

# Complete Solution for preparative HPLC



High Purity, High Recovery,  
High Throughput

Agilent Technologies Offers Two New Lines  
of Preparative HPLC Columns

**LCGC**

LCGC Chromatography Solutions Pvt. Ltd.



**Agilent Technologies**

— Authorised Distributor

*Exclusive solutions for Innovative minds*

# New Choices for Preparative LC and High-Throughput Purification

Agilent Technologies offers a complete line of columns for the Agilent 1100 Series Purification System and for other preparative and purification needs. In selecting HPLC columns from Agilent Technologies, you are purchasing more than just products. You will benefit from nearly four decades of instrument design experience, coupled with consistent consumables quality and unrivaled chromatography expertise. You can rely on Agilent to help you attain the reproducible results you need. Columns for our 1100 Series Purification System range from scalar size (4.6 mm I.D.) to preparative sizes (21.2 to 50 mm I.D.). Expanding your capabilities, new Prep columns give you a choice of 5  $\mu\text{m}$  particles and 10  $\mu\text{m}$  particles. These are the columns to use if you want:

- Maximum yield
- Easy scalability
- Exceptional stability, which means greater reliability Agilent Prep or ZORBAX PrepHT (high throughput) columns let you isolate and purify any compound—in even the most difficult samples.

## Agilent Prep Columns: the Newest Addition to Agilent LC Columns

Agilent's new line of preparative HPLC columns lets you reliably purify large amounts of target compounds at a lower cost. These larger-size columns are designed for laboratory-scale sample purification from microgram to gram quantities. They provide easy isolation and purification of compounds of interest—ideal for use with the Agilent 1100 Series Purification System.

Choice of Particle Sizes The new 5  $\mu\text{m}$  particles and 10  $\mu\text{m}$  particles Prep columns provide:

- High-throughput purification and high resolution (with 5  $\mu\text{m}$  particles)
- Higher loadability than non-Agilent columns at lower pressure and lower cost (with 10  $\mu\text{m}$  particles)
- Superior efficiency and peak shape with both 5  $\mu\text{m}$  and 10  $\mu\text{m}$  particle sizes

### Superior Sample Loading

Agilent Prep LC columns are available with C18 and bare silica packing, offering high carbon load and high surface area. This allows the maximum amount of sample that can be placed onto the column without reducing selectivity.

These columns provide highest sample loading at both low and high pH, which maximizes product yield and system throughput.

A completely new, Agilent-designed bonded phase and new silica give you greater selectivity and the best sample loading across a wide range of analyses.

### Easy, Reliable Scale-up

A variety of dimensions allows you to develop methods and easily scale from microgram to gram quantities of sample with reliable results. This makes method transfer simple and predictable.

### Excellent Column Stability

These columns are exceptionally stable, maintaining good efficiency and peak shape for more than 1,000 injections.

### Longer Column Lifetime

These are the first columns from Agilent to use a 10  $\mu\text{m}$  particle size, allowing lower column pressure and thus longer column lifetime.

Agilent's unique packing and hardware ensure that you will experience superior bed stability and extended column lifetime.

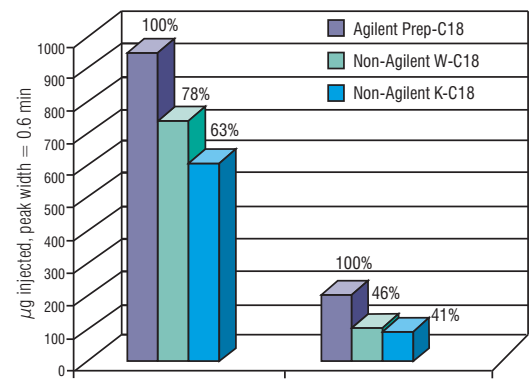


The Agilent Prep column provides the highest sample loading (by mass) in the industry—so you can purify more sample in less time.

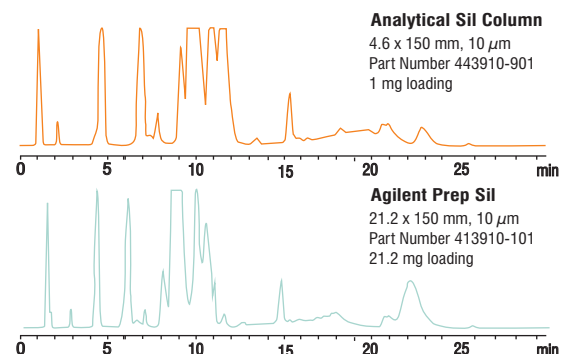


The Agilent ZORBAX PrepHT columns offer high purity and high recovery.

Agilent Prep-C18 Column—  
Highest Mass Loading at pH 2 and 10



Reliable Scale-up on Analytical and Preparative Columns—  
Sample: Crude Lecithin Extract



## Benefits of Agilent Prep HPLC Columns

- **Highest sample loading** in the industry, for maximum sample purification
- **Available in 21.2, 30 and 50 mm I.D.** with lengths ranging from 50 to 250 mm
- **Easy scalability** from 4.6 mm I.D. to 50 mm I.D. for rapid method development
- Prep 21.2 mm I.D. columns **available with Agilent's Preparative Cartridge Hardware**. This makes it simple to use columns with different lengths to

increase sample load. Guard columns are easily integrated, giving superior protection of the purification column.

- **Exceptional column stability** up to pH 10 for reliability, reproducibility and method flexibility
- **Most widely used bonded phases**, making them compatible with most analyses while enabling use of just one column for the majority of your applications
- **Extended** column lifetime.

## Order Guide for Agilent Prep Columns

Available in dimensions up to 50 mm I.D.

Column description	Size (mm)	Particle size (µm)	C18	Silica
Scalar	4.6 x 250	10	440910-902	440910-901
Scalar	4.6 x 150	10	443910-902	443910-901
Scalar	4.6 x 100	10	449910-902	-
Scalar	4.6 x 250	5	440905-902	440905-901
Scalar	4.6 x 150	5	443905-902	443905-901
Scalar	4.6 x 100	5	449905-902	449905-901
Scalar	4.6 x 50	5	446905-902	446905-901

PrepHT cartridge columns (require hardware kit 820400-901)

PrepHT	21.2 x 250	10	410910-102	410910-101
PrepHT	21.2 x 150	10	413910-102	413910-101
PrepHT	21.2 x 150	5	443905-102	443905-101
PrepHT	21.2 x 100	5	449905-102	449905-101
PrepHT	21.2 x 50	5	446905-102	446905-101

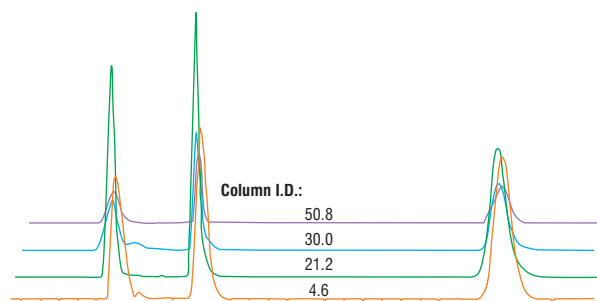
Standard fittings (no hardware required)

Prep 30	30 x 250	10	410910-302	410910-301
Prep 30	30 x 150	10	413910-302	413910-301
Prep 30	30 x 100	10	419910-302	419910-301
Prep 30	30 x 100	5	449905-302	449905-301
Prep 30	30 x 50	5	446905-302	446905-301
Prep 50	50 x 250	10	410910-502	410910-501
Prep 50	50 x 150	10	413910-502	413910-501
Prep 50	50 x 100	10	419910-502	419910-501
Prep 50	50 x 100	5	449905-502	449905-501
Prep 50	50 x 50	5	446905-502	446905-501
PrepHT Column Hardware Kit	-	-	820400-901	820400-901
PrepHT Guard Cartridges, 2/pack	21.2 x 10	10	420212-902	420212-901
Prep HT Guard Hardware	-	-	820444-901	820444-901
Prep External Guard Hardware	-	-	420420-901	420420-901

Additional configurations and bulk packing are available upon request.

## Scalability of Agilent Prep-C18

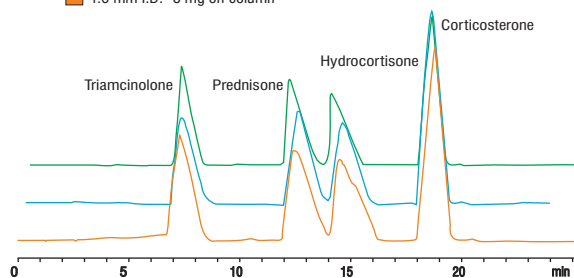
10µ; 150 mm length; 4.6, 21.2, 30.0 and 50.8 mm I.D.s



Reliable scale-up from 4.6 to 50 mm I.D. with Agilent Prep columns

Overlay of chromatographic results from 4.6 mm I.D. to 30.0 mm I.D.

- 30.0 mm I.D. - 320 mg on column
- 21.2 mm I.D. - 160 mg on column
- 4.6 mm I.D. - 8 mg on column



The analytical sample was overloaded and excellent loadability and reliable scale-up was achieved with a sample of corticosteroids.

Conditions			
Columns:	4.6, 21.2, 30 mm x 150 mm 10 µm Agilent Prep-C18	Flow rate:	1 mL/min, 4.6 mm I.D. 21.2 mL/min, 21.2 mm I.D. 42.4 mL/min, 30.0 mm I.D.
Mobile phase A:	Water	Flow rate:	42.4 mL/min, 30.0 mm I.D.
Mobile phase B:	50% Acetonitrile: 17% Methanol: 30% Isopropanol (v/v)	Injection solvent:	DMSO
Gradient:	Time 0, 25% B; 7 min, 25% B; 15 min, 34% B; 15.1 min, 45% B; 20 min, 45% B; 20.1 min, 25% B; Stop time : 24 min	Injection solvent:	4.6 mm I.D.: 80 µL: 21.2 mm I.D.: 1600 µL 30.0 mm I.D.: 3200 µL 21.2, 1500 µL: 30, 5000 µL
		Injection loop:	244.8; Ref. 260, 100
		DAD settings:	Detector wavelength: 244.8; Ref. 260, 100
		Flowcell:	0.06 mm pathlength

## ZORBAX PrepHT HPLC Columns: Ideal for High-Throughput or Difficult Analyses

Want high purity, high recovery and high throughput? ZORBAX PrepHT columns offer additional choices for scale-up of small and large molecules such as peptides and proteins, under difficult conditions, or when you want high throughput. These columns come in 21.2 mm I.D. You can scale up to this size from all Agilent ZORBAX bonded phases.

### Particle Sizes

Particle sizes include 5 µm and 7 µm for very high resolution. This allows high loadability, high yield and high purity of compounds. These particle sizes provide extra resolution for critical analyses when purifying small amounts (milligrams) of sample.

### Higher Flow Rates for Faster Analyses

The larger diameter and mechanically stronger ZORBAX particles allow flow rates up to 100 mL/min for 21.2 mm I.D., for fast throughput. Moreover, these are the right columns to use for complex and difficult samples when your separations are driven by selectivity.

### Compound Confirmation

For high-throughput preparative separations, the identity of analytes is easily confirmed using mass-based purification.

## Benefits of ZORBAX PrepHT HPLC Columns

- Available in a variety of bonded phases: Eclipse XDB, StableBond, Bonus-RP and Extend-C18 for optimized resolution and loadability under any conditions
- Easy scale-up from analytical to preparative scale without losing resolution Polymeric
- Fast preparative separation up to 2,000 mg
- Easy to install, with finger-tight connections that seal up to 5,000 psi/350 bar

## PrepHT Columns are Easy to Use



PrepHT cartridge columns with reusable end fittings have a unique design that makes them easy to install and seal finger-tight up to 5,000 psi. The economical cartridge design allows for an integral guard column to be used, which prolongs the life of the PrepHT column without adding any delay volume in rapid gradient sample purification.

## Order Guide for ZORBAX PrepHT HPLC Columns

ZORBAX Eclipse XDB and Bonus-RP PrepHT							
Column Description	Size (mm)	Particle Size (µm)	XBD-C18 USP L1	XBD-C8 USP L7	Bonus-RP		
PrepHT Cartridge*	21.2 x 250	7	977250-102	977250-106	878250-101		
	21.2 x 150	7	977150-102	977150-106	878150-101		
	21.2 x 150	5	970150-902	970150-906	868150-901		
	21.2 x 100	5	970100-902	970100-906	868100-901		
	21.2 x 50	5	970050-902	970050-906	868050-901		
PrepHT Guard Cartridge**	17 x 7.5	5	820212-925	820212-926	820212-928		
ZORBAX StableBond (80Å) PrepHT							
Column Description	Size (mm)	Particle Size (µm)	SB-C18 USP L1	SB-C8 USP L7	SB-Aq	SB-CN USP L10	SB-Phenyl USP L11
PrepHT Cartridge*	21.2 x 250	7	877250-102	877250-106	877250-114	877250-105	877250-112
	21.2 x 150	7	877150-102	877150-106	877150-114		
	21.2 x 150	5	870150-902	870150-906	870150-914		
	21.2 x 100	5	870100-902	870100-906	870100-914		
	21.2 x 50	5	870050-902	870050-906	870050-914		
PrepHT Guard Cartridge**	17 x 7.5	5	820212-920	820212-915	820212-933	820212-933	820212-915
ZORBAX StableBond (300Å) PrepHT							
Column Description	Size (mm)	Particle Size (µm)	300SB-C18 USP L1	300SB-C8 USP L7	300SB-C3	300SB-CN USP L10	
PrepHT Cartridge*	21.2 x 250	7	897250-102	897250-106	897250-109	897250-105	
	21.2 x 150	7	897150-102	897150-106	897150-109		
	21.2 x 150	5	895150-902	895150-906	895150-909		
	21.2 x 100	5	895100-902	895100-906	895100-909		
	21.2 x 50	5	895050-902	895050-906	895050-909		
PrepHT Guard Cartridge**	17 x 7.5	5	820212-921	820212-918	820212-924	820212-924	
ZORBAX Extend PrepHT							
Column Description	Size (mm)	Particle Size (µm)	Extend-C18				
PrepHT Cartridge*	21.2 x 150	5	770150-902				
	21.2 x 100	5	770100-902				
	21.2 x 50	5	770050-902				
PrepHT Guard Cartridge**	17 x 7.5	5	820212-930				
ZORBAX Original PrepHT							
Column Description	Size (mm)	Particle Size (µm)	Sil USP L3	C18 (ODS) USP L1	C8 USP L7	CN USP L10	NH2 USP L8
PrepHT Cartridge*	21.2 x 250	7	877952-101	877952-102	877952-106	877952-105	877952-108
ZORBAX Rx PrepHT							
Column Description	Size (mm)	Particle Size (µm)	Rx-Sil USP L3	Rx-C18 USP L1			
PrepHT Cartridge*	21.2 x 250	7	877250-101	877967-102			
PrepHT Guard Cartridge**	17 x 7.5	5	820212-919	820212-914			
Accessories for PrepHT Hardware							
Description	Part Number	*Requires PrepHT end fittings 820400-901					
Guard Hardware Kit	820444-901	** Requires Guard hardware kit which contains guard column fitting, seal insertion tool (seal holder and seal pusher), and 1 polymeric seal: P/N 820444-901					
PrepHT End Fittings	820400-901	Larger 30 mm and 50 mm ID columns also available. Please inquire about availability.					
Replacement Seals	820385-901	Configurations not shown are available upon request.					



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