

Make Chromatographic Separation More Efficient





UHPL, HPLC, FAST LC

Biological, analysis, Drug analysis, Traditional, Chinese, medicine, analysis Environmental, analysis, Pesticide, residue, analysis Carbohydrate, analysis, Organic, acid, analysis, Chiral, analysis 深圳市恒谱生科学仪器有限公司 UHPLCS Scientific Instruments Co.,Ltd.



COMPANY PROFILE

UHPLC Scientific Instruments Co., Ltd. Is a high-tech manufacturer committed to R & D and manufacturing of high-quality chromatography consumables. We have rich production experience and strong manufacturing technology capabilities in chromatographic column with high degree of separation and long service life, HPLC packing with good mechanical strength and uniform pore size, ultra-high pressure in-line filter, guard column, non-bubble solvent inlet filter, frit, empty HPLC column, air-resistor

We have been constantly optimizing the R&D and preparation capabilities and management system of our company, so as to better solve the customers' confusions in chromatographic analysis and purification and help them continuously improve chromatographic separation capacity and product competitiveness. Our products have been sold well in many developed analytical science economies around the world.

As a professional manufacturer of chromatographic consumables, UHPLCS looks forward to establishing a closer strategic partnership with customers and create a better future hand in hand!



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HPLC Column/Packing



HPLC Column — Packing — USHA Series and USHB Series

	Physical and Chemical Parameters				Param	eters _		
HPLC Column Packing	Particle Size (μm)	Pore Size (Å)	Carbon Content (%)	PH	End- Capping	Separation Mode	Features and Applications	Specifications of HPLC Column (mm)
USHA C18			17	2~8	Yes	Reversed- phase	High selection and high separation. Widely used in in the analysis of polar and hydrophobic substances, the first choice of all kinds of compounds.	2.1×30 2.1×50 2.1×75
USHA C18- BIO,5 10 µm, 100 Å			17.5	2~9	OneEnd- capping	Reversed- phase	 Specially designed for the separation of variousalkaline compounds The pH tolerance range is 2~9. 	2.1×100 2.1×150
USHA C18-T			17.5	2~10	Double End- capping	Reversed- phase	Designed for selective separation, aim for high quality separation and purification.	3.0×30 3.0×50 3.0×100
USHA C18-N	1.8		19	1.5~11	No	Reversed- phase	Unique bonding mode, can achieve 100% water phase condition.	3.0×150 4.6×30
USHA C18- AQ	2		16	2~8	Yes	Reversed- phase	• C18 and polar group.	4.6×50 4.6×100
USHA C18-A	3	70, 100,	13	2~8	Yes	Reversed- phase	Low carbon content, suitable for separation of strongly polar and hydrophilic compounds	4.6×150 4.6×250
USHA C8	10 or	150, 200, 300	10	2~8	Yes	Reversed- phase	C8 has a relatively low hydrophobicity compared with C18 stationary, suitable for the separation of most hydrophobic compounds, more suitable for separating compounds with strong adsorption on C18 column.	10×50 10×100 10×150 10×250
USHA C4	even bigger parti cles	etc.	3	2~8	Yes	Reversed- phase	Suitable for the separation of polar and hydrophob icsubstances in C18 and C8 separation for too long.	20×50 20×200
USHA Phenyl (USHA phenyl column)			12	2~8	Yes	Reversed- phase	• π- π interaction shows selectivity difference from that	20×150 20×250
USHA NH2 (USHA amino column)			4	2~8	Yes	Normal- phasev Reversed- phase	Strong polarity can be both positive and negative; The amino functional group provides a retention that allows the analysis of polar compounds under normal phase elution conditions. Organic compounds in monosaccharides and polyglycans/ olefines/aromatics can be analyzed by acetonitrile and water. In the buffer of low PH value, there is weak anion exchange which can separate some negatively charger' molecules.	20×300 21.2×150 21.2×250 30×150 30×250 50×150 50×250

HPLC Column — Packing — USHA Series and USHB Series

-	TIFEC COlumnia Facking OSTIA Series and OSTID Series								
	Phy	sical ar	nd Che	mical	Param	eters		Specifications	
HPLC Column Packing	Particle Size (μm)	Pore Size (Å)	Carbon Content (%)	PH Stability	End- apping	Separation mode	Applications	of HPLC Column (mm)	
							M edium polarity cyanogroup, can be used inbothpositive and negative phases.	2.1×30	
							•The hydrophobicityis relatively low in	2.1×50	
							the stationary phase of reversed-phas e chromatography and shows a differ	2.1×75	
	1.8					Normal-	ent selectivity from thatof C18 due to the π -electron interaction	2.1×100	
USHA CN (USHA cyan	2		6	2~8	Yes	phase Reversed	ofthecyanide group.	2.1×150	
column)		70,				-phase	 Suitable for separation of components that have been separated for too long 	3.0×30	
	3						on C18, and suitable or the occasion	3.0×50	
	_	100,					where is very difficult to optimizethe chromatogram on C18.	3.0×100	
	5	150,					 When very hydrophobic compounds cannot be eluted using standard 	3.0×150	
	10	200,					C18 and C8 reversed-phase column,	4.6×30	
		300					the most polarized inverting column can be a cyanide column.	4.6×50	
USHA Diol	or even	etc.	5	2~7	No	Normal- phase	Separation of polar and basic	4.6×100	
OSHA DIOI	bigger parti	etc.		_ '	INO	Hilic	compounds using silanol residues.	4.6×150	
	cles						 <10ppm high purity spherical silica gel, verylowmetal impurities. 	4.6×250	
USHA SiL				1~7	Yes	Normal- phase	•Can be used to separate polar and	10×50	
						Hilic	basic organic compounds, such as vitamins, steroids, andmany other	10×100	
							drug molecules.	10×150	
USHB C18			17	2~8	Yes	Reversed-	•Excellent stability and repeatability, full cover bonded silica gel was used	10×250	
03HB C10			''	2 3	163	phase	as packing. •High selectivity and high separation.	20×50	
	3				Double	D	•Specially designed for the separation	20×200	
USHB C18-BIO	5	70,	20	1.5~10	End- capping	Reversed- phase	of all kind of alkali compounds, the pH tolerance range can be 1.5-10.	20×150	
		120,					•Low carbon content, suitable for sepa-	20×250	
USHB C18-AQ		,	14	2~8	Yes	Reversed- phase	ration of hydrophilic and polar compounds, and 100%pure water	20×300	
	9	150,				p	mobile phase.	21.2×150	
USHB C8	10	200,	10	2~8	Yes	Reversed-	Suitable for separating most	21.2×250	
USHB C8	or even	300,		2 3	163	phase	hydrophobic compounds	30×150	
	bigger part icles	etc.				Normal-	•High purity spherical silica gel (metal impurities <10ppm), with high	30×250	
USHB SiL	icies			1~7	No	phase	columnefficiency and good peak shape characteristics.	50×150	
						Hilic	Can be used to separate polar and bas ic organic compounds	50×250	

HPLC Column - Packing - USHA Series & USHB Series

- Suitable for the separation of most of chiral compounds
- Features Good separation & excellent durability
 - Can be used for SFC optimal durability chromatography column
 - Significant reduction in initial costs from analysis to large-scale preparation

• Signif	Significant reduction in initial costs from analysis to large-scale preparation							
Chiral HPLC Column/Packing	Packing/Particle Size(Å)	Chirality F	unctional Group	Applications	Solvents Types	HPLC Column Specification (mm)		
						2.1×30		
			On 1911 Salaming park and annual			2.1×50		
USHC AD		coated with amylose—≡ (3,5-dimethylphenyl	Facilities (and the control of the c			2.1×75		
			1 1 1			2.1×100		
						2.1×150		
			Amy Voor 115-eth opherst by Euchamans)			3.0×30		
USHC AS		coated with amylose—≡ [(S)-0-phenylethyl	Service discourse R N			3.0×50		
		carbamate]				3.0×100		
	-					3.0×150		
	3	coated with amylose—≡	Amyton Amyton of the Amyton of			4.6×30		
USHC AY		(5-chloro-2-methylphe- nyl carbamate)	ended on bina per		normal phase	4.6×50		
	_	nyt carbamate)	A CH	contains amides, aromatic ring	N-hexane, n-heptane, methanol,	4.6×100		
	. 5			substituents, carbonyl	ethanol, isopropanol,	4.6×150		
		coated with amylose—≡	00 910-chiro-kendigibergkantanahi	groups, nitro groups,	acetonitrile	4.6×250		
USHC AZ	10	(3-chloro-4-methylphe- nyl carbamate)	Amples carrying CH ₃	sulfonyl groups,	phase reversal Acetonitrile,	10×50		
	10	,	***	cyanide groups,	Methanol, Éthanol,	10×100		
	1			hydroxyl groups,	Isopropanol, Water,	10×150		
	20	coated with cellulose—Ξ	California (California California		Buffer	10×250		
USHC OD	20	(3,5-dimethylphenyl carbamate)	Calbulana derivation sociales en acceptant			20×50		
			e g os			20×150		
	1					20×200		
		coated with cellulose—三	Colleges			20×250		
USHC OJ		(4-methylbenzoate)	Carle ace derivedre (care for action get)			20×300		
			~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			21.2×150		
	1					21.2×250		
			Cathina (ISSCHIOSASSITISTERINA)			30×150		
USHC OZ		coated with amylose—≡ (3-chloro-4-methylphenyl	caned on straight Cession converse Counted on straight CH ₀ CH ₀			30×250		
		carbamate)	n A			50×150		
						50×250		



A new generation of ODS column with organosilicone mixed matrix

- Unique excellent separation selectivity of silica gel C18.
- Excellent acid and alkali resistance. Effective effect on various types of compounds.
- Durability, good peak shape display, reproducibility and low pressure.
- It is a liquid chromatography column suitable for a particularly wide range



Particle Size	5μm, 10μm		
Pore size	100 Å		
Carbon Content	18%		
End Capping	One time end-capping		
рН	1~12		
Temperature	pH 1~7, 70°C pH 7~12, 50°C		

- Suitable for a variety of new and old equipment under lower pressure.
- Convenient to use high viscosity solvents like methanol as eluent.
- Injection volume can be more than twice as much as previous products when dissolving samples in highly soluble solvents such as acetonitrile.

For Clemastine and other alkalic compounds that tend to form tails and are difficult to analyze, it is easy to obtain a good peak shape without tails by using USHA C18-G column. Can be used over a wide pH range (1-12), especially in strong alkali or high temperature conditions. The service life of chromatographic column is more than several

times that of the general alkaline-resistant(mixed) C18 column on the market. Good acid resistance. The performance will be better if used together with UHPLCS guard column. High versatility. The first choice of insulin. Widely used in the analysis of polar substances and hydrophobic substances.

HPLC Column Specification (mm)					
2.1*30、2.1*50、2.1*75、2.1*100、2.1*150	3.0*30、3.0*50、3.0*100、3.0*150				
4.6*30、4.6*50、4.6*100、4.6*150、4.6*250	10*50、10*100、10*150、10*250				
20*50、20*200、20*150、20*250、20*300	21.2*150、21.2*250				
30*150 \ 30*250	50*150、50*250				



- Carefully designed for easy cleaning and maintenance operation
- Small dead volume and smooth tube inner wall
- Ensured high performance of the finished products of HPLC column; High degree of reproducibility
- Complete specifications, from analysis to preparation

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Empty HPLC Column 30# /50#



Empty HPLC Column 20#



Length: 50-100-150-200-250-300-500-1000-1100 (mm)

Empty HPLC Column 7.8# /10#



Length: 20-30-50-75-100-150-200-250-300 (mm)

Empty HPLC Column 4.6# (Sheet Frit Type)



Empty HPLC Column 4.6# (PEEK Cup Frit Type)



Empty HPLC Column 4.0#



Empty HPLC Column 3.0#



Empty HPLC Column 2.1#



Empty HPLC Column 2.1# (Ultra-high Pressure Type)



Column Frit

Column Frit 2.1#



Specification

Stainless Steel (Ultra-high Pressure Type) $0.2, 0.5, 2\mu$ PEEK (Ordinary Type) 2μ

Column Frit 3.0#



Specification

Stainless Steel $0.2, 0.5, 2\mu$ **PEEK** 2μ

Column Frit 4.0#



Specification

PEEK (Big Hole) 0.5, 2, 5, 10, 15, 20μ

PEEK (Small Hole) $0.5, 2, 5, 10, 15, 20\mu$

Column Frit 4.6#













Specification

PEEK (Big Hole) 0.5, 2, 5, 10, 15, 20 μ

PEEK (Small Hole) $0.5, 2, 5, 10, 15, 20\mu$ Stainless Steel+PEEK Frit $0.5, 2, 5, 10, 15, 20\mu$

Column Frit 10#



Specification

PEEK (Big Hole) 0.5, 2, 5, 10, 15 μ

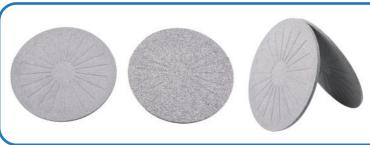
Column Frit 20#/30#/50#



Specification

$$\begin{split} & \text{PEEK(Column Frit Type)} \\ & 0.5, 2, 5, 10, 15, 20\,\mu \\ & \text{PEEK(Frit Type)} \\ & 0.5, 2, 5, 10, 15, 20\,\mu \end{split}$$

Frit DAC#



Specification

Sintered Stainless Steel (Filter pores can be customized) 0.5, 2, 5, 10 $15, 20, 30, 40 \mu$



Empty HPLC Column Set



Column Inner Diameter	2.1	3.0	4.0	4.6	7.8	10	20	30	50
Length		20	30	50	100	150	25	0	
Polishing Brightness	0.	1μ in	terna	l surfa	ce rou	ghnes	s, hi	ghligl	ht



Column Frit



Applicable Inner Diameter of Column

Small Hole Type: 2.1/3.0/4.0/4.6/7.8/10



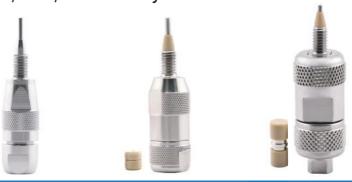
Analytical Guard Column





Analytical Guard Column









Analytical Guard Column



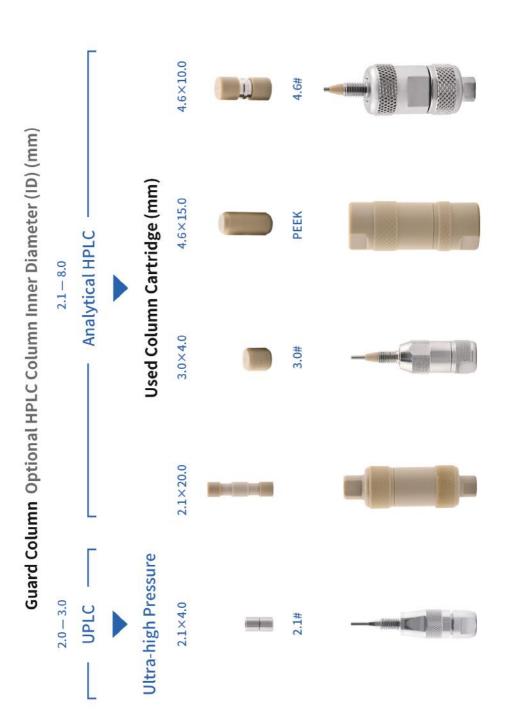
- ∨ Very little dead volume
- Din addition to protecting the column, it can greatly reduce the spectral band broadening caused by extra-column effect compared with other guard columns
- The middle connection tubing and thread fitting areomitted which is more convenient and easy to operate
- **Smaller**, almost zero back-pressure
- Reduce flow path diffusion
- Improving sensitivity and separation of chromatographic analysis



HPLC Guard Cartridge











Preparation Guard Column





Preparation Guard Column

Protect your HPLC column from chemical contaminants!

Away from: wide peak, split peak, high back-pressure, low degree of separation, baseline noise drift.





HPLC In-line Filter







— HPLC In-line Filter —

- Good corrosion resistance
 Easy to clean or replace
- · Not easy to block, with long service life
- Less dead volume, no leakage, low back-pressure www.uhplcs.com

UPLC In-line Filter ————

Analytical Inline Filter ——

Preparation In-line Filter ———



HPLC In-line Filter

Intercept the smallest particles > (0.5μm, 2μm, 5μm, optional) in the mobile phase

Let the injection valve, column, detector no longer break down!

Ultra-high Pressure UPLC

Suitable for HPLC Column Inner Diameter ID: 2.1mm



Specification

2.1#

 $0.2\mu, 0.5\mu, 2\mu$

Analytical HPLC Suitable for HPLC Column Inner Diameter ID: 2.1-8.0mm



3.0#

 $0.2\mu, 0.5\mu, 2\mu$



4.6#

0.5μ, 2μ, 5μ,10μ, 20μ



4.6#

0.5µ,2µ, 5µ,10µ,20µ

Suitable for HPLC Column Inner Diameter ID: 9.6-16.0mm





Semi-preparation HPLC

10#

0.5μ, 2μ, 5μ,10μ, 20μ

Preparation HPLC

Suitable for HPLC Column Inner Diameter ID: 18.0-29.0mm





20#

0.5μ,2μ, 5μ,10μ,20μ

Suitable for HPLC Column Inner Diameter ID: 30.0-49.0mm





30#

0.5μ, 2μ, 5μ,10μ, 20μ



PEEK/Stainless Steel Frit





PEEK/Stainless Steel Frit



 $0.2\mu, 0.5\mu, 2\mu, 5\mu, 10\mu, 20\mu$



Specification

OD (Outer Diameter) mm	ID (Inner Diameter)mm	H(Height)mm	
C 4	1.6		
6.4	2.4	1.6	
6.5	3.2		
14.4	12.0	1.6	
19.1	15.8	1.6	
22.4	19.0		
38.0	33.0	2.0	





UHPLCS

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- * Low suction and filtration resistance
- * Good corrosion resistance, suitable for various solvents







OD:1/16" 1/8" D12.7 2μ,5μ,10μ,20μ ID:2.2 Steps OD: 1/8" Steps D23.5 X L5.4 2μ, 5μ, 10μ, 20μ





0D:1/16" D12.0 2μ,5μ,10μ,20μ OD:1/8"
D12.0
2μ,5μ,10μ,20μ

Applicable Tubing Specification	Size		
ID:1.5-2.2-3 3 Steps	D12.7 × L28.5		
ID:2-2.5-3	D12.7 × L28.5	2μ,5μ,10μ,20μ	
3 Steps	D19.7 × L30.0		
ID:1.5-1/16"-2.2 -3.0-1/8"-3.5 Multiple Steps	D12.7 × L28.5 Analysis	2μ,5μ,10μ,20μ,30μ	200
ID:1/8"-1/6"-3/16" (3.0-4.0-5.0) Multiple Steps	D25.0 × L35.0 Preparation	- 2 μ, 3μ, 10μ, 20μ, 30μ	50

*Compatible with a variety of mobile phase tube lines

*No bubble, solvent utilization rate of 99%

	Specification	on	
Applicable Tubing Specification	Size		1 4
ID:1/16" Step	D10.0 × L19.5		
10.1/10 Зтер	D12.7 × L28.5		
ID:1/8" Step	D12.0 × L20.0	2μ,5μ,10μ,20μ	
ID:1/8" Step	D16.0 × L32.0		
ID:1/6" Step	D25.0 × L52.7		



ID:1/8" Step	D12.7 × L28.5
15.1/6 Step	D19.7 × L30.0
ID:3/16" Step	D25.0 × L30.0
10.3/16 Step	D25.0 × L 40.0

 $2\mu, 5\mu, 10\mu, 20\mu$







Ghost Peak Trapping Removal Column





Ghost Peak Trapping Removal Column

The Hazards of Ghost Peak

- Misjudgment of sample composition
- Instrument contamination
- Overlap with the target peak affecting the separation degree
- Increase the workload to do more validation work to determine if the substance is the target substance

The Source of the Ghost peak

- Impurities enter the mobile phase in many ways
- Effect of sample inlet silicone pad
- The polarity (or pH) of the sample dilution is too different from that of the mobile phase
- Residual bubbles in mobile phase
- The instrument system is old and no longer pure

Ghost Peak Trapping Removal Column developed by UHPLCS can effectively capture mobile phase and ghost peaks generated in the pipeline and mixing process, eliminating the interference of ghost peaks on method validation and analysis of trace and trace substances, greatly shortening the research and development time of personnel. Installed between the gradient mixer and the injector, it can not only remove impurities in the mobile phase, but also effectively remove the tube impurities in circuits and mixers.

Column Cartridge

Size	Volume	Pressure
2.1mmID×20mml	about 40μL	≦100MPa
4.0mmID×20mml	about 150μL	<25MD-
7.6mmID×30mml	about 700μL	≦35MPa







Air-resistor/Tubing Fitting





Air-resistor



Air-resistor

	Air-resistor	
Model	Specification	Product Picture
AR-31-58-6500-005	Ф3.17*Н3.17	
AR-49-60-0220-100	Ф4.9*Н5.85 M5*0.8 Thread	
AR-08-60-4500-005	Ф8*H22.5	Go
AR-63-60-1100-600	Ф6.34*Н6.35	
AR-41-58-5500-005	Ф3.17*Н4.17	

Air-resistor

Air-resistor			
Model	Specification	Product Picture	
AR-08-60-1000-800	Ф8*Н27 UNF 10-32 "Thread		
AR-08-60-0400-300	Ф8*Н27 UNF 10-32 "Thread		
AR-09-60-6700-005	Ф9.9*Н6.05 M10*1 Thread		
AR-15-10-5920-174	Ф15*Н30 Inner Bore Ф6 M 8.5*1.0 Thread		

Tubing Fitting: Threaded Adapter Reducing Union/Multi-way Connector/Tubing/Valve







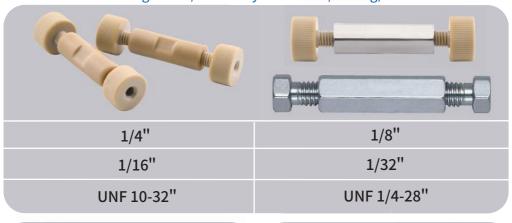








Tubing Fitting: Threaded Adapter Reducing Union/Multi-way Connector/Tubing/Valve











Manifolds Vacuum Filtration Apparatus





Manifolds Vacuum Filtration Apparatus



Needle Tubing Solvent Filter





Chromatographic Technology Holds Lmitless Possibilities



TEL: 0086-0755-28502380 Web: WWW.uhplcs.com

E-mail: sales@uhplcs.com c@uhplcs.com

ADD: No. 51-3, Fu' an West Road, Pinghu StreetLonggang District, ShenzhenGuangdong, 518000 China



WWW.uhplcs.com