

## LiChroprep® Sorbent

High selective, efficient silica sorbent for reproducible peptide purification processes

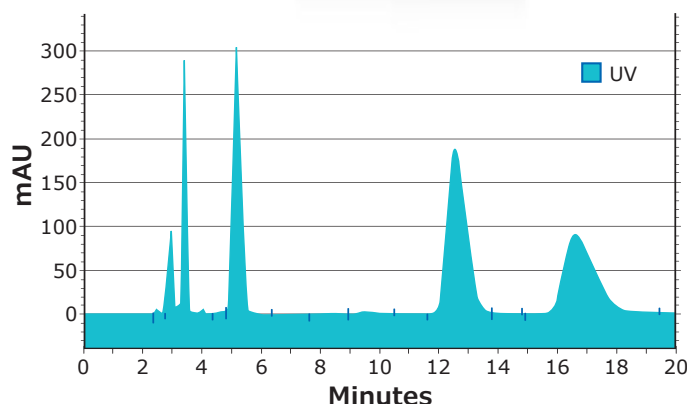
Preparative chromatography plays an important role in purifying valuable compounds in research, pilot plant operation and production. The advantage of this chromatographic method is that it delivers high levels of purity in a rapid and economical manner.

We provide a wide range of surface modified silica sorbents for the purification of APIs and intermediates, designed to meet the special requirements of our customers' manufacturing processes.

Irregularly shaped sorbents are a very efficient and an economic alternative for almost all preparative chromatography purification challenges. The totally porous, irregular particles of LiChroprep® sorbent are tightly classified in the 15–25 µm, 25–40 µm and 40–63 µm ranges and exhibit good separation performance and sufficient stability at reasonable cost.

### LiChroprep® Benefits

- Reproducible, homogeneous, irregularly shaped silica gel matrix
- Narrow, well defined particle size distribution for high performance and high permeability
- Excellent selectivity and efficiency
- Large batch size up to 200 kg in the modification step



**Figure 1.** Separation of a HPLC peptide standard mixture on LiChroprep® RP-18 (15–25 µm) sorbent

### Conditions

Column	Hibar® 250 x 4.6mm LiChroprep® RP-18 (15–25 µm)
Eluent	A: 0.1% TFA in water B: 0.1% TFA in ACN/water 80/20 (v/v)
Gradient	0–40 min A/B 80/20—50/50
Flow rate	1.0 mL/min
Injection	40 µL
Sample	HPLC Peptide Mix (1) Gly-Tyr (2) Val-Tyr-Val (3) Met-Enkephalin (4) Leu-Enkephalin (5) Angiotensin

## Physical and Chemical Data

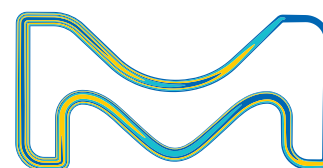
Parameter	LiChrorep® RP-18 15–25 µm	LiChrorep® RP-18 25–40 µm	LiChrorep® RP-18 40–63 µm	Method
Particle size range $d_{50}$ [µm]	18–25	30–35	55–65	Laser diffraction
Quality factor $d_{90}/d_{10}$	≤4.0	≤5.0	≤4.0	
Mean pore size [nm]	10	10	10	N <sub>2</sub> adsorption (BET)
Carbon content [weight %]	≥15	≥15	≥15	CHN analysis
Iron content [weight %]	≤0.02	≤0.02	≤0.02	
Specific pore volume [mL/g]	0.95–1.03	0.95–1.03	0.95–1.03	N <sub>2</sub> adsorption (BET)
Specific surface area [m <sup>2</sup> /g]	330–380	330–380	330–380	N <sub>2</sub> adsorption (BET)
Surface coverage [µmol/m <sup>2</sup> ]	3.0	3.0	3.0	
Elutables [weight %]	≤0.10	≤0.10	≤0.10	
Bulk density [g/mL]	0.39	0.44	0.48	
Packing density [g/mL]	0.51	0.52	0.60	
<b>Selectivity</b>				
α Acetophenone/Phenol	1.8–2.2	1.8–2.2	1.8–2.2	
α Acetophenone/Cinnamic acid	1.1–1.3	1.1–1.3	1.1–1.3	
α 1.Naphtol/Phenol	3.9–4.4	3.9–4.4	3.9–4.4	
<b>Capacity</b>				
k' Toluene	17.0–22.0	19.0–24.0	17.0–22.0	

## Ordering Information

Description	Particle Size	Qty	Catalogue No.
LiChrorep® RP-18	15–25 µm	0.1, 0.5, 10 kg	1.13901
LiChrorep® RP-18	25–40 µm	0.1, 0.5, 5, 25 kg	1.09303
LiChrorep® RP-18	40–63 µm	0.25, 1, 25 kg	1.13900
LiChrorep® RP-8	40–63 µm	0.25, 1 kg	1.09362
LiChrorep® Si 60	15–25 µm	1, 25 kg	1.09336
LiChrorep® Si 60	25–40 µm	1 kg	1.09390
LiChrorep® Si 60	40–63 µm	0.25, 1, 25 kg	1.13905

LiChrorep® is available in ready-to-use Hibar® 250–25 mm prepacked, stainless steel columns as well as in different bulk pack sizes.

Merck KGaA  
Frankfurter Strasse 250  
64293 Darmstadt, Germany



For additional information, please visit  
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