

Adamas[®]



Just Wondering...

Adamas is a word of ancient Greek origin (αδάμας) and later Latin (ādāmās). The meaning of Adamas is Invincible and Unyielding – like a Diamond. Diamonds are well known for their hardness and purity, which are the characteristics that distinguishes our Adamas[®] HPLC Media.



High Performance HPLC Columns A New Platform for HPLC and Prep



Your Specialists in Chromatography

Company Profile

SepaChrom is the brainchild of the founders to create a dedicated reality, unique and able to support the **Chromatography users** optimizing their challenges.

Our Core competence is the manufacturing and trading of **High-Quality** products for **Chromatography**.

SepaChrom product portfolio includes a wide range of in-house manufactured **HPLC** Columns in both **Analytical** and **Preparative** scale, **Flash** cartridges & Instruments, and **Process** scale purification.

Our offer of products for Chromatography includes consumables and accessories, for both **HPLC** and **GC** techniques.

Our brands **Robusta**®, **Adamas**®, **Vydamas**®, **TMC**®, **Purezza**®, **Sepa-Bulk**® are only few of the product lines we propose to the **Chromatographers**.

Our Mission

Decades of experience of our team, combined with a range of High Quality selected products and the most efficient technological solutions, allows **SepaChrom** to be a reference to :

- **Pharma,**
- **Biotech,**
- **Chemical,**
- **Food and Beverage,**
- **Cosmetic,**
- **Environmental,**
- **Clinical**
- **Petrolchemical**

industries, at **R&D** department as well **QC** laboratories and **Production**.

Our commitment is to provide the Highest Technical Support that Chromatographers expect from

Your Specialist in Chromatography



Customers in Mind

The success of **SepaChrom** depends by the complete **satisfaction** of our customers, and consequently by their success.

SepaChrom expertise result in a High-Quality support **pre & after** sales to the Chromatographic Users.

A world-wide Distributor Network will assure the users the best in class technical and commercial support to properly approach their Chromatography challenges.

This include a **fast delivery** of your products from our warehouse to everywhere.



HPLC Columns Introduction

Choosing the Right HPLC Column

Choosing the right column for your application is very important and can be a difficult exercise. However following some simple steps will help you to make the correct choice and positively impact your chromatographic results. Here are some tips :

1. Set Your Separation Goals.

Do you need **High Resolution** or **Maximum Sensitivity**? And is our **Analysis** Time crucial? These are the main questions an HPLC user should consider in the development of a method. You also need to determine whether long column life, low operating cost, or other factors are important.

2. Packing Material.

The choice of the most appropriate media depends on the nature of your compounds and on your goals. The **Right Selectivity** of your packing to obtain a good separation in a relatively short analysis time is the base on which to select the media.

3. Column Format.

Analytical, Semi-Prep or Prep format choice depends on your application and your goals. Inner Diameter and Length will also impact the result of your separation.

Base Material

Polymer-based media such as Polystyrene DVB or Methacrylate offer higher pH stability (pH 1-14) than Silica-based material, so columns packed with these packings can be thoroughly cleaned with strong acids or bases.

However these packings are compressible and may shrink or swell with certain solvents, and they do not offer the same resolution when compared to Silica-based packings.

Silica-based media are physically much stronger and will not shrink or swell. They offer higher resolution and provide sharper peaks compared to Polymer-based material. Silica-based media are also available with a wide range of bonded phases to ensure the widest selectivity for almost any application.

Silica-Based media are compatible with a broad range of polar and non-polar mobile phases and they can be stable to a wide pH range.



Particle Shape

Silica-based media particles can be **Irregular, Spheroidal** or **Spherical** in shape.

Most modern HPLC packings are spherical. A **Spherical** shape particle offers lower back pressure, much higher performance, stability and reproducibility than irregular particles.

Irregular particles have a larger surface area, higher loadability and they are relatively less expensive. These are the reasons why they are still commonly used in prep and process scale purifications.



Spherical



Irregular

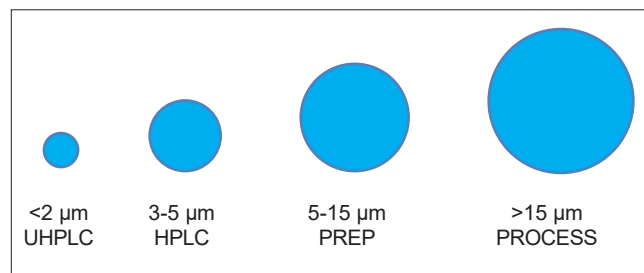
Particle Size

Smaller particle sizes give **Higher Efficiency and Resolution** than larger particle sizes but create higher back-pressure.

Larger particle sizes offer faster flow rates and lower back-pressure.

In analytical applications the typical particle sizes range is from 1.5µm to 10µm diameter, however most of the applications are performed with **3µm and 5µm**, which represent the best compromise between efficiency and back-pressure.

In Preparative applications larger particle sizes are commonly used (10µm to 30µm).

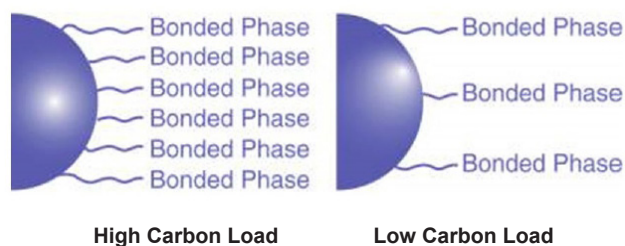


Carbon Load

For **Silica-based Reversed-Phase** packings, a carbon load percentage indicates the amount of functional bonded phase attached to the Silica-base material.

Lower amount of carbon load means that packings are more weakly hydrophobic, which may reduce retention times compared to phases with higher carbon load.

However, a higher carbon load will give higher capacity and often greater separation, especially for compounds of similar hydrophobicity.



Pore Size & Surface Area

Pore Size

Packing materials having smaller pore sizes have higher surface area and consequently a higher capacity than packings with larger pore sizes.

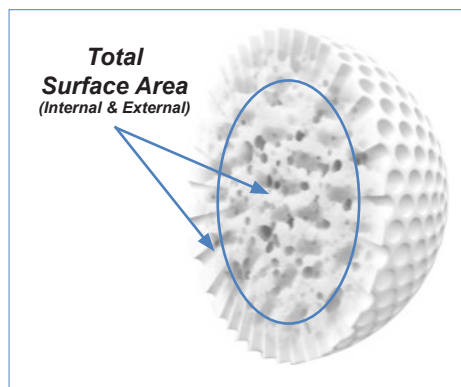
To maximize the interaction between the target molecules and the packing a correct choice of the Pore Size is critical.

In general a 100Å material provide great results for small molecule analysis. For large molecules, such as Proteins and Peptides a 300Å media is typically used.

Surface Area

The Surface Area is the total available surface, most of which is inside the pores, for interaction with the target molecules.

Typically, Small pores means a larger surface area and Large pores means a smaller surface area.



Bonding

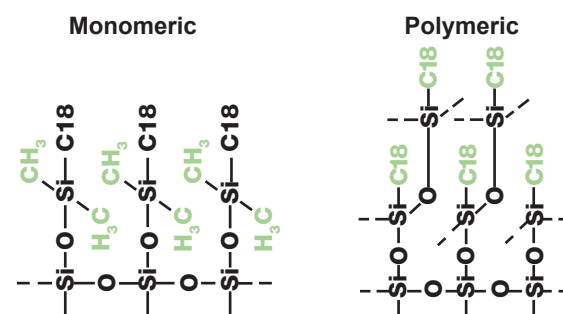
Most commercially available reverse phase HPLC packing materials are Monomeric or Polymeric bonded phases.

When a monofunctional alkylsilane reagent is used to prepare the packing material, the functional chains have a single attachment point to the silica media. These are called **Monomeric** bonded phases.

If di- or trifunctional alkylsilane reagents are used, the bonded phases have functional chains bound to the base silica particle at multiple attachment points and can involve cross-linking between chains.

These are called **Polymeric** bonded phases.

New high-purity silica phases are very stable, whether monomerically or polymerically bonded, however they differ in their selectivity.



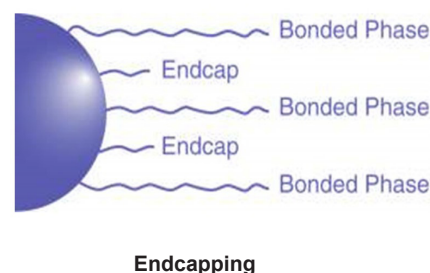
Endcapping

After the bonding procedures to obtain Silica-based reversed-phase packings, a certain amount of residual free silanol groups can remain unreacted on the silica surface.

These groups will interact with polar compounds. Endcapping the bonded phase minimizes these secondary interactions.

Partial or Total endcapping procedures are used to reduce the residual silanols on the silica surface.

Higher endcapping means less interactions with polar compounds while non-endcapped phases mean enhanced polar selectivity, for stronger retention of polar organic compounds.



HPLC Columns Introduction

HPLC Analytical Column Formats

Choosing the right column format is critical to obtain the best performance during your analysis or purification.



Analytical Columns Format

Column Length

When starting a new HPLC method development, the user has to consider the complexity of their sample and the desired run time, in order to find the best column length for their application.

Shorter column length provides faster run times and solvent saving. Usually smaller particle size media is used in shorter column which achieves good resolution in a shorter run time, however complex samples may still need longer columns, even when using smaller particle sizes.

Column I.D.

Smaller internal diameter columns provide better mass sensitivity, require smaller sample size injection, and reduce solvent consumption.

Wider internal diameter columns allow for larger sample sizes and minimize the negative effects of your system's dead volume due to the higher flowrates.

2.1mmID columns work best with a microbore flow cell at your detector and an internal loop injector otherwise you have to tolerate some loss in efficiency and resolution due to system dead volumes.



Column Lengths Available

20-30-50mm Column Length	Fast Separations Work best with 3 μ m Particle Size
75-100-125-150mm Column Length	Standard & Hi-Resolution Separations Work best with 3-5 μ m Particle Size
200-250-300mm Column Length	Standard & Hi-Resolution Separations Work best with 5-10 μ m Particle Size

Analytical Column I.D. Available

2.1mm Column I.D.	High Sensitivity and Low Sample Volume Best use with Microbore Cell and Internal Sample Loop Valve.
3.0mm Column I.D.	High Sensitivity and ideal to reduce solvent consumption Work with standard HPLC instrumentation
4.0mm Column I.D.	Standard Separations Work with standard HPLC instrumentation
4.6mm Column I.D.	Standard Separations Work with standard HPLC instrumentation

Replaceable Frit

In most well-known and popular HPLC Columns, when a backpressure increase occurs, whatever the reason, you have to replace the entire expensive column.

With all **SepaChrom** HPLC Columns you can replace the frit and significantly extend its lifetime.



Full-Guard Cartridges

How can I best protect my HPLC column?

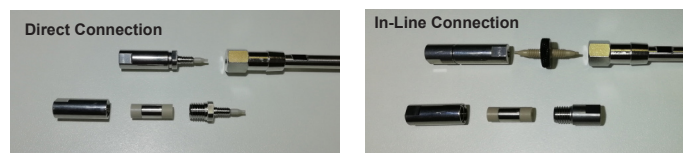
Full-Guard is the convenient protection system for your HPLC column and allows you to change the Guard Cartridge in seconds.

Select the suitable reusable Holder (In-Line or Direct Connect). They work with all Full-Guard Cartridges with following IDs :

2.1 - 3.0 - 4.0 - 4.6 mm ID

Full-Guard Holder

CD0100	Full-Guard Holder - Direct Connection
CD0101	Full-Guard Holder - In-Line Connection



HPLC Columns Introduction

HPLC Column Selection

A Comparison of Reversed - Phase Columns

Typically, chromatographers choose HPLC columns by comparing physical characteristics, such as surface area and carbon load, however quite often this does not provide enough information for adequate column selection.

In the late 1990's Dr. Lloyd Snyder initiated working on what is known as Hydrophobic Subtraction Model (HSM) which then evolved, thanks to others expertise as Dr. John Dolan, Dr. Uwe Neue, Prof. Peter Carr and Prof. Dan Marchand, in a broader understanding of selectivity in Reversed-Phase HPLC (RPLC).

The Hydrophobic Subtraction Model (HSM) has been developed to quantitatively describe the chromatographic selectivity of reversed-phase (RP) HPLC columns. Upon characterization of a given Reversed Phase packing, the HS model provide quantitative values for five parameters including the phase hydrophobicity (H), its resistance to penetration by a solute molecule (S*), the hydrogen-bond acidity & basicity (A & B) and its interaction with ionized solute molecules (C).

These parameters describe the physico-chemical nature of the stationary phase.

This chart lists some of the parameters: Hydrophobicity (H), Hydrogen-bond Acidity (A) (A) & Interaction with ionized soluted molecules (C) (at pH 7.0) (C)

Manufacturer	Column name	Hydrogen-bond acidity value (A)	Interaction with ionized soluted molecules value (C)	Hydrophobicity
Advanced Materials Technology	Halo 5 C18	A	C	1,15
Restek	Allure C18	A	C	1,13
Supelco	Ascentis Express C18	A	C	1,13
Advanced Materials Technology	Halo C18	A	C	1,10
Thermo/Hypersil	Accucore C18	A	C	1,09
Agilent Technologies	Zorbax Extend C18	A	C	1,09
Thermo/Hypersil	Accucore XL C18	A	C	1,09
Shimadzu	Shim-pack XR-ODS II	A	C	1,09
Agilent Technologies	Zorbax C18	A	C	1,08
Hichrom	Ultrasphere ODS	A	C	1,08
Grace/Alltech (Formerly)	Alltima HP C18 High Load	A	C	1,08
Waters	Cortecs C18	A	C	1,08
Agilent Technologies	Zorbax Rx-18	A	C	1,07
Supelco	Ascentis C18	A	C	1,07
Agilent Technologies	Zorbax Eclipse XDB-C18	A	C	1,07
SepaChrom	Robusta C18	A	C	1,06
SepaChrom	Adamas C18-Extreme	A	C	1,05
Grace/Vydac (Formerly)	Denali 120A C18	A	C	1,05
Grace/Grom (Formerly)	GROM Sapphire 110 C18	A	C	1,05
Waters	Symmetry C18	A	C	1,05
Kromasil by Nouryon	Kromasil 100 5 C18	A	C	1,05
Thermo/Hypersil	Hypersil 100 C18	A	C	1,04
Waters	Nova-Pak C18	A	C	1,04
ACT	ACE 5 C18-HL	A	C	1,04
SepaChrom	Adamas C18-X-Bond	A	C	1,04
Waters	Cortecs C18+	A	C	1,04
Waters	Sunfire C18	A	C	1,03
Merck KGaA (EMD Millipore)	Superspher 100 RP-18e	A	C	1,03
Restek	Pinnacle II C18	A	C	1,03
Agilent Technologies	Zorbax Eclipse Plus C18	A	C	1,03
Nacalai Tesque	COSMOSIL C18-MS-II	A	C	1,03
Grace/Grom (Formerly)	GROM-SIL 120 ODS-3 CP	A	C	1,02
Waters	DeltaPak C18 100A	A	C	1,02
Waters	HSS C18	A	C	1,02
Phenomenex	Prodigy ODS(3)	A	C	1,02
Supelco	Supelcosil LC-18	A	C	1,01
Nacalai Tesque	COSMOSIL C18-AR-II	A	C	1,01
Phenomenex	Luna C18	A	C	1,01
Shiseido	Capcell Pak C18 MGII	A	C	1,01
Restek	Pinnacle DB C18	A	C	1,01
GL Sciences	InertSustain C18	A	C	1,01

HPLC Columns Introduction

HPLC Column Selection

A Comparison of Reversed - Phase Columns

Manufacturer	Column name	Hydrogen-bond acidity value ^(A)	Interaction with ionized soluted molecules value ^(C)	Hydrophobicity
Shimadzu	Shim-pack XR-ODS	A	C	1,01
Phenomenex	Kinetex EVO C18	A	C	1,01
SepaChrom	Adamas C18-Classic	A	C	1,01
Advanced Materials Technology	Halo AQ-C18	A	C	1,00
Grace/Alltech (Formerly)	Allsphere ODS2	A	C	1,00
Merck KGaA (EMD Millipore)	LiChrospher 100 RP-18	A	C	1,00
Grace/Jones (Formerly)	Genesis C18 120A	A	C	1,00
GL Sciences	Inertsil ODS-2	A	C	1,00
Waters	XBridge C18	A	C	1,00
ACT	ACE 5 C18	A	C	1,00
Phenomenex	Luna C18(2)	A	C	1,00
Waters	Acquity UPLC BEH C18	A	C	1,00
Agilent Technologies	Zorbax StableBond 80A C18	A	C	0,99
Grace/Alltech (Formerly)	Alltima C18	A	C	0,99
Thermo/Hypersil	Hypersil BDS C18	A	C	0,99
Phenomenex	Prodigy ODS(2)	A	C	0,99
Nomura	Develosil ODS-UG-5	A	C	0,99
GL Sciences	Inertsil ODS-3	A	C	0,99
Thermo/Hypersil	Hypersil ODS-2	A	C	0,98
Grace/Alltech (Formerly)	Adsorbosphere C18	A	C	0,98
Phenomenex	Synergi Max-RP	A	C	0,98
Grace/Alltech (Formerly)	Alltima HP C18	A	C	0,98
Supelco	Discovery C18	A	C	0,98
Waters	XTerra MS C18	A	C	0,98
Phenomenex	Luna Omega C18	A	C	0,98
Waters	Spherisorb S5 ODSB	A	C	0,97
Tosoh Bioscience	TSKgel ODS-120T	A	C	0,97
Supelco	Supelcosil LC-18-DB	A	C	0,97
Phenomenex	Kinetex XB-C18	A	C	0,97
Bischoff	ProntoSIL 120 C18-AQ	A	C	0,97
Thermo/Hypersil	Hypersil ODS	A	C	0,97
ES Industries	Chromegabond WR C18	A	C	0,97
Tosoh Bioscience	TSKgel ODS-80T	A	C	0,96
Waters	Spherisorb ODS-2	A	C	0,96
Phenomenex	Gemini C18 110A	A	C	0,96
Phenomenex	Kinetex C18 100A	A	C	0,96
YMC	YMC-Pack ODS-AQ	A	C	0,96
Fortis Technologies	Fortis C18	A	C	0,96
Agilent Technologies	Poroshell 120 SB-C18	A	C	0,96
Shiseido	Capcell Pak C18 MG III	A	C	0,95
Shiseido	Capcell Pak C18 IF	A	C	0,95
SepaChrom	Adamas C18-Select	A	C	0,95
YMC	YMC-Triart C18	A	C	0,92
Thermo/Hypersil	Hypersil GOLD aQ	A	C	0,91
Waters	Atlantis dC18	A	C	0,91
GL Sciences	Inertsil ODS-4	A	C	0,91
Merck KGaA (EMD Millipore)	LiChrosorb RP-18	A	C	0,90
Macherey Nagel	Nucleosil C18	A	C	0,90
ACT	Ace 5 C18-PFP	A	C	0,90
Tosoh Bioscience	TSKgel ODS-120A	A	C	0,89
Grace/Alltech (Formerly)	Prevail C18	A	C	0,88
Grace/Alltech (Formerly)	Alltima C18 AQ	A	C	0,88
Thermo/Hypersil	Hypersil GOLD	A	C	0,88

HPLC Columns Introduction

HPLC Column Selection

A Comparison of Reversed - Phase Columns

Manufacturer	Column name	Hydrogen-bond acidity value A	Interaction with ionized soluted molecules value C	Hydrophobicity
SepaChrom	Adamas C18-AQ	A	C	0,85
Merck KGaA (EMD Millipore)	Purospher RP-18	A	C	0,84
Grace/Alltech (Formerly)	GraceSmart RP 18	A	C	0,83
Grace/Alltech (Formerly)	Econosphere C18	A	C	0,81
Phenomenex	Partisil ODS(3)	A	C	0,81
Waters	MicroBondapak C18	A	C	0,79
Grace/Alltech (Formerly)	Platinum C18	A	C	0,78
Grace/Alltech (Formerly)	VisionHT C18	A	C	0,78
Grace/Alltech (Formerly)	Alltima C18-LL	A	C	0,78
Waters	Spherisorb ODS-1	A	C	0,68
Grace/Alltech (Formerly)	Platinum EPS C18	A	C	0,61
Agilent Technologies	Zorbax SB-AQ	A	C	0,59

Hydrophobic Subtraction Model (HSM) chart

H= Hydrophobicity

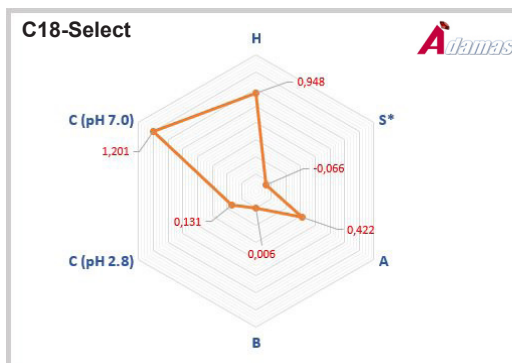
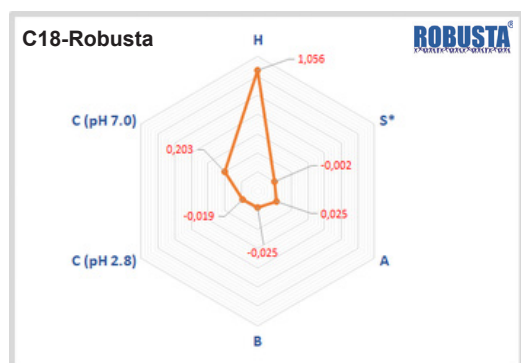
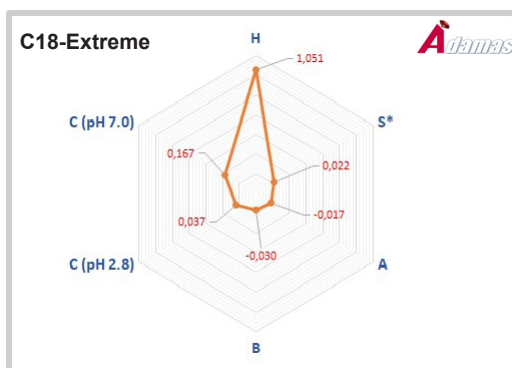
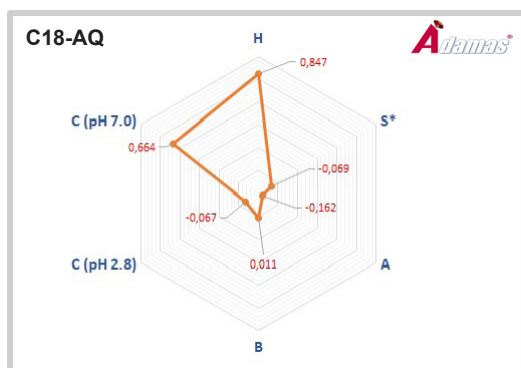
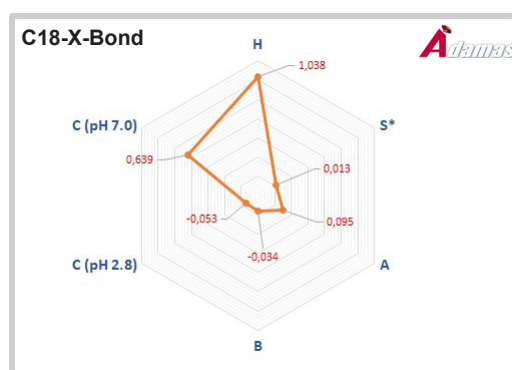
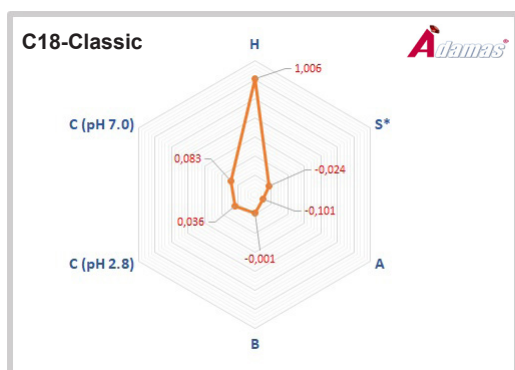
S*= Resistance to penetration by a solute molecule

A= Hydrogen-bond acidity

B= Hydrogen-bond basicity

C(pH2.8)= interaction with ionized solute molecules

C(pH7.0)= interaction with ionized solute molecules



Adamas® Ultra High Purity Silica Platform for HPLC



Adamas® is a media platform for analytical and preparative scale-up application based on Ultra High-Purity silica. The very low metal content ensures high stability, high performance and low bleed columns for high demanding applications.

Often, in a method development process and in an effort to improve sample throughput, users will run a “standard method” on a “standard single media; **Adamas®** has a wide range of chemistries, including five C18 phases, which ensure the maximum selectivity choice to achieve your best separation. A correct strategy will compare phases with complementary selectivity which gives confidence that one of them will produce the required separation. Resolution — that’s the key!

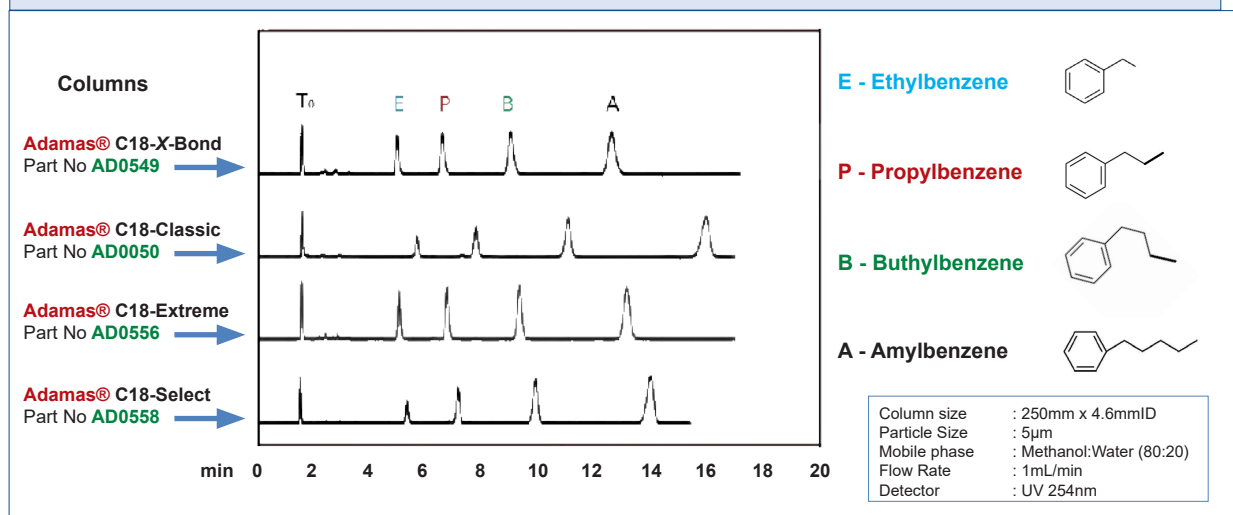


MADE IN ITALY

- **Better Peak Symmetry** : Ultra High-purity silica eliminates peak tailing problems
- **Long Column Life** : Exceptional column stability minimizes downtime and reduces cost
- **Ideal for Critical Analysis** : Low to no detectable column bleed
- **5 Selectivities of C18 Phases** : Optimizes retention, resolution, and analysis time

Adamas® C18 Selectivity	Adamas® C18-Classic	The “Classic” C18 Column, 17% Carbon Load, fully End-capped, good resistance to alkaline pH, High Hydrophobicity due to the “brush-like” C18 chains distribution, Traditional Interaction.
	Adamas® C18-Extreme	This phase is typically used in Extreme pH condition (pH 1-12) whilst still showing a good steric selectivity. The very low bleed ensures excellent MS compatibility even in acidic conditions.
	Adamas® C18-X-Bond	Proprietary bonding, (similar to Tri-art or Xbridge technologies). The very high steric selectivity and lower hydrophobicity results in an interesting alternative to the Classic C18. MS Compatible
	Adamas® C18-Select	The fully exposed silanols (No End-capping) results in a high interaction with polar groups and is an excellent choice for polar compound separation.
	Adamas® C18-AQ	Long hydrocarbon chains can collapse when used in 100% aqueous conditions. Adamas® C18-AQ is fully compatible with 100% aqueous mobile phase due to a double functional group. 11% Carbon Load.

Selectivity of 4 **Adamas®** C18 columns : C18-Classic, C18-X-Bond, C18-Extreme and C18-Select





Adamas® C18-Classic Reversed-Phase HPLC Columns

- Monomeric Bonding Fully End-capped
- High Hydrophobicity Phase
- USP L-Code : L1



Adamas® - Silica Specifications		
Material	Ultra High Purity Spherical Silica	
Porosity	100Å	
Surface Area	310 m ² /g	
Pore Volume	0.80 mL/g	
Particle Size	1.8µ, 3µ - 3.5µ, 5µ - 7µ - 10µ - 15µ	
Metal Content		Typical
	Na, Mg, Al, Ca, Fe, Zr	< 1mg/kg

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® C18-Classic	3µ	50mm	AD0041	AD0051	AD0061	AD0071
	3µ	75mm	AD0042	AD0052	AD0062	AD0072
	3µ	100mm	AD0043	AD0053	AD0063	AD0073
	3µ	125mm	AD0044	AD0054	AD0064	AD0074
	3µ	150mm	AD0045	AD0055	AD0065	AD0075
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0183	CD0182	CD0181	CD0180
	5µ	50mm	AD0857	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0046	AD0056	AD0066	AD0076
	5µ	125mm	AD0047	AD0057	AD0067	AD0077
	5µ	150mm	AD0048	AD0058	AD0068	AD0078
	5µ	200mm	AD0049	AD0059	AD0069	AD0079
	5µ	250mm	AD0050	AD0060	AD0070	AD0080
	5µ	300mm	AD0528	AD0541	AD0554	AD0567
	Full-Guard - 5µ*	10mm	CD0187	CD0186	CD0185	CD0184

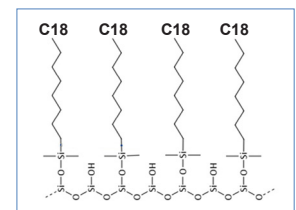


The "Brush-Like" C18 chains distribution.

C18 hydrocarbon chains are linked to the surface silica silanols.

A very common bonding is named "brush-like" because the long C18 chains looks like bristles on a brush.

This type of bonding enhances the hydrophobic interactions.



* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No **CD0100** - Direct Connection
Part.No **CD0101** - In-Line Connection

We are committed to providing you the High-Quality HPLC columns and technical support.

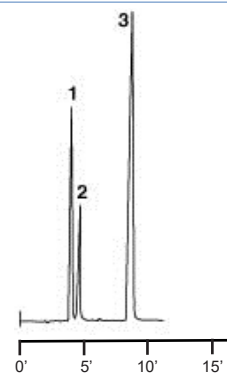
Each **Adamas®** HPLC column is individually tested under our strictly QC Test parameters prior to shipment. All our HPLC columns are fully guaranteed for best performance.



Anilines

Column : **Adamas®** C18-Classic - 5µ
Stock N# : **AD0050**
Dimension : 250mm x 4.6mm ID
Mobile Phase : 60% 50mM Phosphate buffer
: 40% Acetonitrile
Flow Rate : 1 mL/min
Detector : UV at 254nm

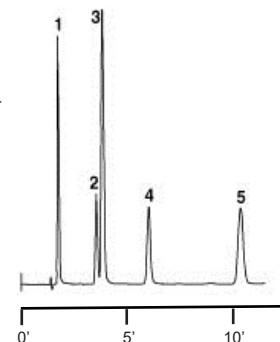
Sample
1. Aniline
2. N,N-Diethylaniline
3. N,N-Dimethylaniline



Aromatic Acids

Column : **Adamas®** C18-Classic - 5µ
Stock N# : **AD0048**
Dimension : 150mm x 4.6mm ID
Mobile Phase : 60% 50mM Phosphate buffer
: 40% Methanol
Flow Rate : 1 mL/min
Detector : UV at 254nm

Sample
1. Vanilmandelic Acid (VMA)
2. Homovanilic Acid (HVA)
3. Vanillic Acid
4. Salicylic Acid
5. Benzoic Acid



Adamas® C18-Extreme

Reversed-Phase HPLC Columns

- Excellent Performance, compatible with Extreme pH Conditions (1-12)
- Good Steric Selectivity - MS Compatible
- USP L-Code : L1



Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® C18-Extreme	3µ	50mm	AD0121	AD0131	AD0141	AD0151
	3µ	75mm	AD0122	AD0132	AD0142	AD0152
	3µ	100mm	AD0123	AD0133	AD0143	AD0153
	3µ	125mm	AD0124	AD0134	AD0144	AD0154
	3µ	150mm	AD0125	AD0135	AD0145	AD0155
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0199	CD0198	CD0197	CD0196
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0108	AD0109	AD0088	AD0089
	5µ	125mm	AD0170	AD0176	AD0128	AD0129
	5µ	150mm	AD0230	AD0236	AD0177	AD0178
	5µ	200mm	AD0430	AD0436	AD0237	AD0238
	5µ	250mm	AD0556	AD0557	AD0437	AD0438
	5µ	300mm	AD0208	AD0218	AD0148	AD0158
	Full-Guard - 5µ*	10mm	CD0203	CD0202	CD0201	CD0200

Full-Guard System

Sepachrom **Full-Guard** system is designed to fully protect your column.

Replacing the Guard Cartridge is easy and takes just a few seconds.

The holder is reusable and works with all analytical I.D columns (2.1-3.0-4.0-4.6mm IDs).



Direct Connection
(Part.No CD0100)



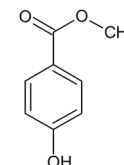
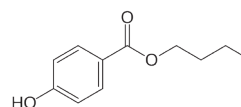
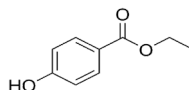
In-Line Connection
(Part.No CD0101)

* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No CD0100 - Direct Connection
Part.No CD0101 - In-Line Connection

Parabens Mixture

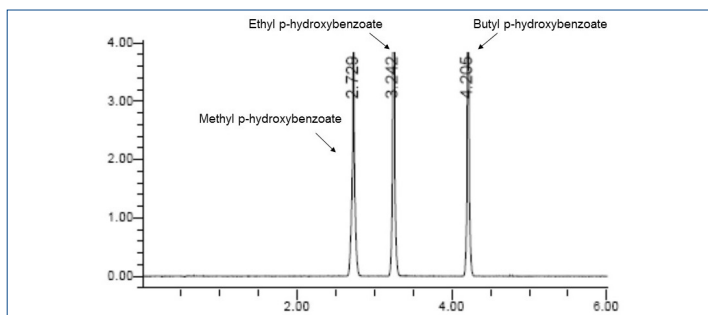
Column : Adamas® C18-Extreme Ethyl-p-hydroxybenzoate Butyl-p-hydroxybenzoate Methyl-p-hydroxybenzoate

Stock N# : AD0121
Particle size : 3µm
Length/ID : 50mm x 4.6mm
Flow Rate : 1 mL/min
Detector : UV 254nm
Injection : 5µL



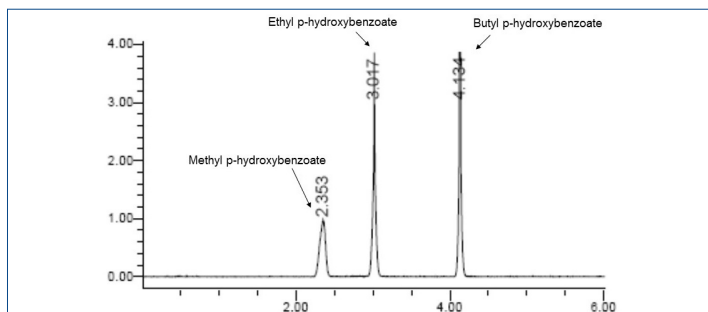
Acidic Conditions

Mobile Phase A : 0.1% TFA / Acetonitrile (95:5)
Mobile Phase B : H₂O / Acetonitrile (5:95)
Gradient : A/B (90:10) to (10:90) in 5 min
 : A/B (10:90) to (0:100) in 0.1 min



Basic Conditions

Mobile Phase A : 0.05% NH₃ / Acetonitrile (95:5)
Mobile Phase B : H₂O / Acetonitrile (5:95)
Gradient : A/B (90:10) to (10:90) in 5 min
 : A/B (10:90) to (0:100) in 0.1 min



Adamas® C18-X-Bond

Reversed-Phase HPLC Columns

- Proprietary Bonding - Very High Steric Selectivity
- MS Compatible - Low Bleeding in Acidic Condition
- USP L-Code : L1



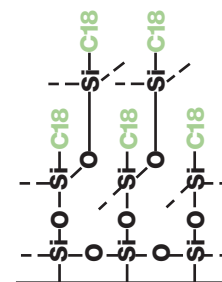
Ordering Information

Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® C18-X-Bond	3µ	50mm	AD0081	AD0091	AD0101	AD0111
	3µ	75mm	AD0082	AD0092	AD0102	AD0112
	3µ	100mm	AD0083	AD0093	AD0103	AD0113
	3µ	125mm	AD0084	AD0094	AD0104	AD0114
	3µ	150mm	AD0085	AD0095	AD0105	AD0115
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0191	CD0190	CD0189	CD0188
	5µ	50mm	AD0859	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0106	AD0107	AD0086	AD0087
	5µ	125mm	AD0166	AD0167	AD0126	AD0127
	5µ	150mm	AD0226	AD0227	AD0168	AD0169
	5µ	200mm	AD0426	AD0427	AD0228	AD0229
	5µ	250mm	AD0549	AD0555	AD0428	AD0429
	5µ	300mm	AD0207	AD0217	AD0147	AD0157
	Full-Guard - 5µ*	10mm	CD0195	CD0194	CD0193	CD0192



Polymeric Bonding.

In the vertically polymerized stationary phase, the trichloro-silane derivatization results in a very complex cross-linked surface, including multiple layers.



* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No **CD0100** - Direct Connection
Part.No **CD0101** - In-Line Connection

Steric Selectivity & Bonding Technology

There are many factors that influence the performance of a high performance liquid chromatography (HPLC) stationary phase. Steric selectivity means the phase's ability to separate planar structures (triphenylene) and those with stereo spatial volume (o-terphenyl).

Our proprietary bonding provides a higher steric selectivity compared to monomeric bonded phases. The steric selectivity of a column also depends on the solvent strength.

Why do we want to characterize column selectivity? Mainly to choose a column of very different selectivity.

In method development there is sometimes the need to change selectivity in order to separate overlapping peaks.

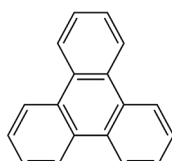
Steric Selectivity

Test operative conditions:

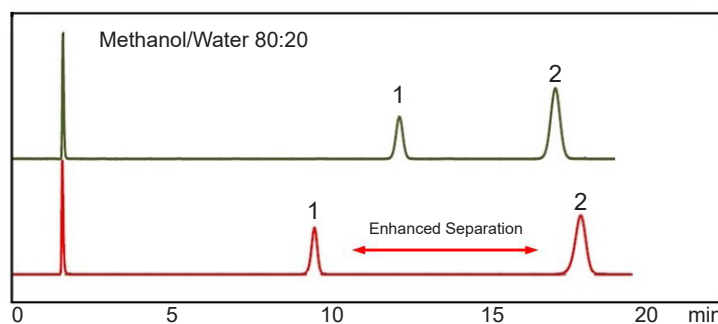
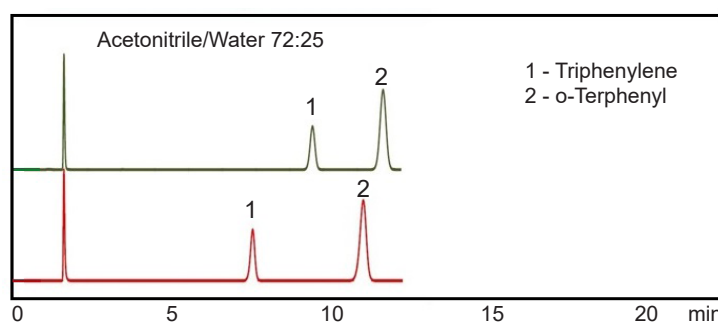
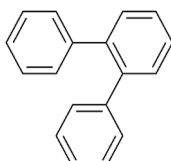
Column 1 (Green) : Adamas® C18-Classic
Column 2 (Red) : Adamas® C18-X-Bond

Particle size : 5µ
Length : 150mm
ID : 4.6mm
Flow Rate : 1 mL/min
Detector : UV 254nm

Triphenylene



o-Terphenyl

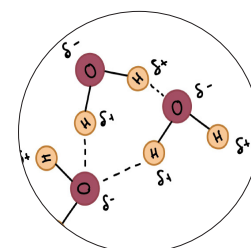


Adamas® C18-Select

Reversed-Phase HPLC Columns

- Monomeric Bonding and NO End-capping (Leaving Free Surface Silanols)
- Ideal for Polar Compounds and Vitamin Analysis
- USP L-Code : L1

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® C18-Select	3μ	50mm	AD0161	AD0171	AD0181	AD0191
	3μ	75mm	AD0162	AD0172	AD0182	AD0192
	3μ	100mm	AD0163	AD0173	AD0183	AD0193
	3μ	125mm	AD0164	AD0174	AD0184	AD0194
	3μ	150mm	AD0165	AD0175	AD0185	AD0195
	3μ	200mm	ASK	ASK	ASK	ASK
	3μ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3μ*	10mm	CD0207	CD0206	CD0205	CD0204
	5μ	50mm	ASK	ASK	ASK	ASK
	5μ	75mm	ASK	ASK	ASK	ASK
	5μ	100mm	AD0110	AD0116	AD0090	AD0096
	5μ	125mm	AD0179	AD0180	AD0130	AD0136
	5μ	150mm	AD0239	AD0240	AD0186	AD0187
	5μ	200mm	AD0439	AD0440	AD0406	AD0407
	5μ	250mm	AD0558	AD0562	AD0523	AD0529
	5μ	300mm	AD0209	AD0219	AD0149	AD0159
	Full-Guard - 5μ*	10mm	CD0211	CD0210	CD0209	CD0208



* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No **CD0100** - Direct Connection
Part.No **CD0101** - In-Line Connection



Just Wondering

Adamas is a word of ancient Greek origin (ἀδάμας) and later Latin (ādāmās). The meaning of **Adamas** is **Invincible** and **Unyielding** - like a **Diamond**.

Diamonds are well known for their **hardness** and **purity**, which are the characteristics that distinguishes our HPLC Media.

Point of Interest :

Although new resources for diamonds are being explored and discovered, the supply of these gems remains limited.

This is understandable once you learn that more than 250 tons of ore need to be blasted, crushed and processed to yield just one carat of rough diamond. Further, only 20 percent of all rough diamonds are suitable for gem cutting.

Clarity is an indication of a diamond's purity. Clarity is determined by a diamond's naturally occurring internal characteristics. These characteristics are sometimes not visible to the naked eye and they are what make each diamond unique.

The characteristics, or inclusions, may look like crystals, feathers, clouds or dark spots and the quantity, size, and location of these inclusions does have an effect on a diamond's value. Diamonds with fewer and smaller inclusions are generally more brilliant, assuming that the colour and cut are the same.

A diamond purity is graded by its relative departure from "flawless"-- the complete absence of inclusions under 10x magnification.

Less than 1% of all diamonds ever found have had no inclusions and can be called flawless (FL) without any inclusions.



Adamas® C18-AQ

Reversed-Phase HPLC Columns

- Hydrophilic Surface C18 Phase
- Compatible with 100% Aqueous Mobile Phase
- For Polar Compounds and Vitamins
- USP L-Code : L1

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® C18-AQ	3µ	50mm	AD0201	AD0211	AD0221	AD0231
	3µ	75mm	AD0202	AD0212	AD0222	AD0232
	3µ	100mm	AD0203	AD0213	AD0223	AD0233
	3µ	125mm	AD0204	AD0214	AD0224	AD0234
	3µ	150mm	AD0205	AD0215	AD0225	AD0235
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0215	CD0214	CD0213	CD0212
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0117	AD0118	AD0097	AD0098
	5µ	125mm	AD0188	AD0189	AD0137	AD0138
	5µ	150mm	AD0408	AD0409	AD0190	AD0196
	5µ	200mm	AD0530	AD0531	AD0410	AD0416
	5µ	250mm	AD0568	AD0569	AD0532	AD0536
	5µ	300mm	AD0210	AD0220	AD0150	AD0160
	Full-Guard - 5µ*	10mm	CD0219	CD0218	CD0217	CD0216



Water Stress Test

With most common C18 HPLC phases, a minimum percentage of organic solvent in the mobile phase is necessary to avoid the collapse of the hydrocarbon chains. This phenomenon is irreversible, so the performance of the column is then compromised.

Sepachrom Adamas® C18-AQ surface chemistry is designed to work in 100% aqueous conditions without compromising the efficiency and performance of the column.

Adamas® C18-AQ selectivity is strongly influenced by the % of aqueous content; >80% of water will result in higher retention of polar compounds. With <50% of water content the reversed phase influence will increase and the column will perform as a RP phase with low carbon load.

Water Stress Test

Test operative conditions:

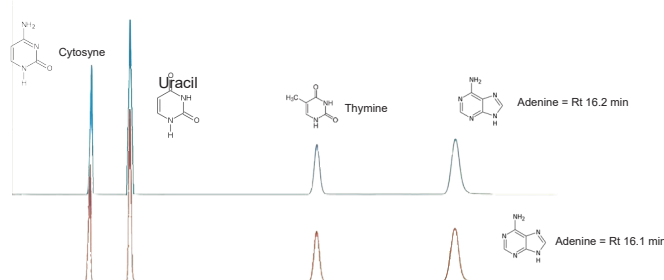
Column : Adamas® C18-AQ
 Part. No : AD0408
 Particle size : 5µ
 Length : 150mm
 ID : 4.6mm

Mobile Phase : 100% mM KH₂PO₄
 Flow Rate : 1 mL/min
 Temperature : 35°C

Starting Conditions



After 1 Week



Adamas® C30

- Carbon Load 17%
- USPL-Code : L62

Ordering Information			
Phase	Particle Size	Length / ID	4.6mm
Adamas® C30	3µ	150mm	AD0860
	3µ	250mm	AD0861
	Full-Guard - 3µ*	10mm	CD0359
	5µ	150mm	AD0862
	5µ	250mm	AD0863
	Full-Guard - 5µ*	10mm	CD0358

Unique Reversed-Phase Selectivity. Ideal for separation of hydrophobic, long-chain, structural isomers (e.g., carotenoids, steroids, lipids, etc.)



* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
 Part.No CD0100 - Direct Connection
 Part.No CD0101 - In-Line Connection

Adamas® C8

Reversed-Phase HPLC Columns

- Polymeric Bonding and End-capped.
- Carbon Load : 9.5%
- Less Hydrophobic than C18 Phases.
- USP L-Code : L7

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® C8	3µ	50mm	AD0281	AD0291	AD0301	AD0311
	3µ	75mm	AD0282	AD0292	AD0302	AD0312
	3µ	100mm	AD0283	AD0293	AD0303	AD0313
	3µ	125mm	AD0284	AD0294	AD0304	AD0314
	3µ	150mm	AD0285	AD0295	AD0305	AD0315
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0119	CD0118	CD0117	CD0116
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0286	AD0296	AD0306	AD0316
	5µ	125mm	AD0287	AD0297	AD0307	AD0317
	5µ	150mm	AD0288	AD0298	AD0308	AD0318
	5µ	200mm	AD0289	AD0299	AD0309	AD0319
	5µ	250mm	AD0290	AD0300	AD0310	AD0320
	5µ	300mm	AD0526	AD0539	AD0552	AD0565
	Full-Guard - 5µ*	10mm	CD0123	CD0122	CD0121	CD0120



Adamas® C4

Reversed-Phase HPLC Columns

- Polymeric Bonding and End-capped
- Carbon Load : 7.0%
- Less Hydrophobic than C18 & C8 Phases.
- USP L-Code : L26

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® C4	3µ	50mm	AD0241	AD0251	AD0261	AD0271
	3µ	75mm	AD0242	AD0252	AD0262	AD0272
	3µ	100mm	AD0243	AD0253	AD0263	AD0273
	3µ	125mm	AD0244	AD0254	AD0264	AD0274
	3µ	150mm	AD0245	AD0255	AD0265	AD0275
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0175	CD0174	CD0173	CD0172
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0246	AD0256	AD0266	AD0276
	5µ	125mm	AD0247	AD0257	AD0267	AD0277
	5µ	150mm	AD0248	AD0258	AD0268	AD0278
	5µ	200mm	AD0249	AD0259	AD0269	AD0279
	5µ	250mm	AD0250	AD0260	AD0270	AD0280
	5µ	300mm	AD0527	AD0540	AD0553	AD0566
	Full-Guard - 5µ*	10mm	CD0179	CD0178	CD0177	CD0176



* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No CD0100 - Direct Connection
Part.No CD0101 - In-Line Connection

Adamas® Phenyl

Reversed-Phase HPLC Columns

- Monomeric Bonding and End-capped.
- Carbon Load : 11.0%
- USP L-Code : L11

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® Phenyl	3µ	50mm	AD0441	AD0451	AD0461	AD0471
	3µ	75mm	AD0442	AD0452	AD0462	AD0472
	3µ	100mm	AD0443	AD0453	AD0463	AD0473
	3µ	125mm	AD0444	AD0454	AD0464	AD0474
	3µ	150mm	AD0445	AD0455	AD0465	AD0475
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0143	CD0142	CD0141	CD0140
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0446	AD0456	AD0466	AD0476
	5µ	125mm	AD0447	AD0457	AD0467	AD0477
	5µ	150mm	AD0448	AD0458	AD0468	AD0478
	5µ	200mm	AD0449	AD0459	AD0469	AD0479
	5µ	250mm	AD0450	AD0460	AD0470	AD0480
	5µ	300mm	AD0522	AD0535	AD0548	AD0561
	Full-Guard - 5µ*	10mm	CD0147	CD0146	CD0145	CD0144



Adamas® Phenyl-Hexyl

Reversed-Phase HPLC Columns

- Proprietary Bonding.
- USP L-Code : L11



Unique Reversed-Phase Selectivity, complementary to C18 phase, ideal for Polar Aromatic and Heterocyclic compounds separation.

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® Phenyl-Hexyl	3µ	50mm	AD0798	AD0805	AD0810	AD0816
	3µ	75mm	AD0799	AD0806	AD0811	AD0817
	3µ	100mm	AD0800	AD0807	AD0812	AD0818
	3µ	125mm	AD0801	AD0808	AD0813	AD0819
	3µ	150mm	AD0802	AD0809	AD0814	AD0820
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0259	CD0258	CD0257	CD0256
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0796	AD0797	AD0794	AD0795
	5µ	125mm	AD0822	AD0823	AD0803	AD0804
	5µ	150mm	AD0828	AD0829	AD0824	AD0825
	5µ	200mm	AD0832	AD0833	AD0830	AD0831
	5µ	250mm	AD0836	AD0837	AD0834	AD0835
	5µ	300mm	AD0826	AD0827	AD0815	AD0821
	Full-Guard - 5µ*	10mm	CD0263	CD0262	CD0261	CD0260



* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No CD0100 - Direct Connection
Part.No CD0101 - In-Line Connection

Adamas® - Normal-Phase HPLC Columns

- Ultra High Purity Spherical Silica
- Diol, Cyano, Amino, Silica and HILIC phases
- 100Å Porosity
- 310 m²/g Surface Area

Normal-Phase	
Carbon Load	
Diol	4.0%
Cyano	6.5%
Amino	4.0%
Silica	n/a
HILIC	n/a

Adamas® Diol

Normal-Phase HPLC Columns

- Provide Unique Selectivity -
- Alternative to Silica phase - Reduced Interaction of Polar Compounds
- USP L-Code : L20

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® Diol	3µ	50mm	AD0361	AD0371	AD0381	AD0391
	3µ	75mm	AD0362	AD0372	AD0382	AD0392
	3µ	100mm	AD0363	AD0373	AD0383	AD0393
	3µ	125mm	AD0364	AD0374	AD0384	AD0394
	3µ	150mm	AD0365	AD0375	AD0385	AD0395
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0167	CD0166	CD0165	CD0164
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0366	AD0376	AD0386	AD0396
	5µ	125mm	AD0367	AD0377	AD0387	AD0397
	5µ	150mm	AD0368	AD0378	AD0388	AD0398
	5µ	200mm	AD0369	AD0379	AD0389	AD0399
	5µ	250mm	AD0370	AD0380	AD0390	AD0400
	5µ	300mm	AD0524	AD0537	AD0550	AD0563
	Full-Guard - 5µ*	10mm	CD0171	CD0170	CD0169	CD0168



Adamas® Cyano

Normal-Phase HPLC Columns

- Proprietary Bonding
- Very Stable Cyano phase
- USP L-Code : L10

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® Cyano	3µ	50mm	AD0321	AD0331	AD0341	AD0351
	3µ	75mm	AD0322	AD0332	AD0342	AD0352
	3µ	100mm	AD0323	AD0333	AD0343	AD0353
	3µ	125mm	AD0324	AD0334	AD0344	AD0354
	3µ	150mm	AD0325	AD0335	AD0345	AD0355
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0127	CD0126	CD0125	CD0124
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0326	AD0336	AD0346	AD0356
	5µ	125mm	AD0327	AD0337	AD0347	AD0357
	5µ	150mm	AD0328	AD0338	AD0348	AD0358
	5µ	200mm	AD0329	AD0339	AD0349	AD0359
	5µ	250mm	AD0330	AD0340	AD0350	AD0360
	5µ	300mm	AD0525	AD0538	AD0551	AD0564
	Full-Guard - 5µ*	10mm	CD0131	CD0130	CD0129	CD0128



* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No **CD0100** - Direct Connection
Part.No **CD0101** - In-Line Connection

Adamas® Amino

Normal-Phase HPLC Columns

- Amino Groups offer Polar Selectivity in RP & NP, Ion-exchange or HILIC conditions
- Ideal for Carbohydrate analysis
- USP L-Code : L8

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® Amino	3µ	50mm	AD0001	AD0011	AD0021	AD0031
	3µ	75mm	AD0002	AD0012	AD0022	AD0032
	3µ	100mm	AD0003	AD0013	AD0023	AD0033
	3µ	125mm	AD0004	AD0014	AD0024	AD0034
	3µ	150mm	AD0005	AD0015	AD0025	AD0035
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0135	CD0134	CD0133	CD0132
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0006	AD0016	AD0026	AD0036
	5µ	125mm	AD0007	AD0017	AD0027	AD0037
	5µ	150mm	AD0008	AD0018	AD0028	AD0038
	5µ	200mm	AD0009	AD0019	AD0029	AD0039
	5µ	250mm	AD0010	AD0020	AD0030	AD0040
	5µ	300mm	AD0533	AD0546	AD0559	AD0572
	Full-Guard - 5µ*	10mm	CD0139	CD0138	CD0137	CD0136



Adamas® Silica

Normal-Phase HPLC Columns

- The Base Material for all Adamas® HPLC Column line.
- USP L-Code : L3

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® Silica	3µ	50mm	AD0481	AD0491	AD0501	AD0511
	3µ	75mm	AD0482	AD0492	AD0502	AD0512
	3µ	100mm	AD0483	AD0493	AD0503	AD0513
	3µ	125mm	AD0484	AD0494	AD0504	AD0514
	3µ	150mm	AD0485	AD0495	AD0505	AD0515
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0151	CD0150	CD0149	CD0148
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0486	AD0496	AD0506	AD0516
	5µ	125mm	AD0487	AD0497	AD0507	AD0517
	5µ	150mm	AD0488	AD0498	AD0508	AD0518
	5µ	200mm	AD0489	AD0499	AD0509	AD0519
	5µ	250mm	AD0490	AD0500	AD0510	AD0520
	5µ	300mm	AD0521	AD0534	AD0547	AD0560
	Full-Guard - 5µ*	10mm	CD0155	CD0154	CD0153	CD0152



* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No CD0100 - Direct Connection
Part.No CD0101 - In-Line Connection

Adamas® HILIC

Normal-Phase HPLC Columns

- Monomeric Bonding and NO End-capping (Leaving Free Surface Silanols)
- Ideal for Polar Compounds and Vitamin Analysis
- USP L-Code : L3

Ordering Information						
Phase	Particle Size	Length / ID	4.6mm	4.0mm	3.0mm	2.1mm
Adamas® HILIC	3µ	50mm	AD0401	AD0411	AD0421	AD0431
	3µ	75mm	AD0402	AD0412	AD0422	AD0432
	3µ	100mm	AD0403	AD0413	AD0423	AD0433
	3µ	125mm	AD0404	AD0414	AD0424	AD0434
	3µ	150mm	AD0405	AD0415	AD0425	AD0435
	3µ	200mm	ASK	ASK	ASK	ASK
	3µ	250mm	ASK	ASK	ASK	ASK
	Full-Guard - 3µ*	10mm	CD0159	CD0158	CD0157	CD0156
	5µ	50mm	ASK	ASK	ASK	ASK
	5µ	75mm	ASK	ASK	ASK	ASK
	5µ	100mm	AD0119	AD0120	AD0099	AD0100
	5µ	125mm	AD0197	AD0198	AD0139	AD0140
	5µ	150mm	AD0417	AD0418	AD0199	AD0200
	5µ	200mm	AD0542	AD0543	AD0419	AD0420
	5µ	250mm	AD0570	AD0571	AD0544	AD0545
	5µ	300mm	AD0206	AD0216	AD0146	AD0156
	Full-Guard - 5µ*	10mm	CD0163	CD0162	CD0161	CD0160

* 3/pkg - Full-Guard Cartridges require Full-Guard Holder. Two versions available :
Part.No **CD0100** - Direct Connection
Part.No **CD0101** - In-Line Connection

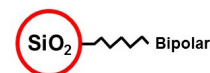


Hydrophilic Interaction Chromatography HILIC

Hydrophilic Interaction Chromatography (HILIC) is a technique used to separate polar or ionic compounds. HILIC uses polar stationary phases and organic mobile phases as normally used in Normal Phase Chromatography (NP). When a polar stationary phase is used with a mobile phase high in organic concentration, the water (more polar) will adsorb on the surface creating a semi-stagnant, water-rich stationary phase and a water depleted mobile phase. Polar analytes can then partition in to aqueous-enriched phase and can undergo ionic cation exchange interaction with silanol groups. This will enhance the retention of polar compounds and results in their high loading capacities.

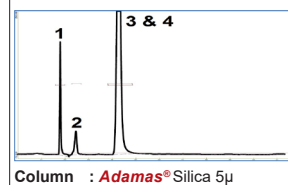
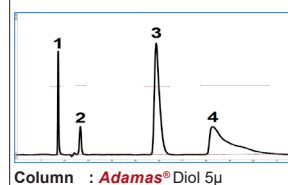
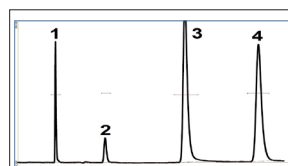
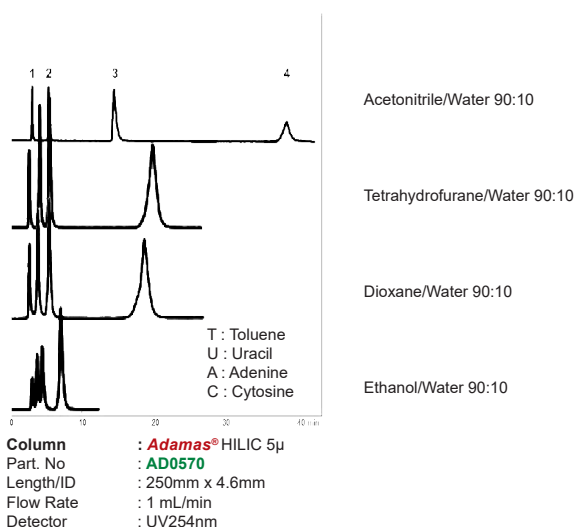
Adamas® HILIC media has bipolar functional groups, covalently bonded on to the silica surface and can be used for separation and large scale purification of a wide range of hydrophilic compounds.

Adamas® HILIC



Higher Interactions
than other conventional
HILIC Phases as
-OH & -Diol

Retention vs. Mobile Phases



Comparison of HILIC Columns

Method :
 Length/ID : 150mm x 4.6mm
 Mobile Phase : Acetonitrile/Water 90:10
 Flow Rate : 1 mL/min
 Detector : UV254nm

- 1 : Toluene
- 2 : Uracil
- 3 : Adenine
- 4 : Cytosine



1 : Toluene



2 : Uracil



3 : Adenine



4 : Cytosine

Other products available from SepaChrom

HPLC

HPLC Silica Based Columns for Routine Analysis
 HPLC & UHPLC Silica Based Columns for Small Molecules Separation
 HPLC Silica Based Columns for Large Molecules Separation
 HPLC Silica Based Columns for Traditional Chinese Medicine
 Polymer Base Columns for Carbohydrate & Organic Acids Analysis Chiral HPLC Columns
 Ion Chromatography Columns for Anions and Cations Analysis

VYdamas®



ROBUSTA®

Adamas®

MEDIA

Irregular & Spherical Silica Gel for Flash, Preparative & Industrial Purification
 Raw & Bonded Silica Gel for Any Application
 Wide Range Porosity (30Å- 2500Å) and Particle Size (10µ-200µ)
 Polymer Based Resin for Reversed Phase and Ion Exchange Chromatography

PREP

10mm - 50mmID Packed Preparative Columns for Lab Scale Purification packed by SepaChrom
 50mm - 2000mmID Process Scale Chromatography Columns & Systems, Flanged & DAC Technology
 OEM Packed Preparative Columns
 Scale-up Method Development & Custom Packing Service

ROBUSTA®

Adamas®

VYdamas®

FLASH

Instruments for Flash and Prep Chromatography up to 825mL/min & 400 bar pressure
 Integrated ELSD & MS Simple Quad Detector for Flash Purification
 TLC Plates and Accessories for Flash Chromatography
 A Complete Range of Flash Columns for All Existing Flash Instruments

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Advion Interchim

SPE

SEClute™, Extract-Clean™, Maxi-Clean™ SPE Cartridges for Pharma, Environmental, Food&Beverage Applications.
 PuroPhase™ Polymer Base SPE Cartridges for Clinical & Forensic Applications.
 Maxi-Clean™ Ion Chromatography SPE Cartridges
 Vydac® - Bioselect SPE Cartridges for Biological Samples
 Accessories for SPE & Syringe Filters

OTHER INSTRUMENTS

SepaChrom Hydrogen, Nitrogen and Air Generators for GC
 SepaChrom Nitrogen Generators for LC-MS
 Automated Sample Evaporators for Lab Scale Purification
 Interchim Advion CMS Compact Mass Spectrometer Detector

CONSUMABLE

Autosampler Vials for HPLC, IC e GC
 Head Space and Sampling Vials
 SS & PEEK Tubing, Fittings, Ferrule & Valves
 Syringes and Septa for GC
 Traps for GC Gas Lines