

Analysis - Silica gels

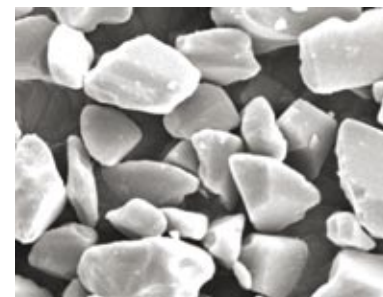
Preparative silica gels

ZEOprep™ is a series of irregularly shaped porous silicas, specifically manufactured for use in liquid chromatography.

The production process starts on a large scale and applies closely controlled conditions, enabling a very high degree of product quality and reproducibility, both essential requirements for the intended applications.

Another advantage of ZEOprep™ is the very low fraction of under and oversize particles : typically > 90% of the particles are within the given particle size range.

The available particle size range of ZEOprep™ allows the scale-up of separation processes from laboratory to production scale. The special milling technology yields rounded edge particles, resulting in less abrasion and thus less fines. This keeps column back pressure low and reduces channeling effects.



Features	ZEOprep 40	ZEOprep 60	ZEOprep 90	ZEOprep 110	ZEOprep 300
Pore size	40 Å	60 Å	90 Å	110 Å	300 Å
Surface area	600 m ² /g	500 m ² /g	400 m ² /g	360 m ² /g	90 m ² /g
Pore volume	0,6 ml/g	0,8 ml/g	0,9 ml/g	1 ml/g	0,7 ml/g
Tapped bulk density	570 g/l	485 g/l	415 g/l	400 g/l	470 g/l
Average water content			2 at 4 %		
pH			7		
Particle size available	15/25 µm, 25/40µm, 40/63µm, 60/200 µm, 200/500 µm				

ZEOprep™ sorbents

Shape	Bonding	Pore size	Surface	15 /25µ	35 /70µ	40 /63µ	60 /200µ
IR	none	40 Å	600 m ² /g	3200500.610	3200500.620	3200500.630	3200500.650
IR	none	60 Å	500 m ² /g	3200100.610	3200100.620	3200100.630	3200100.650
IR	none	90 Å	400 m ² /g	3200300.610	3200300.620	3200300.630	3200300.650
IR	none	110 Å	360 m ² /g	3200330.610	3200330.620	3200330.630	ND
IR	none	300 Å	90 m ² /g	3200700.610	3200700.620	3200700.630	ND
IR	C18	60 Å	500 m ² /g	3201000.610	ND	3201000.630	3201000.650
IR	C18	90 Å	400 m ² /g	3201100.610	ND	3201100.630	3201100.650
IR	C8	90 Å	400 m ² /g	3201110.610	ND	3201110.630	ND
IR	amino	90 Å	400 m ² /g	3201130.610	ND	3201130.630	ND
IR	cyano	90 Å	400 m ² /g	3201140.610	ND	3201140.630	ND

IR : irregular

Sepix™ is a value for money irregular silica gel offering a direct alternative to sorbents available in the low pressure chromatography market.

Sepix™ sorbents

Type	Shape	Bonding	Porosity	Surface	40 /63µ	60 /200µ
Sepix 560	irregular silica	none	60 Å	500 m ² /g	3200500.610	3200250-650



Analysis - Silica gels

Preparative silica gels

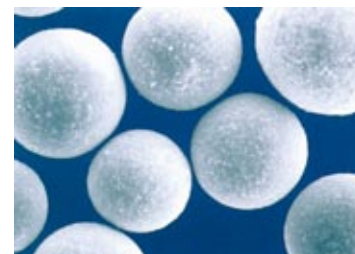
ZEOSphere™ is a new perfectly spherical material, specifically manufactured for use in liquid chromatography. This silica is produced by an emulsion process on a large batch scale, providing reproducible chromatographic separations of high quality.

Large batch sizes : 170kg per batch

Historical expertise for large batch manufacture allows to fulfill the demands of process applications. Batch to batch deviations are reduced to a minimum.

Silica features

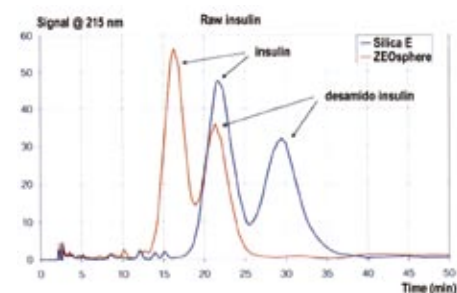
ZEOSphere™ SI and C18	pore size (Å)	70	100	200	300
	specific surface area (m ² /g)	500	320	200	100
	pore volume (ml/g)			0.8-1.1	
	particle sizes (µm)			10/15/20	
ZEOSphere™ C18	carbon content (%)	22	20	14	7



	70 Å	100 Å	200 Å	300 Å
ZEOSphere 10µ SI	3202500.771	3202600.771	3202700.771	3202800.771
ZEOSphere 15µ SI	3202500.772	3202600.772	3202700.772	3202800.772
ZEOSphere 20µ SI	3202500.773	3202600.773	3202700.773	3202800.773
ZEOSphere 10µ C18	NA	3201600.771	3201700.771	3201800.771
ZEOSphere 15µ C18	NA	3201600.772	3201700.772	3201800.772
ZEOSphere 20µ C18	NA	3201600.773	3201700.773	3201800.773

Separation of insulin and desamido-insulin on C18 silica

50mM (NH₄)₂(SO₄) buffer pH 3.5: EtOH (70.2:29.8) w:w
Flow : 1ml /min isocratic @ 25°C



Analysis - Preparative

Inertsil® preparative columns

Series III

Most of Inertsil silicas are available in preparative columns for a very efficient scale up.

- Ultra pure silica gel 99.999 %
- Excellent reproductibility

Description	Particle size	ODS-3	C8-3	PH-3	CN-3	Sil 100 Å
Prep columns						
250 x 20mm	6 µm	5020-06822	5020-84966	5020-85166	5020-85366	5020-84366
250 x 30mm	6 µm	5020-06832	5020-84976	5020-85176	5020-85376	5020-84376
250 x 50mm	8 µm	5020-06852	5020-84986	5020-85186	5020-85386	5020-84386
50 x 20mm	6 µm	5020-07014	5020-84962	5020-85162	5020-85362	5020-84362
50 x 30mm	8 µm	5020-07015	5020-84972	5020-85172	5020-85372	5020-372
Guard columns						
50 x 20 mm	6 µm	5020-06821	5020-84967	5020-85167	5020-85367	5020-84367
50 x 30 mm	6 µm	5020-06831	5020-84977	5020-85177	5020-85377	5020-84377



Series II

Description	ODS-2, 5 µm	C8, 5 µm	C4, 5 µm
Columns			
250 x 20mm	5020-06123-ODS2	5020-06123-C8	5020-06123-C4
Guard columns			
50 x 20 mm	5020-06121-ODS2	5020-06121-C8	5020-06121-C4
Description	PH, 5 µm	Sil 150 Å, 5 µm	
Columns			
250 x 20mm	5020-06123-PH	5020-06123-S15	
Guard columns			
50 x 20 mm	5020-06121-PH	5020-06121-S15	

Econo Prep

Econo Prep silica offer performance and economy for large scale purifications. This 40 µm 80 Å media is available as underivatized or C18 bonded silica gel.

Description	ODS 80 Å, 40 µm	Sil 80 Å, 40 µm
Prep column		
100 x 100 mm	5020-36081	5020-36181
500 x 50 mm	5020-36055	5020-36155
500 x 100 mm	5020-36085	5020-36185