



HICHROM

Chromatography Columns and Supplies

LC COLUMNS Purospher and Purospher Star

Catalogue 9

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Purospher®, Purospher STAR, Aluspher® and ChiraDex®

Purospher Phases

The Purospher® range of HPLC columns is based on high purity metal-free silica. Purospher RP-18 is a polar (amino) endcapped C18 phase that enables the symmetrical elution of basic compounds as well as the separation of hydrophilic compounds using up to 100% aqueous solutions. Purospher RP-18e has hydrophobic endcapping and is suitable for the separation of complex samples with simple eluents. Purospher RP-18 HC is a non-endcapped version, excellent for high resolution separations of explosives and related compounds.

Purospher STAR Phases

Purospher STAR phases are based on high purity silica for the separation of basic, neutral and metal-chelating samples. Purospher STAR RP-18e and RP-8e have higher pH stability (1.5 to 10.5) than Purospher RP-18 and RP-18e. Additionally, the 2µm phases are available in Hibar HR UHPLC hardware.

Aluspher RP-select B

Aluspher® RP-select B is a reversed-phase material based on porous spherical alumina, the surface of which has been modified by polymer coating with polybutadiene. Due to its stability in the pH range of 2 – 12, Aluspher RP-select B allows the use of basic eluents such as NaOH. In this way, the ionisation of basic compounds is suppressed and peak tailing is avoided.

ChiraDex Chiral Phase

ChiraDex® is based on a β-cyclodextrin covalently linked to spherical particles of silica. Within the cavities of this cyclic oligosaccharide, enantiomeric solutes can be made to form 'diastereomeric complexes'. The extent of this complexation can be used to separate enantiomeric molecules and ChiraDex shows broad enantioselectivity.

Phase Summary

Phase	Description	Particle Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)
Purospher RP-18	C18 with amino endcapping	5	90	500	18.5
Purospher RP-18e	C18 with hydrophobic endcapping	5	120	350	18
Purospher RP-18 HC	Non endcapped C18	5	90	>470	18
Purospher STAR RP-18e	C18 with hydrophobic endcapping	2, 3, 5	120	330	17
Purospher STAR RP-8e	C8 with hydrophobic endcapping	2, 3, 5	120	330	11.2
Purospher STAR Si	Unbonded silica	5	120	330	-
Purospher STAR NH2	Amino bonded silica	5	120	330	3.5
Aluspher RP-select B	Polybutadiene coated spherical alumina	5	100	170	n/a
ChiraDex	β-Cyclodextrin bonded porous spherical silica	5	100	300-360	n/a

Ordering Information

Purospher, Purospher STAR, Aluspher RP-select B and ChiraDex columns are available in Merck's LiChroCART® cartridge system (see page 184). These columns can be used with or without an integral guard cartridge. Please enquire for column dimensions not listed below.

Description 5µm Phase	Column Dimensions ¹ (mm)		Guard Cartridges (10/µk, 4 x 4mm)
	125 x 4	250 x 4	
Purospher RP-18	50142	50144	50141
Purospher RP-18e	50168	50169	50167
Purospher RP-18 HC	-	51436	-
Purospher STAR RP-18e	50251	50252	50250
Purospher STAR RP-8e	50271	50272	50270
Purospher STAR Si	50268	50269	50249
Purospher STAR NH2	50244	50245	50267
Aluspher RP-select B	51315	51318	51311
ChiraDex	-	51333	50117

¹ Use with manu-CART endfittings 51486 – see p.184