

# 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
<b>PSI 100</b>		yes	yes	yes	yes	yes	yes	yes	yes	yes
<b>PSI 200</b>		yes	yes	yes			yes	yes		yes

#### Physical and chemical properties

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

#### Chromatographic properties

	<b>PSI 100</b>	<b>PSI 100 CN, OH</b>	<b>PSI 100 NH</b>	<b>PSI 100 C18</b>	<b>PSI 100 C8</b>	<b>PSI SRP</b>
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
	<b>PSI 200</b>	<b>PSI 200 CN</b>	<b>PSI 200 NH</b>	<b>PSI 200 C18</b>	<b>PSI 200 C8</b>	
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
<b>Labiospher PSI 100 [TP/m]</b>	55000	50000	40000	20000	14000	5000
<b>Labiospher PSI 100 C18 [TP/m]</b>	70000	60000	45000	25000	16000	8000
<b>Labiospher PSI 200 [TP/m]</b>	55000	50000	40000	25000	14000	5000
<b>Labiospher PSI 200 C18 [TP/m]</b>	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).