



Polaris HPLC Columns

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In areas like drug discovery where target compounds are increasingly polar, it is critical to have a reversed-phase column that performs well under aqueous conditions. Retention is critical, but cannot come with troublesome secondary interactions. Likewise, phase collapse and shifting retention times need to be avoided. The answer is our Polaris line of polar-modified columns.

From the collapse-resistant pore structure of our base silica, to the "wettability" engineered into the bonded phases, Polaris columns have been designed for high aqueous conditions. The combination of high phase density bonding, ultra pure silica, and silanol shielding leads to excellent peak shape among polar-modified columns.

As a family, Polaris offers a variety of polar modifications in both C18 and C8 chemistries.

Polaris C18-A

Polaris C18-A is the best starting place for separations where the benefits of polar-modified columns are desired. The polar modifications of C18-A help it avoid poor peak shape and retention issues in low organic conditions.

Polaris C8-A

Polaris C8-A offers an alternative selectivity to standard C8 phases and has a lower hydrophobicity than Polaris C18-A, making it ideal for polar samples, or faster overall analysis times.

Polaris C18-Ether

Polaris C18-Ether offers an alternative selectivity to Polaris C18-A and standard C18 phases, and typically delivers increased retention of polar compounds away from the void volume.

Polaris C8-Ether

Polaris C8-Ether offers an alternative selectivity to Polaris C8-A with particular utility for hydrogen bonding compounds.

Column Specifications

Bonded Phase	Pore Size	Surface Area	Carbon Load	Endcapped	Pore Volume	Ligand Coverage
Polaris C18-A	180Å	200 m ² /g	13.8%	Yes	1.1 cm ³ /g	3.9 μmol/m ²
Polaris C8-A	180Å	200 m ² /g	7.4%	Yes	1.1 cm ³ /g	4.8 μmol/m ²
Polaris C18-Ether	180Å	200 m ² /g	12.1%	Yes	1.1 cm ³ /g	3.3 μmol/m ²
Polaris C8-Ether	180Å	200 m ² /g	7.1%	Yes	1.1 cm ³ /g	4.5 μmol/m ²
Polaris Amide C18	180Å	200 m ² /g	15%	Yes	1.1 cm ³ /g	4.4 μmol/m ²
Polaris NH ₂	180Å	200 m ² /g	5.5%	Amide	1.1 cm ³ /g	3.8 μmol/m ²
Polaris Si-A	180Å	200 m ² /g	N/A	N/A	1.1 cm ³ /g	N/A

Specifications represent typical values only.

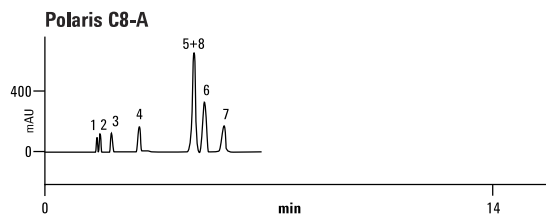
Selectivity test mix for Polaris columns

Mobile Phase: MeCN:water 70:30

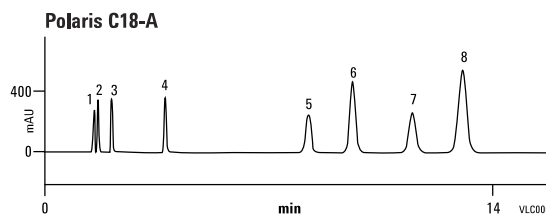
Flow Rate: 1.0 mL/min

Temperature: Ambient

Detector: UV, 254 nm



1. Uracil
2. Caffeine
3. Phenol
4. Toluene
5. Butylbenzene
6. o-Terphenyl
7. Amylbenzene
8. Triphenylene



LC/MS performance test mix for Polaris C8-A

**Column: Polaris C8-A
A2011030X030
3.0 x 30 mm, 3 µm**

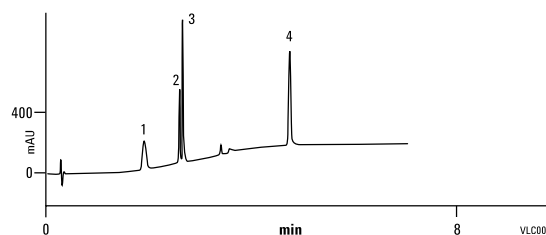
Mobile Phase: A: Water+0.05% HCOOH
B: MeCN+0.05% HCOOH

Gradient: 5-90% B in 3 min and hold for 4 min

Flow Rate: 0.6 mL/min

Temperature: Ambient

Detector: UV, 220 nm



1. Aspartame
2. Cortisone
3. Reserpine
4. Dioctyl phthalate

COLUMNS FOR SMALL MOLECULE SEPARATIONS

Polaris HPLC Columns

Size (mm)	Particle Size (µm)	Polaris C18-A	Polaris C8-A	Polaris C18-Ether	Polaris C8-Ether	Polaris Amide C18	Polaris NH2*	Polaris Si-A*
50.0 x 250	10	A2002250X500						A2004250X500
30.0 x 100	5	A2000100X300						
30.0 x 3.0	3					A2007030X030		
21.2 x 250	10	A2002250X212				A2008250X212		A2004250X212
21.2 x 250	5	A2000250X212	A2010250X212	A2020250X212	A2030250X212	A2006250X212	A2013250X212	A2003250X212
21.2 x 150	5	A2000150X212						A2003150X046
21.2 x 100	5	A2000100X212						
21.2 x 50	5							A2003050X212
10.0 x 250	10					A2008250X100		
10.0 x 250	5	A2000250X100		A2020250X100	A2030250X100	A2006250X100	A2013250X100	
10.0 x 50	3			A2021050X100				
4.6 x 250	10	A2002250X046						A2003250X046
4.6 x 250	5	A2000250X046	A2010250X046	A2020250X046	A2030250X046	A2006250X046	A2013250X046	
4.6 x 200	5	A2000200X046						
4.6 x 150	5	A2000150X046	A2010150X046	A2020150X046	A2030150X046	A2006150X046	A2013150X046	A2003150X046
4.6 x 100	5	A2000100X046	A2010100X046			A2006100X046	A2013100X046	A2003100X046
4.6 x 50	5	A2000050X046		A2020050X046		A2006050X046	A2013050X046	A2003050X046
4.6 x 30	5	A2000030X046						
4.6 x 250	3	A2001250X046		A2021250X046	A2031250X046	A2007250X046	A2014250X046	A2005250X046
4.6 x 150	3	A2001150X046	A2011150X046			A2007150X046	A2014150X046	A2005150X046
4.6 x 100	3	A2001100X046	A2011100X046			A2007100X046	A2014100X046	A2005100X046
4.6 x 75	3	A2001075X046	A2011075X046					

*Normal phase columns.

(Continued)

Polaris HPLC Columns

Size (mm)	Particle Size (µm)	Polaris C18-A	Polaris C8-A	Polaris C18-Ether	Polaris C8-Ether	Polaris Amide C18	Polaris NH2*	Polaris Si-A*
4.6 x 50	3	A2001050X046		A2021050X046	A2031050X046	A2007050X046	A2014050X046	A2005050X046
4.6 x 30	3	A2001030X046						
4.0 x 250	5	A2000250X040	A2010250X040	A2020250X040	A2030250X040		A2013250X040	A2003250X040
4.0 x 150	5	A2000150X040	A2010150X040	A2020150X040	A2030150X040		A2013150X040	A2003150X040
4.0 x 125	5	A2000125X040	A2010125X040	A2020125X040	A2030125X040		A2013125X040	A2003125X040
3.0 x 250	5	A2000250X030	A2010250X030	A2020250X030	A2030250X030	A2006250X030	A2013250X030	A2005250X046
3.0 x 150	5	A2000150X030	A2010150X030	A2020150X030	A2030150X030	A2006150X030	A2013150X030	A2003150X030
3.0 x 100	5	A2000100X030	A2010100X030	A2020100X030	A2030100X030	A2006100X030	A2013100X030	A2003100X030
3.0 x 50	5	A2000050X030						A2003050X030
3.0 x 250	3	A2001250X030				A2007250X030	A2014250X030	A2003250X030
3.0 x 200	3	A2001200X030						
3.0 x 150	3	A2001150X030		A2021150X030		A2007150X030	A2014150X030	A2005150X030
3.0 x 100	3	A2001100X030				A2007100X030	A2014100X030	A2005100X030
3.0 x 50	3	A2001050X030		A2021050X030	A2031050X030	A2007050X030	A2014050X030	A2005050X030
3.0 x 30	3	A2001030X030	A2011030X030					
2.0 x 250	5	A2000250X020		A2020250X020	A2030250X020	A2006250X020	A2013250X020	A2003250X020
2.0 x 150	5	A2000150X020	A2010150X020	A2020150X020	A2030150X020	A2006150X020	A2013150X020	A2003150X020
2.0 x 100	5	A2000100X020				A2006100X020	A2013100X020	A2003100X020
2.0 x 50	5	A2000050X020	A2010050X020	A2020050X020	A2030050X020	A2006050X020	A2013050X020	A2003050X020
2.0 x 30	5	A2000030X020				A2006030X020	A2013030X020	A2003030X020
2.0 x 20	5	A2000020X020					A2013020X020	A2003020X020
2.0 x 250	3	A2001250X020	A2011250X020	A2021250X020	A2031250X020	A2007250X020	A2014250X020	A2005250X020
2.0 x 150	3	A2001150X020	A2011150X020	A2021150X020	A2031150X020	A2007150X020	A2014150X020	A2005150X020
2.0 x 100	3	A2001100X020		A2021100X020	A2031100X020	A2007100X020	A2014100X020	A2005100X020
2.0 x 75	3			A2021075X020				
2.0 x 50	3	A2001050X020	A2011050X020	A2021050X020	A2031050X020	A2007050X020	A2014050X020	A2005050X020
2.0 x 30	3	A2001030X020		A2021050X020		A2007030X020	A2014030X020	A2005030X020
2.0 x 20	3	A2001020X020					A2014020X020	A2005020X020

*Normal phase columns.








Polaris ChromSep Complete Cartridge Systems

Hardware	Size (mm)	Particle Size (μm)	Polaris C18-A
CS	4.6 x 250	5	A2000250C046
CS	4.6 x 150	5	A2000150C046
CS	4.6 x 100	5	A2000100C046
CS	4.6 x 250	3	A2001250C046
CS	4.6 x 150	3	A2001150C046
CS	3.0 x 250	5	A2000250C030
CS	3.0 x 100	5	A2000100C030
CS	2.0 x 100	5	A2000100C020
CS	2.0 x 150	3	A2001150C020
CS	2.0 x 100	3	A2001100C020
CS	2.0 x 50	3	A2001050C020

Polaris ChromSep Replacement Cartridges

Hardware	Size (mm)	Particle Size (μm)	Unit	Polaris C18-A
CS	4.6 x 250	5		A2000250R046
			3/pk	A2000250T046
CS	4.6 x 150	5		A2000150R046
			3/pk	A2000150T046
CS	4.6 x 100	5		A2000100R046
			3/pk	A2000100T046
CS	4.6 x 150	3		A2001150R046
			3/pk	A2001150T046
CS	4.6 x 100	3		A2001100R046
			3/pk	A2001100T046
CS	3.0 x 150	5		A2000150R030
			3/pk	A2000150T030
CS	3.0 x 100	5		A2000100R030
			3/pk	A2000100T030
CS	3.0 x 100	3		A2001100R030
			3/pk	A2001100T030
CS	2.0 x 150	3		A2001150R020
			3/pk	A2001150T020
CS	2.0 x 50	3		A2001050R020
			3/pk	A2001050T020

MetaGuard Columns

Hardware	Dimensions	Particle Size (µm)	Polaris C18-A	Polaris C8-A	Polaris C18-Ether	Polaris C8-Ether	Polaris Amide C18	Polaris NH2*	Polaris Si-A*
	4.6	10	A2002MG						A2004MG
	2.0	10					A2008MG2		A2004MG2
	4.6	5	A2000MG	A2010MG	A2020MG	A2030MG	A2006MG	A2013MG	A2003MG
	2.0	5	A2000MG2	A2010MG2	A2020MG2		A2006MG2	A2013MG2	A2003MG2
	4.6	3	A2001MG	A2011MG	A2021MG		A2007MG	A2014MG	A2005MG
	2.0	3	A2011MG2	A2011MG2	A2021MG2	A2031MG2	A2007MG2	A2014MG2	A2005MG2
	1.0	3	A2001MG1						

*Normal phase columns.