

SILICA SORBENTS FOR HPLC

LABIOSPHER PSI 100 AND PSI 200

technical parameters

Modifications available

Sorbent	Modification	C18	C8	C4	SRP	C18N	NH2	OH	PH	CN
PSI 100		yes	yes	yes	yes	yes	yes	yes	yes	yes
PSI 200		yes	yes	yes			yes	yes		yes

Physical and chemical properties

Sorbent	Specific surface area [m ² /g]	Pore volume [ml/g]	Average pore diameter {nm}	pH (5 % suspension)	Loss of drying on 150 °C [wt %]
PSI 100	240 - 360	0,6 - 0,8	9 - 14	4,0 - 6,5	< 2
PSI 200	140 - 240	0,7 - 0,9	15 - 21	4,0 - 6,5	< 2

Chromatographic properties

	PSI 100	PSI 100 CN, OH	PSI 100 NH	PSI 100 C18	PSI 100 C8	PSI SRP
Nitrobenzene [k']	0,6 - 1,1	0,6 - 1,1	0,6 - 1,1	n.a.	n.a.	n.a.
Phenol [k']	n.a.			0,3 - 0,5	n.a.	n.a.
Toluene [k']	n.a.			2,8 - 3,9	n.a.	4,4 - 5,2
	PSI 200	PSI 200 CN	PSI 200 NH	PSI 200 C18	PSI 200 C8	
Dimethylaniline [k']				1,4 - 1,9	0,7 - 1,1	
Nitrobenzene [k']	0,35 - 0,60	0,3 - 0,6	0,3 - 0,6			
Phenol [k']				0,2 - 0,4	0,1 - 0,3	
Toluene [k']				1,7 - 2,4	0,8 - 1,3	

For Biospher PSI 100 and Biospher PSI 100 CN heptane with 0,1 % of isopropanole was used as mobile phase, k' of biphenyle = 0. For Biospher PSI 100 C18 and Biospher PSI 100 C8 a mixture of methanole and water (7:3 v/v) was used as mobile phase, k' of thiourea = 0.

Typical efficiency of analytical columns (4.6x250 mm)

Particle size [um]	5	7	10	15	20	40
Labiospher PSI 100 [TP/m]	55000	50000	40000	20000	14000	5000
Labiospher PSI 100 C18 [TP/m]	70000	60000	45000	25000	16000	8000
Labiospher PSI 200 [TP/m]	55000	50000	40000	25000	14000	5000
Labiospher PSI 200 C18 [TP/m]	75000	60000	45000	30000	16000	8000

Conditions: column 4,6 x 250 mm, flow rate 0,6 ml/min, measured for nitrobenzene (PSI) or toluene (PSI C18).