°C(High pH)

◎ Determination of Related Substances of Isoniazid

Column：MicroPulite® Gold C18-XB 4.6*150mm 5.0μm (Part No：GDC18XB-154650)

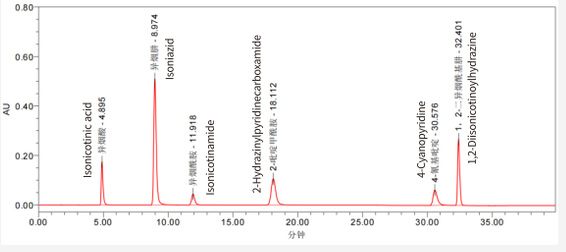
Detector：UV 262nm

Flow rate：0.5mL/min

Column temperature：30°C

Mobile phase：0.02mol/LDisodium hydrogen phosphate (pH 6.0) – methanol

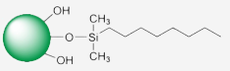
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Isonicotinic acid	4.895	1615618	174304	-	6758.43	1.46
Isoniazid	8.974	6914616	509934	14.18	10877.50	1.30
Isonicotinamide	11.918	754434	44601	7.64	11903.55	1.22
2-Hydrazinylpyridinecarboxamide	18.112	2597653	106068	11.73	13063.48	1.18
4-Cyanopyridine	30.576	1428626	62184	20.83	44286.46	1.43
1,2-Diisonicotinoylhydrazine	32.401	3030644	268509	4.22	190683.78	1.24

MicroPulite® Gold C8 Column

Gold C8 has a weak retention capacity compared to C18, and stronger hydrophobic compounds retaintion time will be shortened , resulting in higher analytical efficiency than C18 columns, and can provide a different selectivity from C18.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C8		10%	300	Yes	120Å	3, 3.5, 5, 10μm	L7	2-8	60°C (Low pH) 40°C(High pH)

◎ Determination of Related Substances of Pentoxifylline

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® Gold C8 4.6*250mm 5.0μm (Part No：GDC08-254650)

Detector：UV 272nm

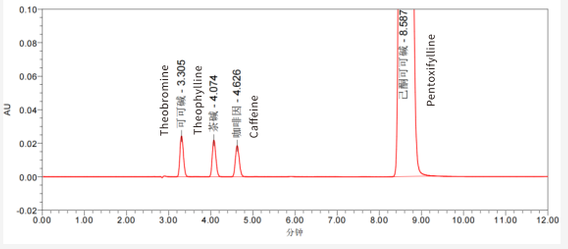
Flow rate：1.0mL/min

Column temperature：35°C

Mobile phase：Phase A: methanol – 0.544% potassium dihydrogen phosphate solution (3:7); Phase B: methanol – 0.544% potassium dihydrogen phosphate solution (7:3)

Time	A%	B%
0	86	14
6	86	14
13	10	90
30	10	90
38	86	14
43	86	14

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Theobromine	3.305	140164	24307	-	7459.63	1.18
Theophylline	4.074	129634	21871	4.92	10732.09	1.16
Caffeine	4.626	119313	18559	3.37	11803.81	1.15
Pentoxifylline	8.587	38269335	3210815	16.14	13143.63	1.32

◎ Content Determination of Clindamycin Phosphate

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® Gold C8 4.6*250mm 5.0μm (Part No：GDC08-254650)

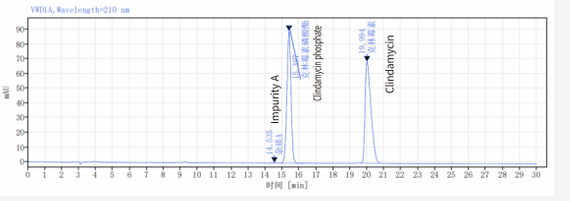
Detector：UV 210nm

Flow rate：1.0 mL/min

Column temperature：30°C

Mobile phase：Phosphate buffer (13.6 g/L potassium dihydrogen phosphate, pH 2.5 adjusted with 85% phosphoric acid)-acetonitrile (80：20)

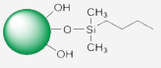
Chromatogram：



Peak name	R.T. (min)	Peak width (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Impurity A	14.535	0.68	0.68	0.19	-	15350	1.05
Clindamycin phosphate	15.397	1.41	1.41	89.58	1.88	18939	0.98
Clindamycin	19.994	1.35	1.35	68.91	8.24	14330	1.71

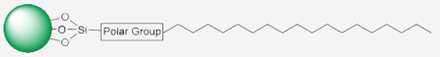
MicroPulite® Gold C4 Column

Gold C4 has a shorter carbon chain, less retentive than C18 and C8, different selectivity for larger molecular compound, Suitable for analyzing compounds with larger molecular weight in small molecules, proteins and other macromolecular compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C4		6%	300	Yes	120Å	3, 3.5, 5, 10μm	L26	2-8	60°C (Low pH) 40°C(High pH)

MicroPulite® Gold RP18 Column

Gold RP18 has a polar embedded groups and patented triple- bonded technology, is compatible with 100% aqueous mobile phase, and the ability to resist bond and phase loss is improved under high aqueous conditions.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
RP18		17%	300	Yes	120Å	3, 3.5, 5, 10μm	L1	1-8	60°C (Low pH) 40°C(High pH)

◎ Determination of Related Substances of Abiraterone Acetate

Column：MicroPulite® Gold RP18 3.0*150mm 3.0μm (Part No：GDR18-153030)

Detector：UV 254nm

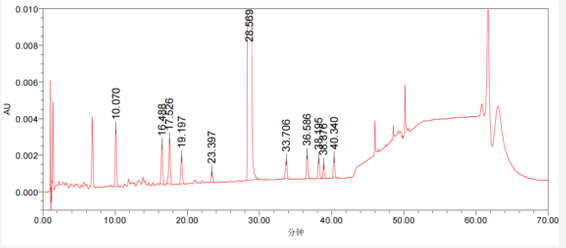
Flow rate：0.45 mL/min

Column temperature：15°C

Mobile phase A: 10 mM ammonium acetate; Mobile phase B: acetonitrile; Mobile phase C: ethanol

Time (min)	Mobile phase A (%)	Mobile phase B (%)	Mobile phase C (%)
0	50	20	30
40	15	55	30
47	0	20	80
58	0	20	80
60	50	20	30
70	50	20	30

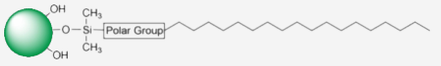
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
F (7-Keto abiraterone acetate)	10.070	39964	3195	-	14882.47	1.18
A (α-Epoxy abiraterone acetate)	16.488	29590	2196	18.85	34540.49	1.03
β (β-Epoxy abiraterone acetate)	17.526	35299	2490	2.94	38260.26	0.86
C (Abiraterone)	19.197	21905	1515	4.51	40531.88	1.04
G (3-Deoxy-3-acetyl abiraterone-3-ethylene)	23.397	8243	617	11.25	65529.48	1 12
Abiraterone acetate	28.569	16452067	1170238	14.17	94646.79	1.18
D (Abiraterone ethyl ether)	33.706	16430	1041	13.18	99425.62	0.85
E (Abiraterone isopropyl ether)	36.586	19173	1368	7.34	149379.16	1.04
H (Dehydro abiraterone)	38.195	15457	1144	4.39	179811.62	1.10
I (3-Deoxy-3-chloro abiraterone)	38.876	10188	817	1.97	233250.26	1.03
J (O-Chlorobutyl abiraterone)	40.340	14111	1096	4.30	212909.85	1.07

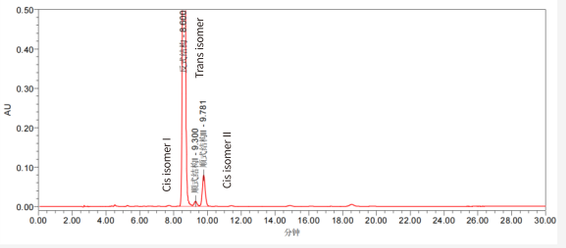
MicroPulite® Gold RP18 Plus Column

In order to increase the retention of compounds, C18 Columns often need to be used in high aqueous phases or even 100% aqueous phase, and use in high aqueous phase for a long time easily lead to hydrophobic collapse .Gold RP18 Plus can effectively use the hydrophilic effect of polar groups by embedding a polar group within the octadecyl chain, making it compatible with and resistant to 100% aqueous phase, and at the same time shielding the residual silanol group effect on the surface of the silica .Gold RP18 Plus can reduce tailing of basic compounds, and provides selectivity different from that of C18.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
RP18 Plus		15%	300	Yes	120Å	3, 3.5, 5, 10μm	L1	2-8	60°C (Low pH) 40°C(High pH)

◎ Content Determination of β, β-Carotene-4,4-dione (Canthaxanthin)

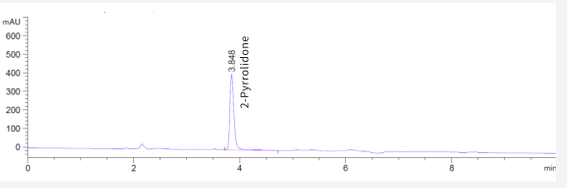
Methodology：GB 7300.902-2022
Column：MicroPulite® Gold RP18 Plus 4.6*250mm 5.0μm
Detector：UV 470nm
Flow rate：1.0mL/min
Column temperature：35°C
Mobile phase：Acetonitrile – water (95:5)
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Trans isomer	8.600	16520250	1717823	-	19052.20	1.10
Cis isomer I	9.300	166860	13341	2.49	13122.62	
Cis isomer II	9.781	946457	79114	1.55	15941.73	1.08

◎ Determination of 2-Pyrrolidone in Povidone K30

Methodology：Pharmacopoeia of the People's Republic of China
Column：MicroPulite® Gold RP18 Plus 4.6*250mm 5.0μm
Detector：UV 205nm
Flow rate：1.0mL/min
Column temperature：30°C
Mobile phase：Water – acetonitrile – methanol (90：5：5)
Chromatogram：



Peak name	R.T. (min)	Area (mAU*s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
2-Pyrrolidone	3.848	2159.58130	408.51859	-	15321	-

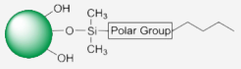
MicroPulite® Gold RP8 Plus Column

Compared to Gold C8 columns, Gold RP8 Plus is compatible and tolerant of 100% water and offers different selectivity from Gold C8.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classification	pH range	Temperature limit
RP8 Plus		10%	300	Yes	120Å	3, 3.5, 5μm	L7	2-8	60°C (Low pH) 40°C(High pH)

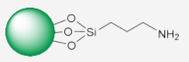
MicroPulite® Gold RP4 Plus Column

For reverse phase analysis of large polar proteins, the Gold RP4 plus provides the ability to analyze under 100% water conditions, greatly enhance retention in reverse phase.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
RP4 Plus		7%	300	Yes	120Å	3, 3.5, 5μm	L26	2-8	60°C (Low pH) 40°C(High pH)

MicroPulite® Gold EC-NH_2 Column

Aminopropyl-bonded silica with triple-bonded technology reduces bonded phase loss and delivers excellent chemical stability. Can be used in both reversed-phase and normal-phase systems, suitable for routine separation of highly polar compounds such as carbohydrates, solving the problem of insufficient retention for highly polar saccharides.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
EC-NH_2		4%	300	Yes	120Å	3, 3.5, 5μm	L8	2-8	60°C (Low pH) 40°C(High pH)

◎ Detection of Carbohydrates on Gold EC-NH_2 Column

Xylitol, sorbitol, maltitol, erythritol

方法：GB 5009.279-2016

Column：MicroPulite® Gold EC-NH_2 5μm 4.6*250mm

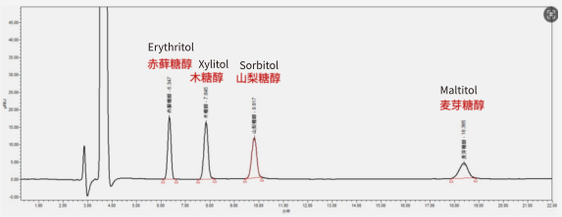
Mobile phase：Acetonitrile – water=80：20 (GB)

Detector：Refractive index detector (RID), temperature set at 30°C

Column temperature：30°C

Injection volume：20μL

Chromatogram：



◎ Fructose, glucose, sucrose, maltose, lactose

Methodology：GB5009.8-2023

Column：MicroPulite® Gold EC-NH_2 5μm 4.6*250mm

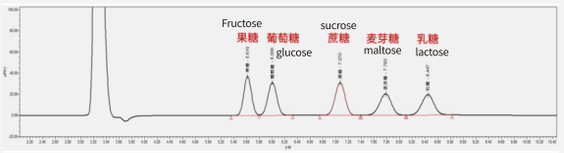
Mobile phase：Acetonitrile : water=70：30 (GB)

Detector：Refractive index detector, temperature set at 40 °C

Column temperature：40°C

Injection volume：10μL

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Fructose	5.616	316260	37122	-	9796.8	1.0327
glucose	6.006	306934	31103	1.5913	8338.2	0.9982
sucrose	7.070	341105	30996	3.8214	9351.5	0.9784
maltose	7.783	266614	20296	2.2200	7968.2	0.9467
lactose	8.447	262426	19377	1.8814	8896.2	0.9842

◎ lactose

Methodology：Pharmacopoeia of the People's Republic of China

Column：MicroPulite® Gold EC-NH_2 5μm 4.6*250mm

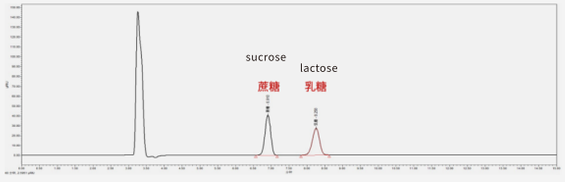
Mobile phase：Acetonitrile – water=7：3

Detector：Refractive index detector (RID), temperature set at 30°C

Column temperature：30°C

Injection volume：10μL

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
sucrose	6.910	447070	40930	-	9102.5	0.9465
lactose	8.258	383599	27329	4.0650	7835.4	0.9323

MicroPulite® Gold HILIC Column

Gold HILIC is an unbonded silica , can be used in hydrophilic mode for the retention of large polar compounds that cannot be retained in the reverse phase.Gold HILIC can also be used as a silica column under normal phase conditions.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
HILIC		-	300	-	120Å	3, 3.5, 5, 10μm	L3	2-8	60°C (Low pH) 40°C(High pH)

◎ Analysis of Five Phospholipids in Soybean Lecithin

Column：MicroPulite® Gold HILIC 250*4.6mm 5.0μm (Part No：GDH-254650)

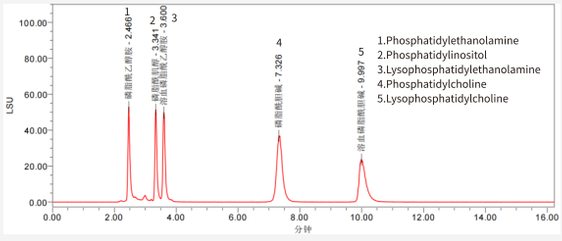
Detector：ELSD（Drift tube temperature: 72°C, gas flow rate: 2.0 L/min）

Flow rate：1.0mL/min

Column temperature：40°C

Mobile phase：Methanol：50 mM ammonium acetate=95：5

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Phosphatidylethanolamine	2.466	225917	51562	-	7990.81	1.31
Phosphatidylinositol	3.341	233109	50744	8.07	15244.74	1.42
Lysophosphatidylethanolamine	3.600	276060	49400	2.13	12813.38	1.42
Phosphatidylcholine	7.326	483715	36765	16.30	8396.73	1.28
Lysophosphatidylcholine	9.997	354285	23536	7.62	10356.05	1.71

◎ Determination of Related Impurities of Telipotide

Column：MicroPulite Gold HILIC 4.6*250mm 5.0μm (Part No：GDH-254650)

Detector：UV 215nm

Flow rate：1.0mL/min

Column temperature：40°C

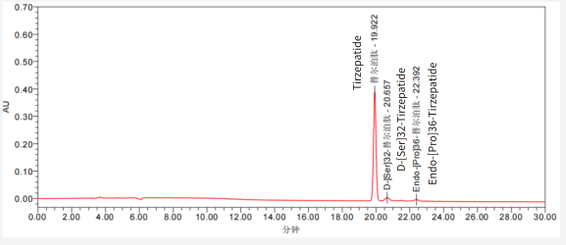
Mobile phase A：0.1%Hydrochloric acid solution

Mobile phaseB：Acetonitrile

Gradient elution

T/min	Mobile phaseA/%	Mobile phaseB/%
0	10	90
30	40	60

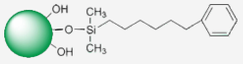
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Telipotide	19.922	4152007	398841	—	83526.05	1.04
D-[Ser] 32 - Telipotide	20.657	200186	11790	2.00	28616.57	1.04
Endo-[Pro] 36 - Telipotide	22.392	100727	5367	3.62	32198.55	0.92

MicroPulite® Gold Phenyl-Hexyl Column

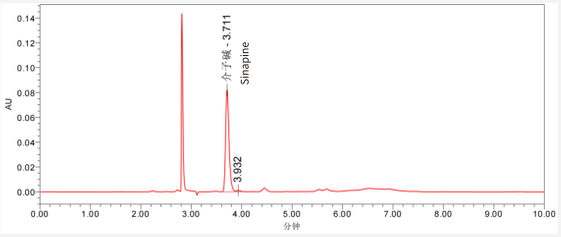
Gold Phenyl-Hexyl has a hexyl connect the benzene ring, reduces hydrolysis of the bonded phase and improves chemical stability compared to phenyl-propyl. Gold Phenyl-Hexyl provides complementary selectivity to straight-chain alkane columns, such as C18 or C8, and is suitable for analyzing aromatic compounds, amines, and polar compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
Phenyl- Hexyl		12%	300	Yes	120Å	3, 3.5, 5, 10μm	L11	2-8	60°C (Low pH) 40°C(High pH)

◎ Content Determination of Semen Raphani

Methodology：Pharmacopoeia of the People's Republic of China
Column：MicroPulite® Gold Phenyl-Hexyl 4.6*250mm 5.0μm
(Part No：GDPH-254650)
Detector：UV 326nm
Flow rate：1.0mL/min
Column temperature：35°C
Mobile phase：Acetonitrile-3% Glacial acetic acid=(15:85)

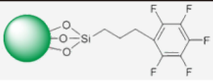
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Sinapine	3.711	386418	82263	-	14917.93	1.30
	3.932	5671	1074	1.65	9990.02	

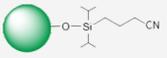
MicroPulite® Gold PFP Column

Gold PFP is pentafluorophenyl bonded to silica .It Influenced by of hydrogen bonding, dipole-dipole interactions, aromatic and π-π, hydrophobicity, etc. Gold PFP has a unique selectivity and is suitable for the analysis of aromatic compounds, halogenated compounds, and planar positional isomers, etc. and it can enhance retention of polar compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
PFP		7%	300	Yes	120Å	3, 3.5, 5,10μm	L43	2-8	60°C (Low pH) 40°C(High pH)

MicroPulite® Gold CN Column

Gold CN can be used in both normal and reverse phase conditions. Compounds have strong hydrophobic retention on C18/C8 and are difficult to elute,they can be analyzed with cyano column. Gold CN provides a different selectivity from C18/C8/C4/phenyl, and is used to analyze compounds that contain carboxyl, hydroxyl, and amine groups.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
CN		5.5%	300	Yes	120Å	5μm	L10	2-8	45°C (Low pH) 45°C(High pH)

◎ Determination of Related Substances of Ondansetron Hydrochloride

Column：MicroPulite® Gold CN 4.6*250mm 5.0μm（Part No：GDCN-254650）

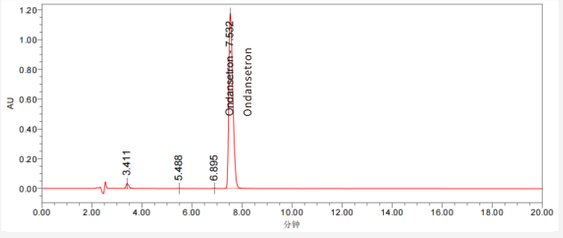
Detector：UV 216nm

Flow rate：1.0mL/min

Column temperature：30°C

Mobile phase: 0.02 mol/L sodium dihydrogen phosphate solution (pH adjusted to 5.4 with sodium hydroxide test solution) – acetonitrile (50:50)

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
-	3.411	268714	33646	-	4231.55	1.34
-	5.488	6397	963	10.85	15091.90	1.07
-	6.895	11317	1458	7.32	17510.08	1.04
Ondansetron	7.532	13136535	1177091	2.52	9794.03	1.44

Ordering Information

◎ Gold Series 3µm

Size	Gold C18	Gold C18 XB	Gold C8	Gold C4	Gold RP18	Gold RP18 Plus
30x 2.1 mm	UGDC18-032130	UGDC18XB-032130	UGDC08-032130	UGDC04-032130	UGDR18-032130	UGDR18P-032130
50x 2.1 mm	UGDC18-052130	UGDC18XB-052130	UGDC08-052130	UGDC04-052130	UGDR18-052130	UGDR18P-052130
100x 2.1 mm	UGDC18-102130	UGDC18XB-102130	UGDC08-102130	UGDC04-102130	UGDR18-102130	UGDR18P-102130
150 x 2.1 mm	UGDC18-152130	UGDC18XB-152130	UGDC08-152130	UGDC04-152130	UGDR18-152130	UGDR18P-152130
30 x 3.0 mm	UGDC18-033030	UGDC18XB-033030	UGDC08-033030	UGDC04-033030	UGDR18-033030	UGDR18P-033030
50 x 3.0 mm	UGDC18-053030	UGDC18XB-053030	UGDC08-053030	UGDC04-053030	UGDR18-053030	UGDR18P-053030
100 x 3.0 mm	UGDC18-103030	UGDC18XB-103030	UGDC08-103030	UGDC04-103030	UGDR18-103030	UGDR18P-103030
150 x 3.0 mm	UGDC18-153030	UGDC18XB-153030	UGDC08-153030	UGDC04-153030	UGDR18-153030	UGDR18P-153030
250 x 3.0 mm	UGDC18-253030	UGDC18XB-253030	UGDC08-253030	UGDC04-253030	UGDR18-253030	UGDR18P-253030
30 x 4.6 mm	GDC18-034630	GDC18XB-034630	GDC08-034630	GDC04-034630	GDR18-034630	GDR18P-034630
50 x 4.6 mm	GDC18-054630	GDC18XB-054630	GDC08-054630	GDC04-054630	GDR18-054630	GDR18P-054630
100 x 4.6 mm	GDC18-104630	GDC18XB-104630	GDC08-104630	GDC04-104630	GDR18-104630	GDR18P-104630
150 x 4.6 mm	GDC18-154630	GDC18XB-154630	GDC08-154630	GDC04-154630	GDR18-154630	GDR18P-154630
200 x 4.6 mm	GDC18-204630	GDC18XB-204630	GDC08-204630	GDC04-204630	GDR18-204630	GDR18P-204630
250 x 4.6 mm	GDC18-254630	GDC18XB-254630	GDC08-254630	GDC04-254630	GDR18-254630	GDR18P-254630

Size	Gold RP8 Plus	Gold RP4 Plus	Gold HILIC	Gold Phenyl-Hexyl	Gold PFP
30x 2.1 mm	UGDR08P-032130	UGDR04P-032130	UGDH-032130	UGDPH-032130	UGDPFP-032130
50x 2.1 mm	UGDR08P-052130	UGDR04P-052130	UGDH-052130	UGDPH-052130	UGDPFP-052130
100x 2.1 mm	UGDR08P-102130	UGDR04P-102130	UGDH-102130	UGDPH-102130	UGDPFP-102130
150 x 2.1 mm	UGDR08P-152130	UGDR04P-152130	UGDH-152130	UGDPH-152130	UGDPFP-152130
30 x 3.0 mm	UGDR08P-033030	UGDR04P-033030	UGDH-033030	UGDPH-033030	UGDPFP-033030
50 x 3.0 mm	UGDR08P-053030	UGDR04P-053030	UGDH-053030	UGDPH-053030	UGDPFP-053030
100 x 3.0 mm	UGDR08P-103030	UGDR04P-103030	UGDH-103030	UGDPH-103030	UGDPFP-103030
150 x 3.0 mm	UGDR08P-153030	UGDR04P-153030	UGDH-153030	UGDPH-153030	UGDPFP-153030
250 x 3.0 mm	UGDR08P-253030	UGDR04P-253030	UGDH-253030	UGDPH-253030	UGDPFP-253030
30 x 4.6 mm	GDR08P-034630	GDR04P-034630	GDH-034630	GDPH-034630	GDPFP-034630
50 x 4.6 mm	GDR08P-054630	GDR04P-054630	GDH-054630	GDPH-054630	GDPFP-054630
100 x 4.6 mm	GDR08P-104630	GDR04P-104630	GDH-104630	GDPH-104630	GDPFP-104630
150 x 4.6 mm	GDR08P-154630	GDR04P-154630	GDH-154630	GDPH-154630	GDPFP-154630
200 x 4.6 mm	GDR08P-204630	GDR04P-204630	GDH-204630	GDPH-204630	GDPFP-204630
250 x 4.6 mm	GDR08P-254630	GDR04P-254630	GDH-254630	GDPH-254630	GDPFP-254630

◎ Gold Series 3.5µm

Size	Gold C18	Gold C18 SB	Gold C8	Gold C4	Gold RP18	Gold RP18 Plus
30x 2.1 mm	UGDC18-032135	UGDC18SB-032135	UGDC08-032135	UGDC04-032135	UGDR18-032135	UGDR18P-032135
50x 2.1 mm	UGDC18-052135	UGDC18SB-052135	UGDC08-052135	UGDC04-052135	UGDR18-052135	UGDR18P-052135
100x 2.1 mm	UGDC18-102135	UGDC18SB-102135	UGDC08-102135	UGDC04-102135	UGDR18-102135	UGDR18P-102135
150 x 2.1 mm	UGDC18-152135	UGDC18SB-152135	UGDC08-152135	UGDC04-152135	UGDR18-152135	UGDR18P-152135
30 x 3.0 mm	UGDC18-033035	UGDC18SB-033035	UGDC08-033035	UGDC04-033035	UGDR18-033035	UGDR18P-033035
50 x 3.0 mm	UGDC18-053035	UGDC18SB-053035	UGDC08-053035	UGDC04-053035	UGDR18-053035	UGDR18P-053035
100 x 3.0 mm	UGDC18-103035	UGDC18SB-103035	UGDC08-103035	UGDC04-103035	UGDR18-103035	UGDR18P-103035
150 x 3.0 mm	UGDC18-153035	UGDC18SB-153035	UGDC08-153035	UGDC04-153035	UGDR18-153035	UGDR18P-153035
250 x 3.0 mm	UGDC18-253035	UGDC18SB-253035	UGDC08-253035	UGDC04-253035	UGDR18-253035	UGDR18P-253035
30 x 4.6 mm	GDC18-034635	GDC18SB-034635	GDC08-034635	GDC04-034635	GDR18-034635	GDR18P-034635
50 x 4.6 mm	GDC18-054635	GDC18SB-054635	GDC08-054635	GDC04-054635	GDR18-054635	GDR18P-054635
100 x 4.6 mm	GDC18-104635	GDC18SB-104635	GDC08-104635	GDC04-104635	GDR18-104635	GDR18P-104635
150 x 4.6 mm	GDC18-154635	GDC18SB-154635	GDC08-154635	GDC04-154635	GDR18-154635	GDR18P-154635
200 x 4.6 mm	GDC18-204635	GDC18SB-204635	GDC08-204635	GDC04-204635	GDR18-204635	GDR18P-204635
250 x 4.6 mm	GDC18-254635	GDC18SB-254635	GDC08-254635	GDC04-254635	GDR18-254635	GDR18P-254635

Size	Gold RP8 Plus	Gold RP4 Plus	Gold EC-NH_2	Gold HILIC	Gold Phenyl-Hexyl	Gold PFP
30x 2.1 mm	UGDR08P-032135	UGDR04P-032135	UGDECNH-032135	UGDH-032135	UGDPH-032135	UGDPFP-032135
50x 2.1 mm	UGDR08P-052135	UGDR04P-052135	UGDECNH-052135	UGDH-052135	UGDPH-052135	UGDPFP-052135
100x 2.1 mm	UGDR08P-102135	UGDR04P-102135	UGDECNH-102135	UGDH-102135	UGDPH-102135	UGDPFP-102135
150 x 2.1 mm	UGDR08P-152135	UGDR04P-152135	UGDECNH-152135	UGDH-152135	UGDPH-152135	UGDPFP-152135
30 x 3.0 mm	UGDR08P-033035	UGDR04P-033035	UGDECNH-033035	UGDH-033035	UGDPH-033035	UGDPFP-033035
50 x 3.0 mm	UGDR08P-053035	UGDR04P-053035	UGDECNH-053035	UGDH-053035	UGDPH-053035	UGDPFP-053035
100 x 3.0 mm	UGDR08P-103035	UGDR04P-103035	UGDECNH-103035	UGDH-103035	UGDPH-103035	UGDPFP-103035
150 x 3.0 mm	UGDR08P-153035	UGDR04P-153035	UGDECNH-153035	UGDH-153035	UGDPH-153035	UGDPFP-153035
250 x 3.0 mm	UGDR08P-253035	UGDR04P-253035	UGDECNH-253035	UGDH-253035	UGDPH-253035	UGDPFP-253035
30 x 4.6 mm	GDR08P-034635	GDR04P-034635	GDECNH-034635	GDH-034635	GDPH-034635	GDPFP-034635
50 x 4.6 mm	GDR08P-054635	GDR04P-054635	GDECNH-054635	GDH-054635	GDPH-054635	GDPFP-054635
100 x 4.6 mm	GDR08P-104635	GDR04P-104635	GDECNH-104635	GDH-104635	GDPH-104635	GDPFP-104635
150 x 4.6 mm	GDR08P-154635	GDR04P-154635	GDECNH-154635	GDH-154635	GDPH-154635	GDPFP-154635
200 x 4.6 mm	GDR08P-204635	GDR04P-204635	GDECNH-204635	GDH-204635	GDPH-204635	GDPFP-204635
250 x 4.6 mm	GDR08P-254635	GDR04P-254635	GDECNH-254635	GDH-254635	GDPH-254635	GDPFP-254635

◎ Gold Series 5µm

Size	Gold C18	Gold C18 SB	Gold C18 XB	Gold AQ-C18	Gold C8	Gold C4	Gold RP18	Gold RP18 Plus
30x 2.1 mm	UGDC18-032150	UGDC18SB-032150	UGDC18XB-032150	UGDAQ-032150	UGDC08-032150	UGDC04-032150	UGDR18-032150	UGDR18P-032150
50x 2.1 mm	UGDC18-052150	UGDC18SB-052150	UGDC18XB-052150	UGDAQ-052150	UGDC08-052150	UGDC04-052150	UGDR18-052150	UGDR18P-052150
100x 2.1 mm	UGDC18-102150	UGDC18SB-102150	UGDC18XB-102150	UGDAQ-102150	UGDC08-102150	UGDC04-102150	UGDR18-102150	UGDR18P-102150
150 x 2.1 mm	UGDC18-152150	UGDC18SB-152150	UGDC18XB-152150	UGDAQ-152150	UGDC08-152150	UGDC04-152150	UGDR18-152150	UGDR18P-152150
30 x 3.0 mm	UGDC18-033050	UGDC18SB-033050	UGDC18XB-033050	UGDAQ-033050	UGDC08-033050	UGDC04-033050	UGDR18-033050	UGDR18P-033050
50 x 3.0 mm	UGDC18-053050	UGDC18SB-053050	UGDC18XB-053050	UGDAQ-053050	UGDC08-053050	UGDC04-053050	UGDR18-053050	UGDR18P-053050
100 x 3.0 mm	UGDC18-103050	UGDC18SB-103050	UGDC18XB-103050	UGDAQ-103050	UGDC08-103050	UGDC04-103050	UGDR18-103050	UGDR18P-103050
150 x 3.0 mm	UGDC18-153050	UGDC18SB-153050	UGDC18XB-153050	UGDAQ-153050	UGDC08-153050	UGDC04-153050	UGDR18-153050	UGDR18P-153050
250 x 3.0 mm	UGDC18-253050	UGDC18SB-253050	UGDC18XB-253050	UGDAQ-253050	UGDC08-253050	UGDC04-253050	UGDR18-253050	UGDR18P-253050
30 x 4.6 mm	GDC18-034650	GDC18SB-034650	GDC18XB-034650	GDAQ-034650	GDC08-034650	GDC04-034650	GDR18-034650	GDR18P-034650
50 x 4.6 mm	GDC18-054650	GDC18SB-054650	GDC18XB-054650	GDAQ-054650	GDC08-054650	GDC04-054650	GDR18-054650	GDR18P-054650
100 x 4.6 mm	GDC18-104650	GDC18SB-104650	GDC18XB-104650	GDAQ-104650	GDC08-104650	GDC04-104650	GDR18-104650	GDR18P-104650
150 x 4.6 mm	GDC18-154650	GDC18SB-154650	GDC18XB-154650	GDAQ-154650	GDC08-154650	GDC04-154650	GDR18-154650	GDR18P-154650
200 x 4.6 mm	GDC18-204650	GDC18SB-204650	GDC18XB-204650	GDAQ-204650	GDC08-204650	GDC04-204650	GDR18-204650	GDR18P-204650
250 x 4.6 mm	GDC18-254650	GDC18SB-254650	GDC18XB-254650	GDAQ-254650	GDC08-254650	GDC04-254650	GDR18-254650	GDR18P-254650

Size	Gold RP8 Plus	Gold RP4 Plus	Gold EC-NH_2	Gold HILIC	Gold Phenyl-Hexyl	Gold PFP	Gold CN
30x 2.1 mm	UGDR08P-032150	UGDR04P-032150	UGDECNH-032150	UGDH-032150	UGDPH-032150	UGDPFP-032150	UGDCN-032150
50x 2.1 mm	UGDR08P-052150	UGDR04P-052150	UGDECNH-052150	UGDH-052150	UGDPH-052150	UGDPFP-052150	UGDCN-052150
100x 2.1 mm	UGDR08P-102150	UGDR04P-102150	UGDECNH-102150	UGDH-102150	UGDPH-102150	UGDPFP-102150	UGDCN-102150
150 x 2.1 mm	UGDR08P-152150	UGDR04P-152150	UGDECNH-152150	UGDH-152150	UGDPH-152150	UGDPFP-152150	UGDCN-152150
30 x 3.0 mm	UGDR08P-033050	UGDR04P-033050	UGDECNH-033050	UGDH-033050	UGDPH-033050	UGDPFP-033050	UGDCN-033050
50 x 3.0 mm	UGDR08P-053050	UGDR04P-053050	UGDECNH-053050	UGDH-053050	UGDPH-053050	UGDPFP-053050	UGDCN-053050
100 x 3.0 mm	UGDR08P-103050	UGDR04P-103050	UGDECNH-103050	UGDH-103050	UGDPH-103050	UGDPFP-103050	UGDCN-103050
150 x 3.0 mm	UGDR08P-153050	UGDR04P-153050	UGDECNH-153050	UGDH-153050	UGDPH-153050	UGDPFP-153050	UGDCN-153050
250 x 3.0 mm	UGDR08P-253050	UGDR04P-253050	UGDECNH-253050	UGDH-253050	UGDPH-253050	UGDPFP-253050	UGDCN-253050
30 x 4.6 mm	GDR08P-034650	GDR04P-034650	GDECNH-034650	GDH-034650	GDPH-034650	GDPFP-034650	GDCN-034650
50 x 4.6 mm	GDR08P-054650	GDR04P-054650	GDECNH-054650	GDH-054650	GDPH-054650	GDPFP-054650	GDCN-054650
100 x 4.6 mm	GDR08P-104650	GDR04P-104650	GDECNH-104650	GDH-104650	GDPH-104650	GDPFP-104650	GDCN-104650
150 x 4.6 mm	GDR08P-154650	GDR04P-154650	GDECNH-154650	GDH-154650	GDPH-154650	GDPFP-154650	GDCN-154650
200 x 4.6 mm	GDR08P-204650	GDR04P-204650	GDECNH-204650	GDH-204650	GDPH-204650	GDPFP-204650	GDCN-204650
250 x 4.6 mm	GDR08P-254650	GDR04P-254650	GDECNH-254650	GDH-254650	GDPH-254650	GDPFP-254650	GDCN-254650

◎ Gold Series Preparative Columns 5µm

Size	Gold C18	Gold C8	Gold C4	Gold RP18	Gold RP18 Plus	Gold RP8 Plus
150 x 10 mm	GDC18-1510050	GDC08-1510050	GDC04-1510050	GDR18-1510050	GDR18P-1510050	GDR08P-1510050
250 x 10 mm	GDC18-2510050	GDC08-2510050	GDC04-2510050	GDR18-2510050	GDR18P-2510050	GDR08P-2510050
150 x 20 mm	GDC18-1520050	GDC08-1520050	GDC04-1520050	GDR18-1520050	GDR18P-1520050	GDR08P-1520050
250 x 20 mm	GDC18-2520050	GDC08-2520050	GDC04-2520050	GDR18-2520050	GDR18P-2520050	GDR08P-2520050
150 x 21.2 mm	GDC18-1521250	GDC08-1521250	GDC04-1521250	GDR18-1521250	GDR18P-1521250	GDR08P-1521250
250 x 21.2 mm	GDC18-2521250	GDC08-2521250	GDC04-2521250	GDR18-2521250	GDR18P-2521250	GDR08P-2521250
150 x 30 mm	GDC18-1530050	GDC08-1530050	GDC04-1530050	GDR18-1530050	GDR18P-1530050	GDR08P-1530050
250 x 30 mm	GDC18-2530050	GDC08-2530050	GDC04-2530050	GDR18-2530050	GDR18P-2530050	GDR08P-2530050
150 x 50 mm	GDC18-1550050	GDC08-1550050				
250 x 50 mm	GDC18-2550050	GDC08-2550050				

Size	Gold RP4 Plus	Gold EC-NH_2	Gold HILIC	Gold Phenyl-Hexyl	Gold PFP
150 x 10 mm	GDR04P-1510050	GDECNH-1510050	GDH-1510050	GDPH-1510050	GDPFP-1510050
250 x 10 mm	GDR04P-2510050	GDECNH-2510050	GDH-2510050	GDPH-2510050	GDPFP-2510050
150 x 20 mm	GDR04P-1520050	GDECNH-1520050	GDH-1520050	GDPH-1520050	GDPFP-1520050
250 x 20 mm	GDR04P-2520050	GDECNH-2520050	GDH-2520050	GDPH-2520050	GDPFP-2520050
150 x 21.2 mm	GDR04P-1521250	GDECNH-1521250	GDH-1521250	GDPH-1521250	GDPFP-1521250
250 x 21.2 mm	GDR04P-2521250	GDECNH-2521250	GDH-2521250	GDPH-2521250	GDPFP-2521250
150 x 30 mm	GDR04P-1530050	GDECNH-1530050	GDH-1530050	GDPH-1530050	GDPFP-1530050
250 x 30 mm	GDR04P-2530050	GDECNH-2530050	GDH-2530050	GDPH-2530050	GDPFP-2530050
150 x 50 mm					
250 x 50 mm					

◎ Gold Series Preparative Columns 10µm

Size	Gold C18	Gold AQ-C18	Gold C8	Gold C4	Gold RP18
150 x 10 mm	GDC18-15100100	GDAQ-15100100	GDC08-15100100	GDC04-15100100	GDR18-15100100
250 x 10 mm	GDC18-25100100	GDAQ-25100100	GDC08-25100100	GDC04-25100100	GDR18-25100100
150 x 20 mm	GDC18-15200100	GDAQ-15200100	GDC08-15200100	GDC04-15200100	GDR18-15200100
250 x 20 mm	GDC18-25200100	GDAQ-25200100	GDC08-25200100	GDC04-25200100	GDR18-25200100
150 x 21.2 mm	GDC18-15212100	GDAQ-15212100	GDC08-15212100	GDC04-15212100	GDR18-15212100
250 x 21.2 mm	GDC18-25212100	GDAQ-25212100	GDC08-25212100	GDC04-25212100	GDR18-25212100
150 x 30 mm	GDC18-15300100	GDAQ-15300100	GDC08-15300100	GDC04-15300100	GDR18-15300100
250 x 30 mm	GDC18-25300100	GDAQ-25300100	GDC08-25300100	GDC04-25300100	GDR18-25300100
150 x 50 mm	GDC18-15500100	GDAQ-15500100	GDC08-15500100		
250 x 50 mm	GDC18-25500100	GDAQ-25500100	GDC08-25500100		

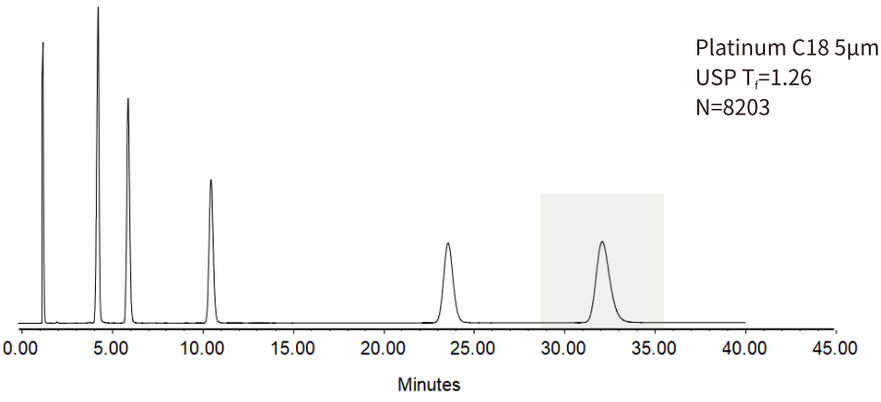
Size	Gold RP18 Plus	Gold HILIC	Gold Phenyl-Hexyl	Gold PFP
150 x 10 mm	GDR18P-15100100	GDH-15100100	GDPH-15100100	GDPFP-15100100
250 x 10 mm	GDR18P-25100100	GDH-25100100	GDPH-25100100	GDPFP-25100100
150 x 20 mm	GDR18P-15200100	GDH-15200100	GDPH-15200100	GDPFP-15200100
250 x 20 mm	GDR18P-25200100	GDH-25200100	GDPH-25200100	GDPFP-25200100
150 x 21.2 mm	GDR18P-15212100	GDH-15212100	GDPH-15212100	GDPFP-15212100
250 x 21.2 mm	GDR18P-25212100	GDH-25212100	GDPH-25212100	GDPFP-25212100
150 x 30 mm	GDR18P-15300100	GDH-15300100	GDPH-15300100	GDPFP-15300100
250 x 30 mm	GDR18P-25300100	GDH-25300100	GDPH-25300100	GDPFP-25300100
150 x 50 mm				
250 x 50 mm				

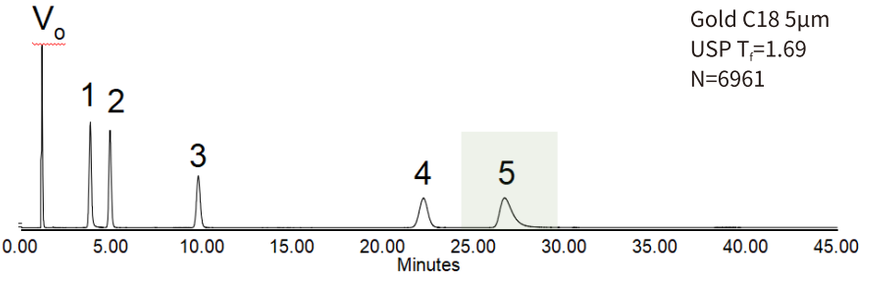
MicroPulite® Platinum Columns: Higher Loading Capacity, Better Peak Shape

Platinum columns feature a high-loading design with maximized specific surface area, delivering excellent sample loading capacity. C18 and C8 options are available as general-purpose columns.

- Silica-based columns with high-purity matrix and high specific surface area
- High loading capacity, optimized peak shape and efficiency, versatile under medium-to-low pH conditions
- Premium silica columns with better peak shape for basic compounds

USP tailing factor (Tf) calculated with amitriptyline (peak 5) at pH 7





Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
MicroPulite® Platinum	C18	Special C18	14%	320	Yes	100	3,3.5,5,10	L1	1-8	50°C (Low pH) 40°C (High pH)
	C8	Special C8	9%	320	Yes	100	3.5,5,10	L7	1-8	50°C (Low pH) 40°C(High pH)

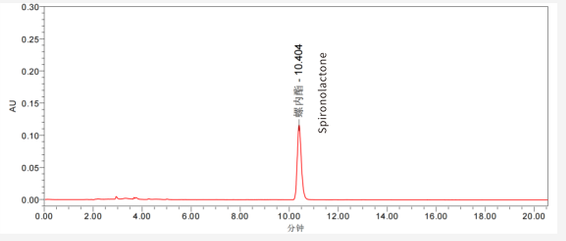
MicroPulite® Platinum C18 Column

With unique bonded and endcapped technology , Platinum C18 provides symmetrical peak shapes for acid, basic, and neutral compounds when used in low/medium pH mobile phase conditions. Platinum C18 also has a superior stability when used in low pH conditions, so it has ideal column life.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C18	Special C18	14%	320	Yes	100Å	3, 3.5, 5, 10μm	L1	1-8	50°C (Low pH) 40°C(High pH)

◎ Content Determination of Spironolactone

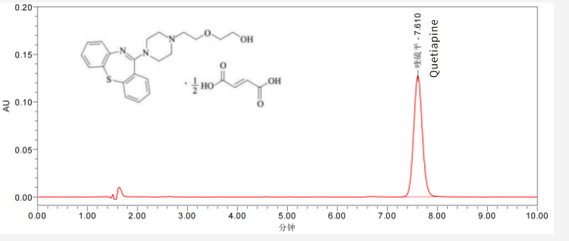
Methodology：Pharmacopoeia of the People's Republic of China
Column：MicroPulite® Platinum C18 4.6*250mm 5.0μm
Detector：UV 238nm
Flow rate：1.0 mL/min
Column temperature：40°C
Mobile phase： Acetonitrile – water= (50:50)
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Spironolactone	10.404	1350919	116118	-	18749.94	1.21

◎ Content Determination of Quetiapine Fumarate Tablets

Methodology：Pharmacopoeia of the People's Republic of China
Column：MicroPulite® Platinum C18 4.6*150mm 5.0μm
Detector：UV 289nm
Flow rate：1mL/min
Column temperature：40°C
Mobile phase：Methanol – water – triethylamine (670:330:4)
(pH adjusted to 6.8 with phosphoric acid)
Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	USP Plate Count (N)	USP Tailing
Quetiapine	7.610	1536292	127325	-	9214.15	1.07

MicroPulite® Platinum C8 Column

Platinum C8 also offers excellent stability and symmetrical peak shapes at low pH, is suitable for the analysis of strongly hydrophobic compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
C8	Special C8	9%	320	Yes	100Å	3.5, 5, μm	L7	1-8	40°C (Low pH) 40°C(High pH)

Ordering Information

◎ Platinum Series 3.5µm

Size	Platinum C18	Platinum C8
30x 2.1 mm	UPTC18-032135	UPTC08-032135
50x 2.1 mm	UPTC18-052135	UPTC08-052135
100x 2.1 mm	UPTC18-102135	UPTC08-102135
150 x 2.1 mm	UPTC18-152135	UPTC08-152135
30 x 3.0 mm	UPTC18-033035	UPTC08-033035
50 x 3.0 mm	UPTC18-053035	UPTC08-053035
100 x 3.0 mm	UPTC18-103035	UPTC08-103035
150 x 3.0 mm	UPTC18-153035	UPTC08-153035
250 x 3.0 mm	UPTC18-253035	UPTC08-253035
30 x 4.6 mm	PTC18-034635	PTC08-034635
50 x 4.6 mm	PTC18-054635	PTC08-054635
100 x 4.6 mm	PTC18-104635	PTC08-104635
150 x 4.6 mm	PTC18-154635	PTC08-154635
200 x 4.6 mm	PTC18-204635	PTC08-204635
250 x 4.6 mm	PTC18-254635	PTC08-254635

◎ Platinum Series 5µm

Size	Platinum C18	Platinum C8
30x 2.1 mm	UPTC18-032150	UPTC08-032150
50x 2.1 mm	UPTC18-052150	UPTC08-052150
100x 2.1 mm	UPTC18-102150	UPTC08-102150
150 x 2.1 mm	UPTC18-152150	UPTC08-152150
30 x 3.0 mm	UPTC18-033050	UPTC08-033050
50 x 3.0 mm	UPTC18-053050	UPTC08-053050
100 x 3.0 mm	UPTC18-103050	UPTC08-103050
150 x 3.0 mm	UPTC18-153050	UPTC08-153050
250 x 3.0 mm	UPTC18-253050	UPTC08-253050
30 x 4.6 mm	PTC18-034650	PTC08-034650
50 x 4.6 mm	PTC18-054650	PTC08-054650
100 x 4.6 mm	PTC18-104650	PTC08-104650
150 x 4.6 mm	PTC18-154650	PTC08-154650
200 x 4.6 mm	PTC18-204650	PTC08-204650
250 x 4.6 mm	PTC18-254650	PTC08-254650

◎ Platinum Series Preparative Columns 5µm

Size	Platinum C18	Platinum C8
150 x 10 mm	PTC18-1510050	PTC08-1510050
250 x 10 mm	PTC18-2510050	PTC08-2510050
150 x 20 mm	PTC18-1520050	PTC08-1520050
250 x 20 mm	PTC18-2520050	PTC08-2520050
150 x 21.2 mm	PTC18-1521250	PTC08-1521250
250 x 21.2 mm	PTC18-2521250	PTC08-2521250
150 x 30 mm	PTC18-1530050	PTC08-1530050
250 x 30 mm	PTC18-2530050	PTC08-2530050

◎ Platinum Series Preparative Columns 10µm

Size	Platinum C18	Platinum C8
150 x 10 mm	PTC18-15100100	PTC08-15100100
250 x 10 mm	PTC18-25100100	PTC08-25100100
150 x 20 mm	PTC18-15200100	PTC08-15200100
250 x 20 mm	PTC18-25200100	PTC08-25200100
150 x 21.2 mm	PTC18-15212100	PTC08-15212100
250 x 21.2 mm	PTC18-25212100	PTC08-25212100
150 x 30 mm	PTC18-15300100	PTC08-15300100
250 x 30 mm	PTC18-25300100	PTC08-25300100

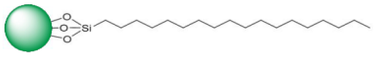
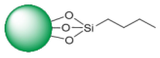
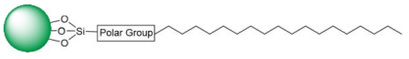
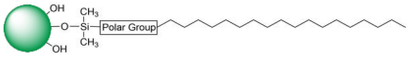
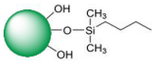
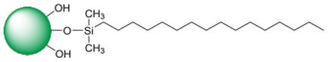
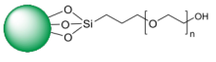
BioPulite® Series – Liquid Chromatography Columns for Bioseparation

BioPulite® series is based on WePure's proprietary microsphere manufacturing technology. Porous microspheres are synthesized from silica raw materials with precisely controlled particle size, delivering high column efficiency, high mechanical strength and stable performance.

Leveraging a world-leading microsphere surface bonding and modification platform to provide tailored selectivity for different biomolecules.

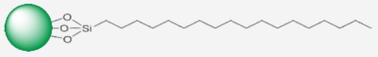
Strict ISO 9001 quality control ensures product performance and reproducibility.

This series is suitable for analysis of various biomolecules including monoclonal antibodies (mAbs) and proteins, serving as an effective tool for biopharmaceutical, biotechnology and life science research.

Column Series	Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
BioPulite®	XP Protein tC18		12%	100	Yes	300	1.7,2.5, 3.5,5	L1	1-12	80°C (Low pH) 60°C (High pH)
	XP Protein tC4		8%	100	Yes	300	1.7,2.5, 3.5,5	L26	1-12	80°C(Low pH) 50°C(High pH)
	XP Protein RP18		12%	100	Yes	300	3.5,5	L1	2-11	50°C(LowpH) 45°C (High pH)
	XP Protein RP18 Plus		17%	100	Yes	300	3.5,5	L1	2-11	50°C (Low pH) 45°C (High pH)
	Gold Protein C4		1.3%	100	Yes	300	3,5	L26	2-8	60°C (Low pH) 40°C (High pH)
	Gold Protein C18		8.5%	100	Yes	300	3,5	L1	2-8	60°C (Low pH) 40°C (High pH)
	Protein Perfect SEC		-	300 100	No No	125 300	3,5 5	L33 L33	2-8	45°C (Low pH) 45°C (High pH)

BioPulite® XP Protein tC18 Column

XP Protein tC18 is made of hybrid silica particles, stable in the pH 1-12. The larger pore size of 300A is suitable for analysis of large molecular compounds such as peptides, proteins, oligonucleotides, and mRNA. Hybrid silica material enhances the resistance to high temperature, high pH, and high concentration buffer salt. it is ideal column of reverse phase analysis macromolecular compounds.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
XP Protein tC18		12%	100	Yes	300Å	1.7, 2.5, 3.5, 5μm	L1	1-12	80°C (Low pH) 60°C(High pH)

◎ Content Determination of Insulin Glargine

Methodology：Pharmacopoeia of the People's Republic of China

Column：BioPulite® XP Protein tC18 300Å 4.6*250mm 5.0μm

Detector：UV 214nm

Flow rate：1.0mL/min

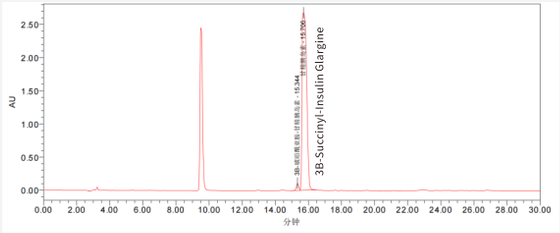
Column temperature：35°C

Mobile phase：Phase A: Dissolve 18.4 g sodium chloride in 250 mL phosphate buffer (dissolve 20.7 g anhydrous sodium dihydrogen phosphate in 800 mL water, adjust pH to 2.5 with 85% phosphoric acid, dilute to 1000 mL with water), add 250 mL acetonitrile, dilute to 1000 mL with water.

Phase B: Dissolve 3.2 g sodium chloride in 250 mL phosphate buffer (dissolve 20.7 g anhydrous sodium dihydrogen phosphate in 800 mL water, adjust pH to 2.5 with 85% phosphoric acid, dilute to 1000 mL with water), add 650 mL acetonitrile, dilute to 1000 mL with water.

Time	A%	B%
0	96	4
20	83	17
30	63	37
40	96	4

Chromatogram：



Peak name	R.T. (min)	Area (μV·s)	Height (μV)	USP Resolution (Rs)	peak-to-valley ratio	USP Tailing
3B-Succinimide insulin glargine	15.344	1072277	107763	-	5.9	-
Insulin glargine	15.706	52205955	2674491	0.91		1.67

◎ Simultaneous Analysis of Different Lipids in Lipid Nanoparticles

Methodology：Chinese Journal of Chromatography A 1709 (2023) 464375

Column：BioPulite® XP tC18 300Å 4.6*250mm 3.5μm

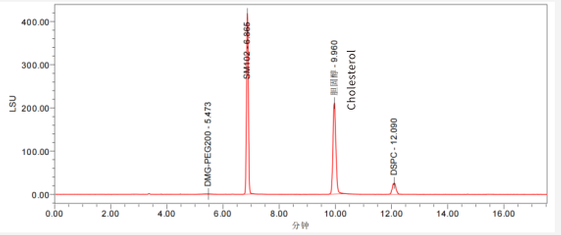
Detector：ELSD T=50°C

Flow rate：1.2mL/min

Column temperature：65°C

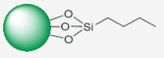
Mobile phase：Methanol : 200 mM ammonium formate= (96:4)

Chromatogram：



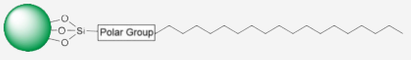
BioPulite® XP Protein tC4 Column

XP Protein tC4 is stable in the pH 1-10, hybird silica enhance the pH and temperature tolerance of the columns. Xp Protein tC4 is suitable for separating proteins with different sizes, hydrophobicity and isoelectric points.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
XP Protein tC4		8%	100	Yes	300Å	1.7, 2.5, 3.5, 5μm	L26	1-12	80°C (Low pH) 50°C(High pH)

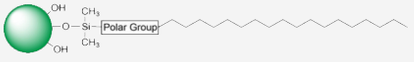
BioPulite® XP Protein RP18 Column

Both XP Protein RP18 and XP Protein RP18 Plus are compatible with 100% aqueous phase, suitable for analysispeptides and proteins with high polarity.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
XP Protein RP18		12%	100	Yes	300Å	3.5, 5μm	L1	2-11	50°C (Low pH) 45°C(High pH)

BioPulite® XP Protein RP18 Plus Column

Both XP Protein RP18 and XP Protein RP18 Plus are compatible with 100% aqueous phase, suitable for analysispeptides and proteins with high polarity.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
XP Protein RP18 Plus		17%	100	Yes	300Å	3.5, 5μm	L1	2-11	50°C (Low pH) 45°C(High pH)

BioPulite® Gold Protein C18 Column

Gold Protein c18 is made of high purity silica, stable in pH 2-8, and 300A pore size is suitable for large molecular weight compounds, so it is a cost-effective choice for biomolecule analysis.

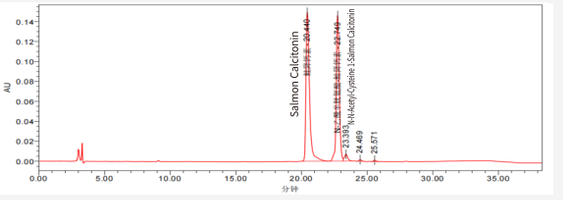
Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
Gold Protein C18		8.5%	100	Yes	300Å	3,5μm	L1	2-8	80°C (Low pH) 50°C(High pH)

◎ Determination of Related Substances of Salmon Calcitonin

Methodology：Pharmacopoeia of the People's Republic of China
Column：MicroPulite® Gold C18 300Å 5μm 250*4.6mm
Detector：UV 220nm
Flow rate：1.0mL/min
Column temperature：40°C
Mobile phase：Phase A: 0.02 mol/L tetramethylammonium hydroxide solution (pH adjusted to 2.5 with phosphoric acid) – acetonitrile = 9:1
Phase B: 0.02 mol/L tetramethylammonium hydroxide solution (pH adjusted to 2.5 with phosphoric acid) – acetonitrile = 2:3

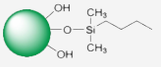
Time	A%	B%
0	72	28
30	48	52
32	72	28
55	72	28

Chromatogram：



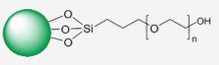
BioPulite® Gold Protein C4 Column

300 Å large-pore high-purity silica matrix with short carbon chain design, suitable for separation of protein macromolecules. Cost-effective with excellent batch stability, suitable for routine separation and analysis of various proteins, providing a cost-effective and mild separation solution for routine protein analysis.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
Gold Protein C4		1.3%	100	Yes	300Å	3,5μm	L26	2-8	80°C (Low pH) 50°C(High pH)

BioPulite® Protein Perfect SEC Column

Protein Perfect SEC is a pure silica based Size-Exclusion Chromatography(SEC) Column. The surface of stationary phase is modified with hydrophilic polymers bonded to the silica gel, enabling effective separation of biomacromolecules, including proteins, peptides, and oligonucleotides. Protein Perfect SEC is available with pore sizes of 125 Å and 300 Å, making it suitable for the analysis of biomacromolecules with diverse molecular weights.

Stationary Phase	Bonded Phase	Carbon Load	Surface area	End-capped	Pore Size	Particle Size	USP Classi-fication	pH range	Temperature limit
Protein Perfect SEC		-	300 100	No No	125 300	3,5μm 5μm	L33 L33	2-8	45°C (Low pH) 45°C(High pH)

Stationary Phase	Protein molecular weight range	Molecular weight range of water-soluble polymers
500~150,000	Protein Perfect SEC 300	5000~1,250,000
500~25,000	Protein Perfect SEC 125	1000~100,000

Ordering Information

◎ BioPulite Series 1.7μm

Size	XP Protein tC18 300Å	XP Protein tC4 300Å
50x 2.1 mm	UXPtC18-300-052117	UXPtC4-300--052117
100x 2.1 mm	UXPtC18-300-102117	UXPtC4-300--102117
150 x 2.1 mm	UXPtC18-300-152117	UXPtC4-300--152117
30 x 3.0 mm	UXPtC18-300-033017	UXPtC4-300--033017
50 x 3.0 mm	UXPtC18-300-053017	UXPtC4-300--053017
100 x 3.0 mm	UXPtC18-300-103017	UXPtC4-300--103017
150 x 3.0 mm	UXPtC18-300-153017	UXPtC4-300--153017

◎ BioPulite Series 2.5μm

Size	XP Protein tC18 300Å	XP Protein tC4 300Å
30x 2.1 mm	UXPtC18-300-032125	UXPtC4-300--032125
50x 2.1 mm	UXPtC18-300-052125	UXPtC4-300--052125
100x 2.1 mm	UXPtC18-300-102125	UXPtC4-300--102125
150 x 2.1 mm	UXPtC18-300-152125	UXPtC4-300--152125
30 x 3.0 mm	UXPtC18-300-033025	UXPtC4-300--033025
50 x 3.0 mm	UXPtC18-300-053025	UXPtC4-300--053025
100 x 3.0 mm	UXPtC18-300-103025	UXPtC4-300--103025
150 x 3.0 mm	UXPtC18-300-153025	UXPtC4-300--153025
250 x 3.0 mm	UXPtC18-300-253025	UXPtC4-300--253025
30 x 4.6 mm	XPtC18-300-034625	XPtC4-300--034625
50 x 4.6 mm	XPtC18-300-054625	XPtC4-300--054625
100 x 4.6 mm	XPtC18-300-104625	XPtC4-300--104625
150 x 4.6 mm	XPtC18-300-154625	XPtC4-300--154625
200 x 4.6 mm	XPtC18-300-204625	XPtC4-300--204625
250 x 4.6 mm	XPtC18-300-254625	XPtC4-300--254625

◎ BioPulite Series 3μm

Size	Gold Protein C4 300Å	Gold Protein C18 300Å
30x 2.1 mm	UGDC4-300-032130	UGDC18-300-032130
50x 2.1 mm	UGDC4-300-052130	UGDC18-300-05210
100x 2.1 mm	UGDC4-300-102130	UGDC18-300-102130
150 x 2.1 mm	UGDC4-300-152130	UGDC18-300-152130
30 x 3.0 mm	UGDC4-300-033030	UGDC18-300-033030
50 x 3.0 mm	UGDC4-300-053030	UGDC18-300-053030
100 x 3.0 mm	UGDC4-300-103030	UGDC18-300-103030
150 x 3.0 mm	UGDC4-300-153030	UGDC18-300-153030
250 x 3.0 mm	UGDC4-300-253030	UGDC18-300-253030
30 x 4.6 mm	GDC4-300-034630	GDC18-300-034630
50 x 4.6 mm	GDC4-300-054630	GDC18-300-054630
100 x 4.6 mm	GDC4-300-104630	GDC18-300-104630
150 x 4.6 mm	GDC4-300-154630	GDC18-300-154630
200 x 4.6 mm	GDC4-300-204630	GDC18-300-204630
250 x 4.6 mm	GDC4-300-254630	GDC18-300-254630

◎ BioPulite Series 3.5μm

Size	XP Protein tC18 300Å	XP Protein tC4 300Å	XP Protein RP18 300Å	XP RP18 Plus 300Å
30x 2.1 mm	UXPtC18-300-032135	UXPtC4-300-032135	UXPR18-300-032135	UXPR18P-300-032135
50x 2.1 mm	UXPtC18-300-052135	UXPtC4-300-052135	UXPR18-300-052135	UXPR18P-300-052135
100x 2.1 mm	UXPtC18-300-102135	UXPtC4-300-102135	UXPR18-300-102135	UXPR18P-300-102135
150 x 2.1 mm	UXPtC18-300-152135	UXPtC4-300-152135	UXPR18-300-152135	UXPR18P-300-152135
30 x 3.0 mm	UXPtC18-300-033035	UXPtC4-300-033035	UXPR18-300-033035	UXPR18P-300-033035
50 x 3.0 mm	UXPtC18-300-053035	UXPtC4-300-053035	UXPR18-300-053035	UXPR18P-300-053035
100 x 3.0 mm	UXPtC18-300-103035	UXPtC4-300-103035	UXPR18-300-103035	UXPR18P-300-103035
150 x 3.0 mm	UXPtC18-300-153035	UXPtC4-300-153035	UXPR18-300-153035	UXPR18P-300-153035
250 x 3.0 mm	UXPtC18-300-253035	UXPtC4-300-253035	UXPR18-300-253035	UXPR18P-300-253035
30 x 4.6 mm	XPtC18-300-034635	XPtC4-300-034635	XPR18-300-034635	XPR18P-300-034635
50 x 4.6 mm	XPtC18-300-054635	XPtC4-300-054635	XPR18-300-054635	XPR18P-300-054635
100 x 4.6 mm	XPtC18-300-104635	XPtC4-300-104635	XPR18-300-104635	XPR18P-300-104635
150 x 4.6 mm	XPtC18-300-154635	XPtC4-300-154635	XPR18-300-154635	XPR18P-300-154635
200 x 4.6 mm	XPtC18-300-204635	XPtC4-300-204635	XPR18-300-204635	XPR18P-300-204635
250 x 4.6 mm	XPtC18-300-254635	XPtC4-300-254635	XPR18-300-254635	XPR18P-300-254635

◎ BioPulite Series 5μm

Size	XP Protein tC18 300Å	XP Protein tC4 300Å	XP Protein RP18 300Å	XP RP18 Plus 300Å	Gold Protein C4 300Å	Gold Protein C18 300Å
30x 2.1 mm	UXPtC18-300-032150	UXPtC4-300-032150	UXPR18-300-032150	UXPR18P-300-032150	UGDC4-300-032150	UGDC18-300-032150
50x 2.1 mm	UXPtC18-300-052150	UXPtC4-300-052150	UXPR18-300-052150	UXPR18P-300-052150	UGDC4-300-052150	UGDC18-300-052150
100x 2.1 mm	UXPtC18-300-102150	UXPtC4-300-102150	UXPR18-300-102150	UXPR18P-300-102150	UGDC4-300-102150	UGDC18-300-102150
150 x 2.1 mm	UXPtC18-300-152150	UXPtC4-300-152150	UXPR18-300-152150	UXPR18P-300-152150	UGDC4-300-152150	UGDC18-300-152150
30 x 3.0 mm	UXPtC18-300-033050	UXPtC4-300-033050	UXPR18-300-033050	UXPR18P-300-033050	UGDC4-300-033050	UGDC18-300-033050
50 x 3.0 mm	UXPtC18-300-053050	UXPtC4-300-053050	UXPR18-300-053050	UXPR18P-300-053050	UGDC4-300-053050	UGDC18-300-053050
100 x 3.0 mm	UXPtC18-300-103050	UXPtC4-300-103050	UXPR18-300-103050	UXPR18P-300-103050	UGDC4-300-103050	UGDC18-300-103050
150 x 3.0 mm	UXPtC18-300-153050	UXPtC4-300-153050	UXPR18-300-153050	UXPR18P-300-153050	UGDC4-300-153050	UGDC18-300-153050
250 x 3.0 mm	UXPtC18-300-253050	UXPtC4-300-253050	UXPR18-300-253050	UXPR18P-300-253050	UGDC4-300-253050	UGDC18-300-253050
30 x 4.6 mm	XPtC18-300-034650	XPtC4-300-034650	XPR18-300-034650	XPR18P-300-034650	GDC4-300-034650	GDC18-300-034650
50 x 4.6 mm	XPtC18-300-054650	XPtC4-300-054650	XPR18-300-054650	XPR18P-300-054650	GDC4-300-054650	GDC18-300-054650
100 x 4.6 mm	XPtC18-300-104650	XPtC4-300-104650	XPR18-300-104650	XPR18P-300-104650	GDC4-300-104650	GDC18-300-104650
150 x 4.6 mm	XPtC18-300-154650	XPtC4-300-154650	XPR18-300-154650	XPR18P-300-154650	GDC4-300-154650	GDC18-300-154650
200 x 4.6 mm	XPtC18-300-204650	XPtC4-300-204650	XPR18-300-204650	XPR18P-300-204650	GDC4-300-204650	GDC18-300-204650
250 x 4.6 mm	XPtC18-300-254650	XPtC4-300-254650	XPR18-300-254650	XPR18P-300-254650	GDC4-300-254650	GDC18-300-254650

◎ BioPulite Series Protein Perfect SEC 125Å

Size	3μm	5μm
150 x 4.6 mm	PFTSEC-125-154630	-
250 x 4.6 mm	-	PFTSEC-125-254650
300 x 7.8mm	PFTSEC-125-307830	PFTSEC-125-307850

◎ BioPulite Series Protein Perfect SEC 300Å

Size	5μm
250 x 4.6 mm	PFTSEC-300-254650
300 x 7.8mm	PFTSEC-300-307850

MicroPulite® Peptide Series:Designed for peptide separation

The MicroPulite® Peptide series is used for the separation and analysis of peptides in reverse phase.
XP tC18 and PHS XP tC18 are based on hybrid silica particles, triple-bonded modification and a unique double endcapped technology, which provides better tolerance to high pH and high temperature, sharper and superior peaks. HSS T3 is made of high strength silica, can enhance retention of polar peptide.

- Excellent peak shape and performance ,due to hybrid, triple-bonded and endcapped technology
- Different selectivity ,meet the needs of separation various properties peptides
- Flexibility,various specifications to meet HPLC/UHPLC/UPLC requirements
- Good reproducibility,quality control strictly, stable from batch to batch

Column Series	Bonded Phase	Carbon Load	Pore Size	End-capped	Particle Size	USP Classi-fication	pH range
Peptide XP	tC18	18%	130Å	Double endcapped	1.7、2.5、3.5、5	L1	1-12
Peptide PHS XP	tC18	15%	130Å	Double endcapped	1.7、2.5、3.5、5	L1	1-11
Peptide HSS	T3	11%	100Å	Double endcapped	1.8、2.5、3.5、5	L1	1-8

Sample Information

Angiotensinogen (1-7) DRVYIHP, Bradykinin RPPGFSPFR,
Angiotensin I DRVYIHPFHL, Angiotensin II DRVYIHPF

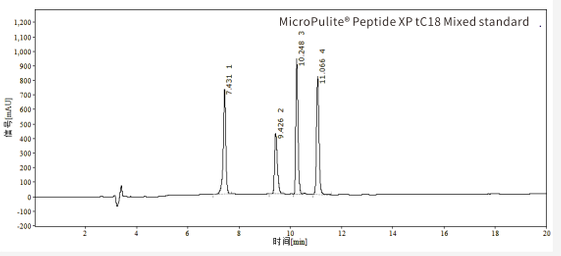
Detection conditions

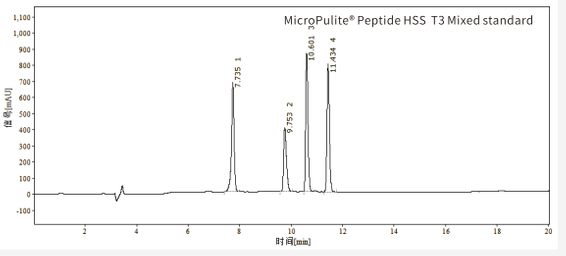
Wavelength:220nm
Mobile phase A:0.1% TFA water
Mobile phase B:0.1% TFA acetonitrile

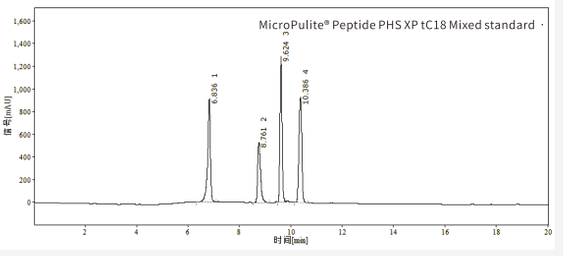
Column

MicroPulite® Peptide XP tC18 4.6*250mm
MicroPulite® Peptide HSS T3 4.6*250mm
MicroPulite® Peptide PHS XP tC18 4.6*250mm

Chromatogram:







Guard column and in-line filter

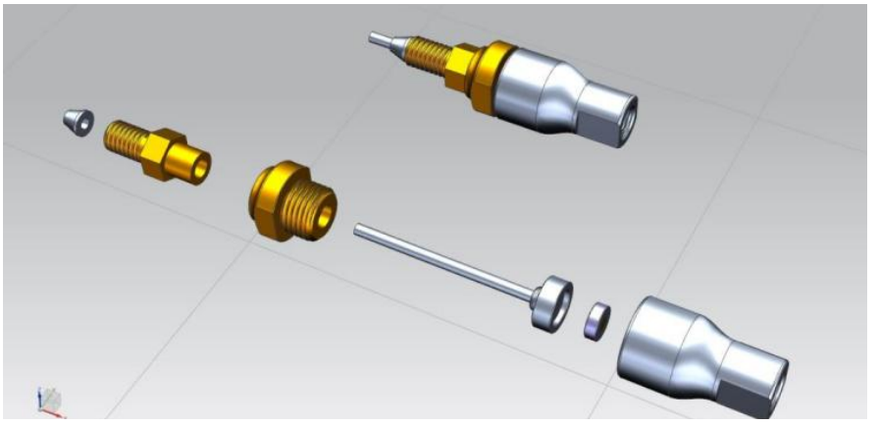
Installing an in-line filter or guard column at the front analytial column is crucial for mini mizing system downtime and improving column lifetime. The in-line filter contains a frit with specific pore size, which effectively intercepts particulate impurities in the mobile phase and samples that are larger than the frit's pore size. The guard column contains packing material identical to the analytical column, which helps reduce contamination of the column inlet by samples or mobile phase, there by prolonging the service lifetime of the analytical column.

Specifications	Recommended inner diameter of column
2.1*4mm	2.1mm
3*4mm	3mm
4.6*10mm	3.9mm/4.6mm
10*10mm	10mm
19*10mm	20/21.2/30mm

In-line Filter

The in-line filter removes particulate matter from samples or mobile phase through physical filtration, protecting the column, pump, and tube from blockage. WePure's in-line filter is designed for UPLC systems, it is made of stainless steel and it can pressures up to 18,000 psi.

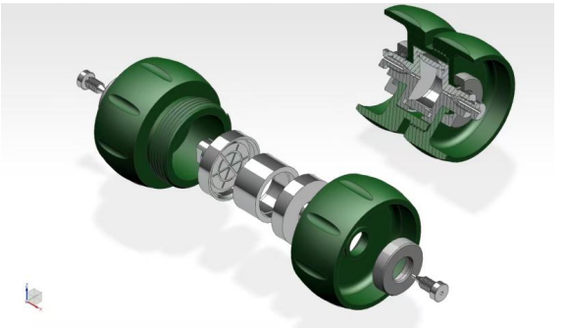
If the following situation occur, such as rapid column pressure increase, peak tailing, or peak split, Please remove the column and test the in-line filter's pressure to determine if the filter is the source of high pressure. If the filter pressure is elevated, it indicates potential frit blockage,please replace the frit.



	Part No	Description
In-line Filter	OF-21	Wechromlite On-line Filter Holder for UPLC
	OFSP-0205	Wechromlite On-line Filter Replaceable sieve plate (0.2μm)5pk
	OFSP-0210	Wechromlite On-line Filter Replaceable sieve plate (0.2μm)10pk

Semi-Preparative Guard Column

The preparative guard column needs fits and tubes to connect with the column. WePure's guard column is designed for semi-preparative columns, easy to install and has reliable performance. It is recommended the cartridge use the same packing material as semi-preparative column. Additionally, guard cartridges of different specifications require correspondingly matched guard column holders.



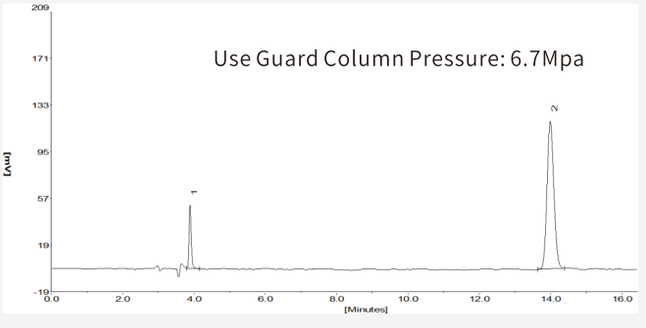
Guard column Part No	Column inner diameter	Guard column specifications	Operating Pressure
G100	10mm	10*10mm	6000psi
G190	20mm	19*10mm	6000psi

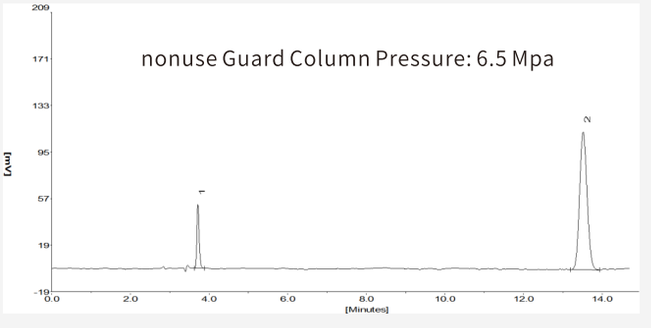
HPLC Guard Column

- Extend the column lifetime
- No change of column performances
- Easy to use

Description	Size	Bachpressure	Efficiency	Peak Asym
MicroPulite® XP tC18	4.6*250 mm, 5μm	6.7MPa (Use Guard Column)	102333.67	1.09
		6.5MPa (nonuse Guard Column)	96362.56	1.10

Chromatographic conditions
Mobile phase:A:0.1% TFA water;B:0.1% TFA acetonitrile
Fow:0.8mL/min
Temperature: 25°C
Detector: 254 nm





Ordering Information

Product	pH	Packing Type	Particle Size (μm)	Specification (mm)	Part No
WeChromlite® Series Guard Cartridge	1-12	XP tC18 Analytical Guard column	1.7	2.1*4	GC-XPtC18-214017-3P
				3.0*4	GC-XPtC18-304017-3P
			2.5	2.1*4	GC-XPtC18-214025-3P
				3.0*4	GC-XPtC18-304025-3P
				4.6*10	GC-XPtC18-4610025-3P
			3	2.1*4	GC-XPtC18-214030-3P
				3.0*4	GC-XPtC18-304030-3P
				4.6*10	GC-XPtC18-4610030-3P
			3.5	2.1*4	GC-XPtC18-214035-3P
				3.0*4	GC-XPtC18-304035-3P
				4.6*10	GC-XPtC18-461035-3P
		XP tC18 Semi prepared Guard column	5	2.1*4	GC-XPtC18-214050-3P
				3.0*4	GC-XPtC18-304050-3P
				4.6*10	GC-XPtC18-4610050-3P
				10*10	GC-XPtC18-10010050-1P
				19*10	GC-XPtC18-19010050-1P
				20*10	GC-XPtC18-20010050-1P
				30*10	GC-XPtC18-30010050-1P
			7	10*10	GC-XPtC18-10010070-1P
				19*10	GC-XPtC18-19010070-1P
				20*10	GC-XPtC18-20010070-1P
				30*10	GC-XPtC18-30010070-1P
			10	10*10	GC-XPtC18-100100100-1P
				19*10	GC-XPtC18-190100100-1P
				20*10	GC-XPtC18-200100100-1P
				30*10	GC-XPtC18-300100100-1P
	2-8	Gold C18 Analytical Guard column	3	2.1*4	GC-GDC18-214030-3P
				3.0*4	GC-GDC18-304030-3P
				4.6*10	GC-GDC18-4610030-3P
			3.5	2.1*4	GC-GDC18-214035-3P
				3.0*4	GC-GDC18-214035-3P
				4.6*10	GC-GDC18-4610035-3P
			5	2.1*4	GC-GDC18-214050-3P
				3.0*4	GC-GDC18-304050-3P
				4.6*10	GC-GDC18-4610050-3P

Product	pH	PackingType	Particle Size (μm)	Specification (mm)	Part No
WeChromlite® Series Guard Cartridge	2-8	Gold C18 Semi prepared Guard column	5	10*10	GC-GDC18-10010050-1P
				19*10	GC-GDC18-19010050-1P
				20*10	GC-GDC18-20010050-1P
				30*10	GC-GDC18-30010050-1P
			7	10*10	GC-GDC18-10010070-1P
				19*10	GC-GDC18-19010070-1P
				20*10	GC-GDC18-20010070-1P
				30*10	GC-GDC18-30010070-1P
			10	10*10	GC-GDC18-100100100-1P
				19*10	GC-GDC18-190100100-1P
				20*10	GC-GDC18-200100100-1P
				30*10	GC-GDC18-300100100-1P

Product	pH	PackingType	Particle Size (μm)	Specification (mm)	Part No
WeChromlite® Series Guard Cartridge	1-8	HSS T3 Analytical Guard column	1.8	2.1*4	GC-HST3-214018-3P
				3.0*4	GC-HST3-304018-3P
			2.5	2.1*4	GC-HST3-214025-3P
				3.0*4	GC-HST3-304025-3P
				4.6*10	GC-HST3-4610025-3P
			3.5	2.1*4	GC-HST3-214035-3P
				3.0*4	GC-HST3-304035-3P
				4.6*10	GC-HST3-4610035-3P
	1-8	Perfect T3 Analytical Guard column	3	2.1*4	GC-PFT3-214030-3P
				3.0*4	GC-PFT3-304030-3P
				4.6*10	GC-PFT3-4610030-3P
			5	2.1*4	GC-PFT3-214050-3P
				3.0*4	GC-PFT3-304050-3P
				4.6*10	GC-PFT3-4610050-3P
		Perfect T3 Semi prepared Guard column	5	10*10	GC-PFT3-10010050-1P
				19*10	GC-PFT3-19010050-1P
				20*10	GC-PFT3-20010050-1P
				30*10	GC-PFT3-30010050-1P
			7	10*10	GC-PFT3-10010070-1P
				19*10	GC-PFT3-19010070-1P
				20*10	GC-PFT3-20010070-1P
				30*10	GC-PFT3-30010070-1P
			10	10*10	GC-PFT3-100100100-1P
				19*10	GC-PFT3-190100100-1P
				20*10	GC-PFT3-200100100-1P
				30*10	GC-PFT3-300100100-1P

Amino Acid Analysis

◆AQC Reagent Pre-column Derivatization Amino Acid Kit

Amino acids are the basic units of proteins, and amino acid analysis plays a critical role in fields such as pharmaceuticals, clinical diagnostics, food, and environmental sciences. The separation of amino acids is relatively high difficulty and challenge. To enhance analytical sensitivity and selectivity, amino acids are typically derivatized for pre-column or post-column. Current methods for pre-column derivatization of amino acids primarily utilize reagents such as o-phthalaldehyde (OPA), 9-fluorenylmethyl chloroformate (FMOC-Cl), phenyl isothiocyanate (PITC), and 6-aminoquinolyl-N-hydroxysuccinimidyl carbamate (AQC).

- AQC reagent reacts quickly and easily with primary and secondary amines
- The derivatized product can be directly analyzed by LC instruments
- The derivatized product is stable and can be stored at room temperature for up to one week.
- Excess derivatization reagent reacts slowly with water and does not affect amino acid derivatives.

◆AQC Kit for Pre-column Derivatization of Amino Acids

A AQC Kit includes a special HPLC or UPLC column for Amino acid and AQC Reagent. The amino acid analysis column has undergone specialized quality control testing to effectively separate the amino acid derivatives produced from the reaction.

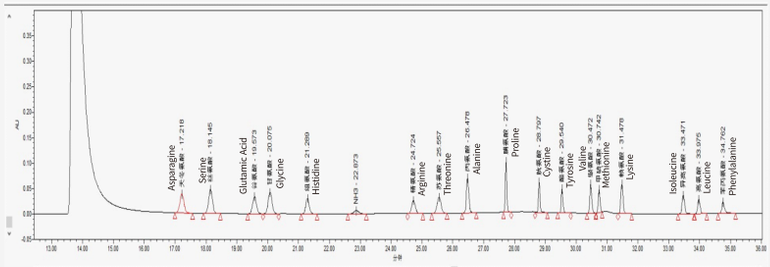
□AQC Reagent Pre-column Derivatization Amino Acid Kit

Provides AQC reagent powder and borate buffer solution required for amino acid derivatization, with 5 vials of each reagent.

◎ Analysis of 17 Amino Acids Using the AQC Kit on HPLC

Column：Amino Acid Analysis Column 3.5μm 4.6*150mm
Detector:UV260
Flow rate:1.2mL/min
Injection volume:10μL
Column temperature:37°C

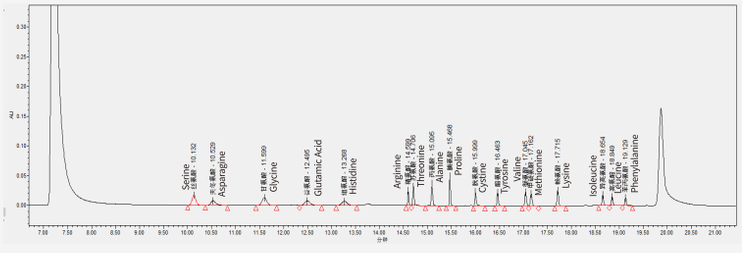
Chromatogram：



◎ Analysis of 17 Amino Acids Using the AQC Kit on UPLC

Column：Amino Acid Analysis Column 1.7μm 2.1*100mm
Detector:UV260
Flow rate:0.4mL/min
Injection volume:1μL
Column temperature:37°C

Chromatogram：



◎Determination of 19 Amino Acids in Beer by Liquid Chromatography with Pre-column AQC Derivatization

Instrument model: KonoMe LEAPS

Column: UPulite® SP C18-AA, 4.6 mm × 150 mm, 3.5 μm (Part No.: SP05-154635)

Injection volume: 20 μL

Column oven temperature: 37 °C

D10: Detection wavelength 260 nm

Experimental Results

Standard Chromatograms

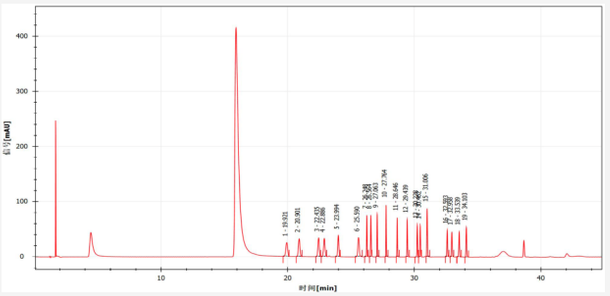


Figure 1: Typical chromatogram of 19 compounds

(1-aspartic acid; 2-serine; 3-glutamic acid; 4-glycine; 5-histidine; 6-ammonia nitrogen; 7-arginine; 8-threonine; 9-alanine; 10-proline; 11-cystine; 12-tyrosine; 13-valine; 14-methionine; 15-lysine; 16-isoleucine; 17-leucine; 18-phenylalanine; 19-tryptophan)

Linearity

The standard curve solutions were injected in order of increasing concentration, and the standard curves were constructed by plotting concentration against peak area. All compounds showed good correlation within the linear range, with correlation coefficients greater than 0.999.

#	Compound Name	Linear Range (mmoL/L)	Linear Equation	Correlation Coefficient R^2
1	aspartic acid	0.01~0.20	y = 1419.1x - 1.2849	0.9998
2	serine	0.01~0.20	y = 1432.1x - 0.3957	0.9999
3	glutamic acid	0.01~0.20	y = 1382.1x + 0.0233	0.9999
4	glycine	0.01~0.20	y = 1362x - 0.7633	0.9999
5	histidine	0.01~0.20	y = 1302x - 0.1399	1.0000
6	ammonia nitrogen	0.01~0.20	y = 1182x + 34.305	0.9997
7	arginine	0.01~0.20	y = 1161.3x - 0.0598	1.0000
8	threonine	0.01~0.20	y = 1264.3x + 3.4959	1.0000
9	alanine	0.01~0.20	y = 1180.9x + 0.0138	0.9999
10	proline	0.01~0.20	y = 1206x - 0.5243	0.9999
11	cystine	0.005~0.10	y = 1904.6x + 0.264	1.0000
12	tyrosine	0.01~0.20	y = 1064.5x - 0.5053	1.0000
13	valine	0.01~0.20	y = 1015x + 0.224	0.9999
14	methionine	0.01~0.20	y = 1000.5x + 0.4295	0.9999
15	lysine	0.01~0.20	y = 1593.1x - 1.2542	0.9997
16	isoleucine	0.01~0.20	y = 979.33x - 0.288	0.9999
17	leucine	0.01~0.20	y = 931.22x + 0.708	0.9999
18	phenylalanine	0.01~0.20	y = 941.18x + 0.3526	1.0000
19	tryptophan	0.01~0.20	y = 1129x - 0.8634	1.0000

Linearity Data Table

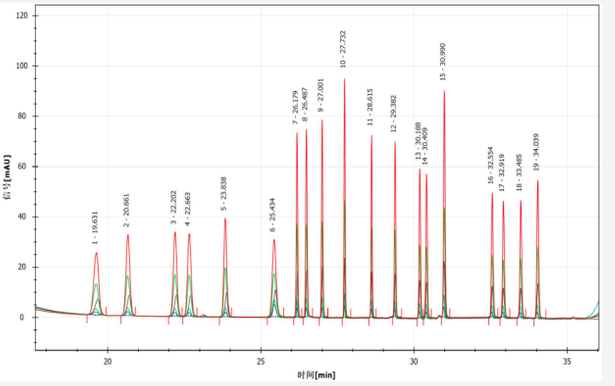


Figure 2: Linearity chromatograms of the 19 compounds

(1-aspartic acid; 2-serine; 3-glutamic acid; 4-glycine; 5-histidine; 6-ammonia nitrogen; 7-arginine; 8-threonine; 9-alanine; 10-proline; 11-cystine; 12-tyrosine; 13-valine; 14-methionine; 15-lysine; 16-isoleucine; 17-leucine; 18-phenylalanine; 19-tryptophan)

Repeatability

A solution at a concentration of 0.20 mmol/L was injected repeatedly 6 times, and the repeatability of retention time and peak area was calculated.

#	Compound Name	Qualitative Repeatability	Quantitative Repeatability
1	aspartic acid	0.073%	0.426%
2	serine	0.043%	0.168%
3	glutamic acid	0.037%	0.273%
4	glycine	0.032%	0.210%
5	histidine	0.029%	0.178%
6	ammonia nitrogen	0.019%	0.320%
7	arginine	0.014%	0.264%
8	threonine	0.010%	0.211%
9	alanine	0.010%	0.306%
10	proline	0.005%	0.153%
11	cystine	0.008%	0.152%
12	tyrosine	0.006%	0.193%
13	valine	0.006%	0.283%
14	methionine	0.007%	0.234%
15	lysine	0.011%	0.237%
16	isoleucine	0.006%	0.315%
17	leucine	0.005%	0.203%
18	phenylalanine	0.006%	0.232%
19	tryptophan	0.012%	0.194%

Repeatability Data Table

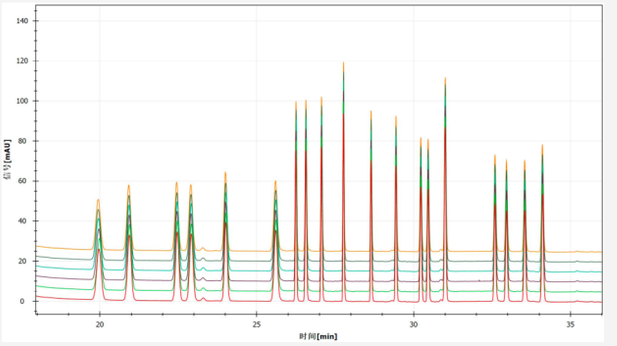


Figure 3: Repeatability chromatograms of the 19 compounds

(1-aspartic acid; 2-serine; 3-glutamic acid; 4-glycine; 5-histidine; 6-ammonia nitrogen; 7-arginine; 8-threonine; 9-alanine; 10-proline; 11-cystine; 12-tyrosine; 13-valine; 14-methionine; 15-lysine; 16-isoleucine; 17-leucine; 18-phenylalanine; 19-tryptophan)

Actual Sample Testing

According to the sample pretreatment method described in Section 3 “Solution Preparation” of this protocol, the amino acid contents in beer fermentation broth and beer were determined. The test data are shown in the following table.

Compound Name	Fermentation Broth1 (mmoL/L)	Fermentation Broth2 (mmoL/L)	Fermentation Broth3 (mmoL/L)	Beer1 (mmoL/L)	Beer2 (mmoL/L)	Beer3 (mmoL/L)
aspartic acid	0.0143	0.0111	0.0129	0.0148	0.0099	0.0129
serine	0.0092	0.0078	0.0089	0.0134	0.0073	0.0111
glutamic acid	0.0150	0.0126	0.0174	0.0348	0.0093	0.0144
glycine	0.1000	0.0847	0.1225	0.1879	0.0562	0.0804
histidine	0.0697	0.0568	0.0876	0.0965	0.0320	0.0497
ammonia nitrogen	0.0218	0.0231	0.0174	0.1465	0.0517	0.0752
arginine	0.0165	0.0021	0.0026	0.0867	0.0022	0.0032
threonine	未检出	未检出	未检出	未检出	未检出	未检出
alanine	0.0475	0.0397	0.0641	0.3804	0.0355	0.0633
proline	2.9067	2.4173	3.2000	2.1475	1.2732	1.8194
cystine	0.0006	0.0005	0.0006	未检出	0.0005	0.0013
tyrosine	0.0114	0.0098	0.0387	0.1675	0.0070	0.0277
valine	0.0015	0.0010	0.0016	0.1425	0.0036	0.0058
methionine	0.0135	0.0129	0.0197	0.0108	0.0085	0.0113
lysine	0.0023	0.0016	0.0015	0.0032	0.0022	0.0034
isoleucine	0.0053	0.0048	0.0058	0.0230	0.0043	0.0061
leucine	0.0035	0.0035	0.0060	0.0260	0.0063	0.0101
phenylalanine	0.0009	0.0014	0.0033	0.1038	0.0065	0.0095
tryptophan	0.0565	0.0447	0.0738	0.0652	0.0277	0.0401

Table: Determination of Amino Acid Contents in Beer Fermentation Broth and Beer

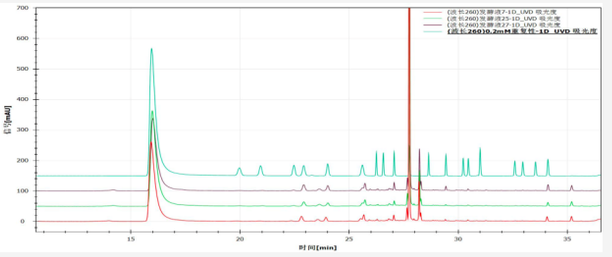


Figure 4: Chromatograms of three types of fermentation broth samples

(1-aspartic acid; 2-serine; 3-glutamic acid; 4-glycine; 5-histidine; 6-ammonia nitrogen; 7-arginine; 8-threonine; 9-alanine; 10-proline; 11-cystine; 12-tyrosine; 13-valine; 14-methionine; 15-lysine; 16-isoleucine; 17-leucine; 18-phenylalanine; 19-tryptophan)

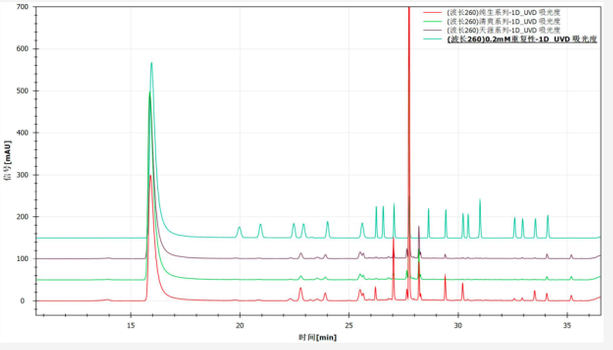


Figure 5: Chromatograms of three series of beer samples

(1-aspartic acid; 2-serine; 3-glutamic acid; 4-glycine; 5-histidine; 6-ammonia nitrogen; 7-arginine; 8-threonine; 9-alanine; 10-proline; 11-cystine; 12-tyrosine; 13-valine; 14-methionine; 15-lysine; 16-isoleucine; 17-leucine; 18-phenylalanine; 19-tryptophan)

Conclusion

In this protocol, a method for the determination of 18 amino acids in beer was established using the WePure AQC pre-column derivatization amino acid kit and an amino acid-specific column. The test results showed good linearity for all amino acids, with correlation coefficients ⩾ 0.999; the repeatability of retention time was less than 0.05%, and the repeatability of peak area was less than 0.4%. The resolution of all compounds was greater than 2.0. The method exhibits good stability, high precision, and is simple and easy to operate, making it suitable for the determination of amino acid contents in beer.

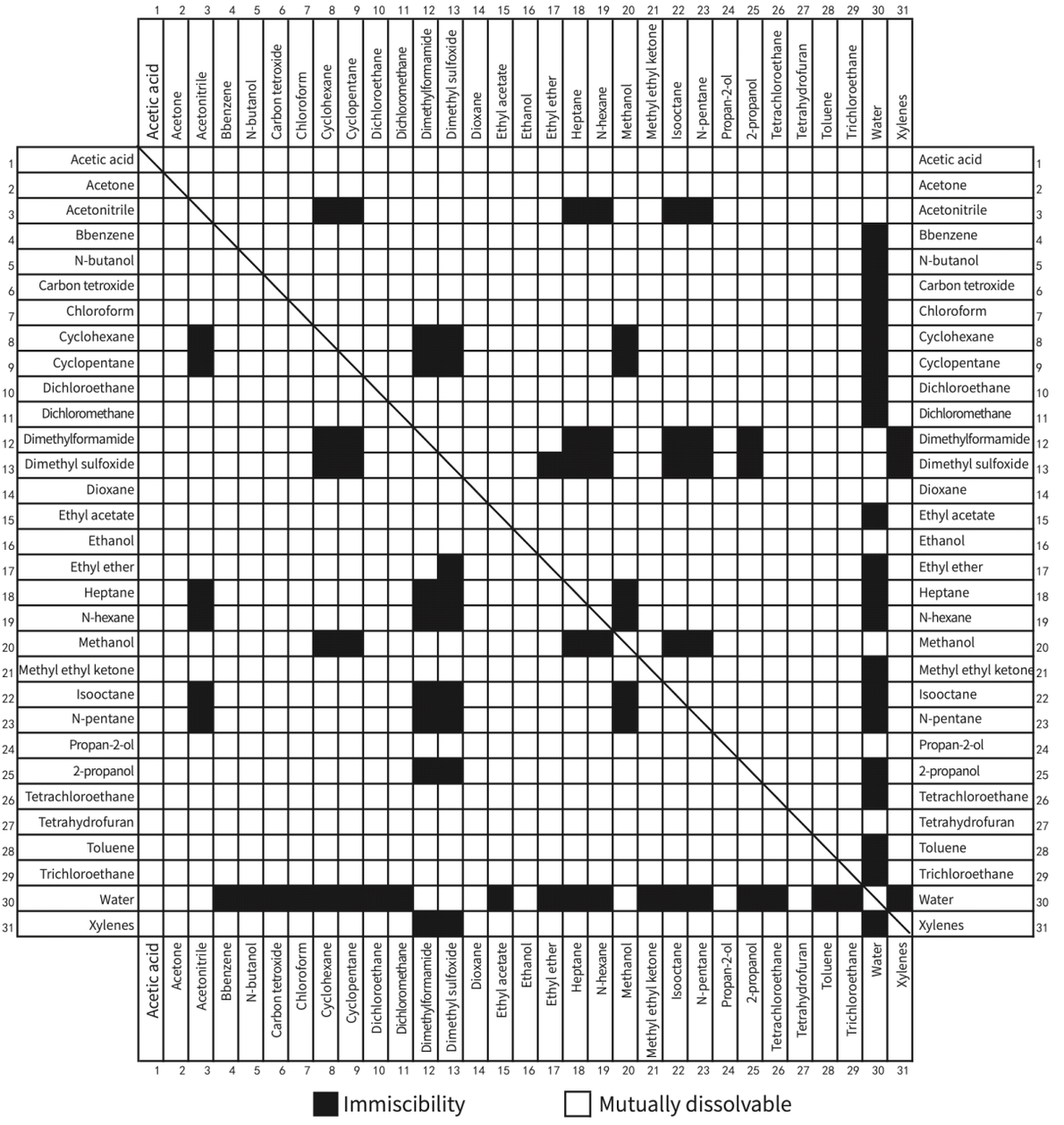
Ordering Information

Product information	Part No.
Upulite® AQC Kit (AQC Pre-column Derivatization Amino Acid HPLC Method Kit)	WEAQCK-001
Upulite® AQC Kit ((AQC Pre-column Derivatization Amino Acid UPLC Method Kit)	WEAQCK-002
Upulite® AQC Reagent	WEAQCR-001
Upulite® SP C18-AA（Amino Acid Analysis Column，3.5μm 4.6*150mm）	SP05-154635
Upulite® SP C18-AA（Amino Acid Analysis Column，1.7μm 2.1*100mm）	SP05-102117

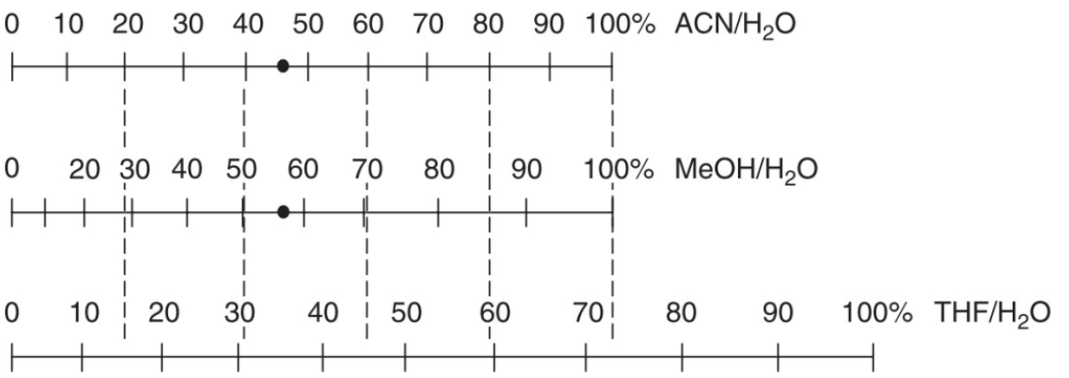
BufferRange, LC- MS compatibility,and Cutoff wavelength of Common Buffers

Buffer reagent	pH buffer reagent	LC-MS compatibility	UV cutoff wavelength
Phosphate(pK_1)	1.1-3 1	NO	<200nm
Phosphate(pK_1)	6.2-8.2		
Phosphate(pK_1)	11.3-13.3		
Acetate	3.8-5.8	YES	210nm(10mm)
Citrate(pK_1)	2.1-4.1	NO	230nm(10mm)
Citrate(pK_1)	3.7-5.7		
Citrate(pK_1)	4.4-6.4		
Trifuracetio Acid(0.1%)	2.0	YES	210nm
Phosphoric Acid(0.1%)	2.0	NO	210nm(10mm)
Formic Acid(0.1%)	2.7	YES	<200nm
Ammonium Formate	2.7-4.7	YES	190nm
Supercarbonate	5.4-7.4	YES (Ammonium)	210nm(10mm)
Carbonate	9.2-11.2	NO (Nak etc)	200nm
Borate	8.3-10.3	NO	190nm
Ammonium	8.2-10.2	YES	200nm(10mm)
Diethylammonium	9.5-11.5	NO	235nm(10mm)
Triethylammonium	9.7-11.7	NO	<200nm(10mm)
Trometamol	7.3-9.3	NO	205nm(10mm)

Common solvent mixing table



Comparison of solvent strength between Acetonitrile (ACN)、Methanol (MeOH) and Tetrahydrofuran (THF)



Common solvent properties

Solvent	Cutoff wavelength(nm)[a]	Refractivity Ri[b]	Viscosity(cP)	Boiling point(°C)[c]	ε (silica)[d]
Acetone	330	1.359	0.36	56	0.53
Acetonitrile	190	1.344	0.38	82	0.52
n-Butanol	215	1.399	2.98	118	0.40
1-Oxymethanol	220	1.402	0.45	78	0.20
Chloroform	245	1.446	0.57	61	0.26
Cyclohexane	200	1.424	1.00	81	0.00
Dimethylformamide	268	1.430	0.92	153	
Dimethyl sulfoxide	268	1.478	224	189	0.50
1,4-Dioxane	215	1.422	1.37	101	0.51
Ethyl acetate	256	1.372	0.45	77	0.48
Heptane	200	1.388	0.40	98	0.00
n-Hexane	195	1.375	0.31	69	0.00
Isooctane	215	1.391	0.50	99	0.00
Methanol	205	1.328	0.55	65	0.70
Methyl tert-butyl ether	210	1.369	0.27	55	0.48
Methyl ethyl ketone	329	1.379	0.43	80	0.40
Dichloromethane	233	1.424	0.44	40	0.30
Propan-2-ol	205	1.377	2.40	82	0.60
n-Propanol	210	1.386	2.30	97	0.60
Tetrahydrofuran	212	1.407	0.55	66	0.53
Toluene	284	1.497	0.59	111	0.22
Water	190	1.333	1.00	100	

a.The solvent absorption value is 1.0 Au£¬The wavelength of the detection pool is 10 mm

b. Index of refraction

c. Boiling Point

d. Solvent strength parameters

WePure WeChat Official Account

WEPURE WePure Biotech (Guangzhou) Co., Ltd.

Production Base: Guangdong WePure Bio-Advanced Materials Co., Ltd.
Address: No. 3, Kechuang Avenue, Innovation API Technology Industrial Park, Xinjiang Town, Wengyuan County
Add: 9/F, Building 7,6 Nanjiang Second Rd., Zhujiang Street, Nansha District, Guangzhou,China
Tel: +86-20-3939 4992 Fax: +86-20-3939 4993
Url: www.wepuretech.com E-mail: support@wepuretech.com