



Experience the performance!

Purospher® columns – the all-around solution for your HPLC separations



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Purospher® HPLC Columns – the all-around solution

Purospher® HPLC columns are based upon a high-purity, metal free silica for excellent separations with good symmetry.

The base material for Purospher® high-purity HPLC columns is made from tetraalkoxysilane. Due to the absence of metals in the silica matrix and in combination with an excellent coverage of the silica surface, this stationary phase enables tailing-free chromatography of acidic, basic and chelating compounds. This is of particular advantage for method development.

Purospher® HPLC columns provide:

- Highly pure spherical silica gel
- High batch-to-batch reproducibility
- Balanced chromatographic properties (Tanaka Hexagon)
- Excellent separation efficiency
- Improved performance to back-pressure ratio
- Extended column lifetime



Choose the right column for your separation

Purospher® STAR

The versatility you need

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Purospher® STAR RP-18 endcapped Purospher® STAR RP-8 endcapped

Excellently suited for the separation of acidic, basic and chelating compounds with simple eluents. The high stability up to pH 10.5 allows the separation of strong basic compounds with alkaline eluents.

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Purospher® STAR Si

Excellently suited for normal-phase separations with highest separation efficiency

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Purospher® STAR NH₂

Enables the high efficient separation of carbohydrates

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Purospher® RP-18 endcapped

Designed for both the separation of basic compounds with simple neutral eluents and for the elution of strongly acidic compounds

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Purospher® RP-18

Polar endcapped stationary phase that enables the peak-tailing free elution of basic compounds, as well as the separations of hydrophilic compounds using up to 100% of aqueous solutions

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Purospher® RP-18 HC

Not endcapped, excellently suitable for high resolution separations of explosives and related compounds

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Ordering information

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Purospher® – the convincing facts

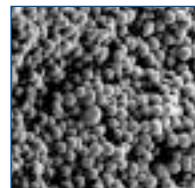
High purity silica – Enhanced performance for best results

Conventional method	Purospher® Si
<p>Type A</p> $\text{M}_2\text{O} - n\text{SiO}_2 \downarrow [-\text{Si}(\text{OH})_2 - \text{O} - \text{Si}(\text{OH})_2 - \text{O} -]_n \downarrow \left[\begin{array}{c} -\text{Si}-\text{O}-\text{Si}-\text{O}- \\ \quad \\ \text{O} \quad \text{O} \\ \quad \\ -\text{Si}-\text{O}-\text{Si}-\text{O}- \end{array} \right]_n \downarrow \text{SiO}_2 \text{ (Na, K, Fe)}$	<p>Type B</p> $\text{Si}(\text{OC}_2\text{H}_5)_4 \downarrow [-\text{Si}(\text{OC}_2\text{H}_5)_2 - \text{O} - \text{Si}(\text{OC}_2\text{H}_5)_2 - \text{O} -]_n \downarrow \left[\begin{array}{c} -\text{Si}-\text{O}-\text{Si}-\text{O}- \\ \quad \\ \text{O} \quad \text{O} \\ \quad \\ -\text{Si}-\text{O}-\text{Si}-\text{O}- \end{array} \right]_n \downarrow \text{SiO}_2$

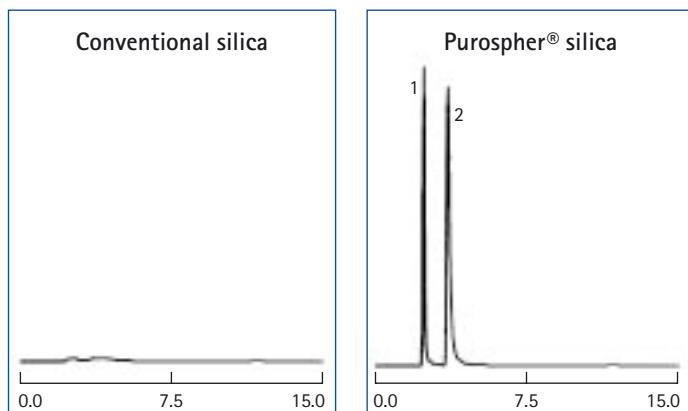
The prerequisite for a modern RP-sorbent is a highly purified silica as a starting material. Purospher® HPLC columns are based upon a high purity, metal free silica for excellent separations with very good peak symmetry. Purospher® is manufactured from tetraalkoxysilane that has a total heavy-metal content of $\leq 5 \text{ ppm}$.

Metal content in ppm

	Sodium	Calcium	Magnesium	Iron	Aluminium
LiChrosorb®	340–400	1300	160–220	20–25	15–20
LiChrospher®	150–250	6–10	4–6	20–40	75–140
Purospher®	1	1	1	3	1
Purospher® STAR					



Enhanced performance for best results



The peak shape of both complexing agents (Quinizarin (1) and 2,2'-Bipyridine (2)) within the adsorption system clearly demonstrates the purity of the Purospher® silica in contrast to conventionally manufactured sorbents.

No chelate complexes are formed, as the symmetrical elution of 2,2'-bipyridine shows, a very sensitive metal-complexing agent.

Specifications

	Particle size	Pore size	Pore volume	Spec surface area	% C	Endcapped	pH-stability	USP classification
Purospher® STAR RP-18 endcapped	3 or 5 µm	120 Å	1.1 ml/g	330 m ² /g	17%	Hydrophobic endcapping	pH 1.5–10.5	L1
Purospher® STAR RP-8 endcapped	3 or 5 µm	120 Å	1.1 ml/g	330 m ² /g	11.2%	Hydrophobic endcapping	pH 1.5–10.5	L7
Purospher® STAR Si	5 µm	120 Å	1.1 ml/g	330 m ² /g	-	No endcapping	-	L3
Purospher® STAR NH ₂	5 µm	120 Å	1.1 ml/g	330 m ² /g	3.5%	-	pH 2–7.5	L8
Purospher® RP-18 endcapped	5 µm	120 Å	1.0 ml/g	350 m ² /g	18.0%	Hydrophobic endcapping	pH 2–8	L1
Purospher® RP-18	5 µm	90 Å	0.95 ml/g	500 m ² /g	18.5%	Amino endcapping	pH 2–7.5	L1
Purospher® RP-18 HC	5 µm	90 Å	1.0 ml/g	> 470 m ² /g	18.0%	No endcapping	pH 2–7.5	L1



Purospher® STAR

The versatility you need!

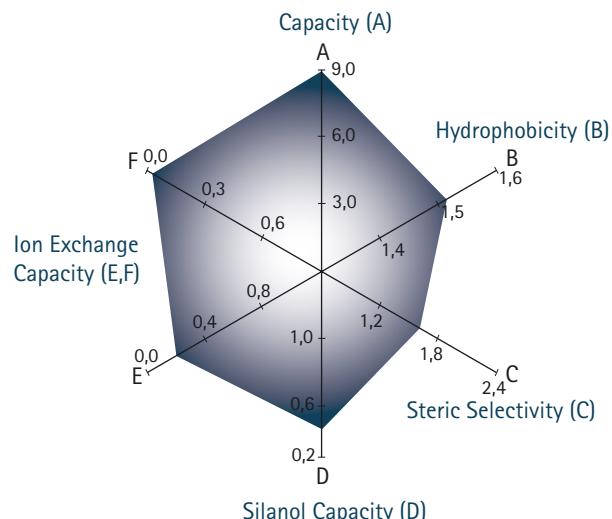
Purospher® STAR HPLC columns are designed for universal use. It doesn't matter if samples are basic, neutral, metal chelating or indeed any other format. You can be sure that Purospher® STAR can do it, naturally without peak tailing! Purospher® STAR HPLC columns makes it easy to choose the right solution for your next HPLC separation.

Excellently balanced - highest all-around performance

Although it is very important to control the physical and chemical properties, a consistently high level of reproducibility can only be ensured by a comprehensive chromatographic characterisation. With respect to consistent selectivity we apply different approaches of leading scientists in HPLC.

The Tanaka test is now established world-wide as the best method of comparing the quality and performance of HPLC columns. This test summarises and visualises all the most important parameters required when choosing the right HPLC column and allows easy comparisons to be made.

A set of seven selected compounds is used to describe capacity, hydrophobicity, steric selectivity and silanophilic properties. To facilitate the illustration and to recognise the quality of a sorbent at one glance, the values of these parameters are outlined on the six axes of a hexagon. The more symmetrical the hexagon appears and the larger its area, the more balanced the stationary phase is in the sum of its chromatographic properties.

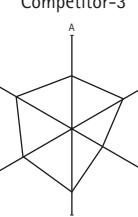
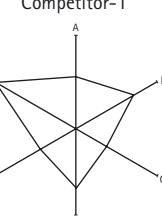
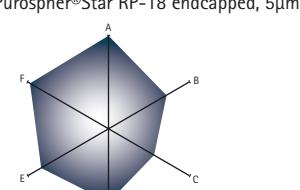


Parameters	property of the stationary phase	factors in preparation of the stationary phase
Capacity (A):	number of alkyl chains	silica surface; surface coverage
Hydrophobicity (B):	CH_2 group selectivity	surface coverage
Steric selectivity (C):	differentiation according to the shape of compounds	silane functionality; surface coverage
Silanol capacity (D):	content and type of silanol groups	residual silanols; endcapping; surface coverage
Ion exchange capacity (E):	at high pH	residual silanols; active sites pH 7
Ion exchange capacity (F):	at low pH	metal impurities

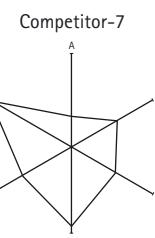
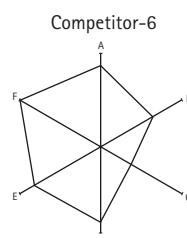
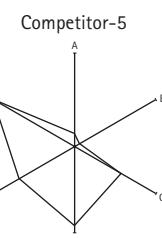
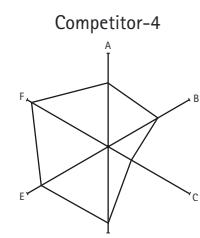
Tanaka Test

Chromatographic conditions:

Column: LiChroCART® 150-4.6
Purospher® STAR RP-18 endcapped, 5µm
Mobile phase: Methanol/Water 80:20
Flow rate: 1.0 ml/min
Detection: UV 254 nm
Temperature: 30°C
Inj. Volume: 10 µl



A: k' (Pentyl benzene) 9.59
B: α (Pentyl-/Butyl benzene) 1.51
C: α (Triphenylene/o-Terphenyl) 1.63
D: α (Caffeine/Phenol) 0.44
E: α (Benzylamine/Phenol; pH 7.6) 0.23
F: α (Benzylamine/Phenol; pH 2.7) 0.02

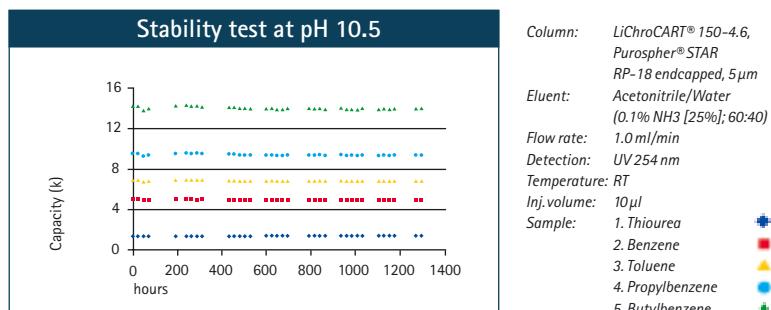
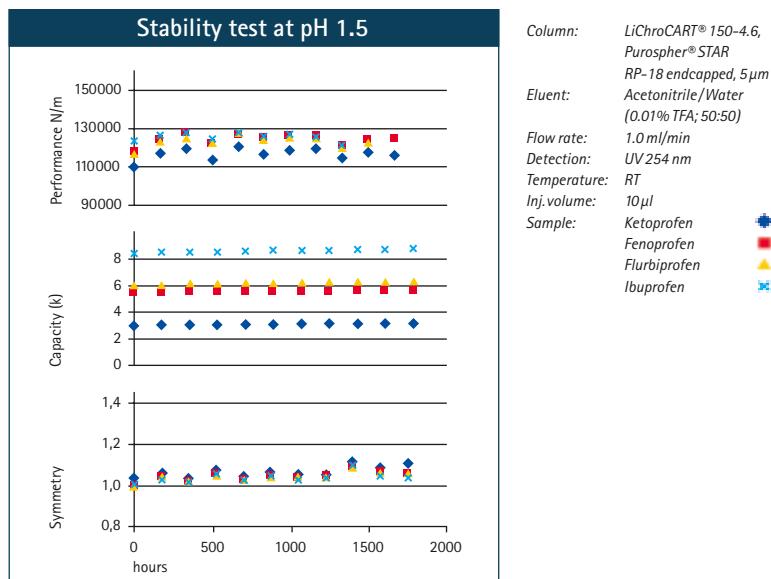


The strength to last and last!

Of course you need a column that is robust, stable in a range of eluent conditions and has an extended column life. Based on the metal free alkoxy silane production process, Purospher® STAR is outstandingly robust and has excellent pH-stability. Naturally all Purospher® STAR columns, regardless of batch provide absolutely reproducible results.

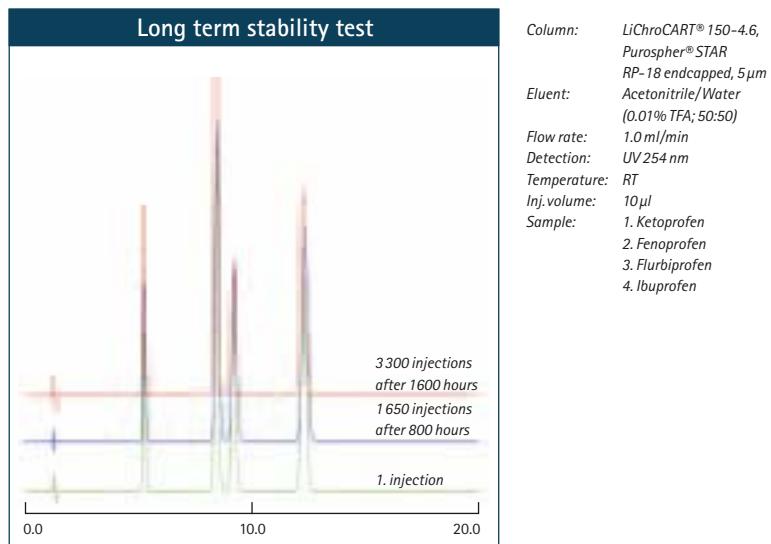
pH Stability

Purospher® STAR has outstanding pH stability. Various studies have shown that Purospher® STAR remains stable and reproducible in a pH range of 1.5 to 10.5. This provides the required pH stability for 99% of common analysis and ensures a simple choice in most applications.



Stable retention times

To ensure the long term chemical stability of Purospher® STAR HPLC columns, special derivatisation and endcapping processes have been developed to ensure a constant retention time even after 3000 injections. The user really gets value for money.

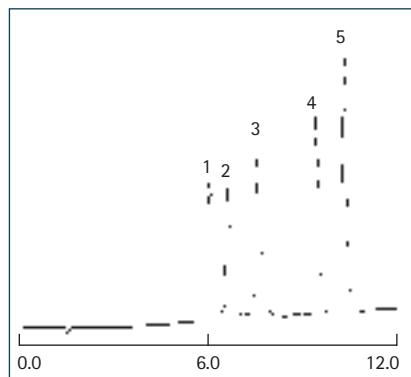


Purospher® STAR RP-18 endcapped

Excellent suited for the separation of acidic, basic and chelating compounds with simple eluents. The high stability up to pH 10.5 allows the separation of strong basic compounds with alkaline eluents.

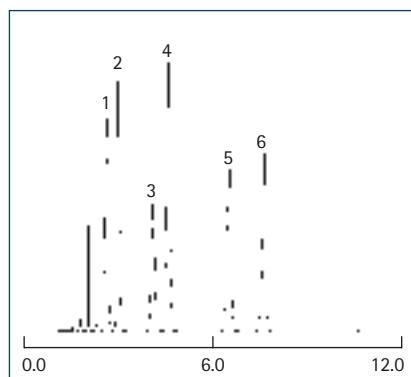
Separation of Basic Compounds (Tryptiline)

Column: LiChroCART® 150-4.6, Purospher® STAR RP-18 endcapped, 5 µm
Mobile Phase: A: Methanol
B: 0.02 M Phosphate buffer pH 7.5
Gradient: 0.0 min 80% A
15.0 min 100% A
Flow rate: 1.0 ml/min
Detection: UV 220 nm
Temperature: 30°C
Inject. volume: 10 µl
Sample:
1. Protryptiline
2. Desipramine
3. Nortriptyline
4. Imipramine
5. Amitriptyline



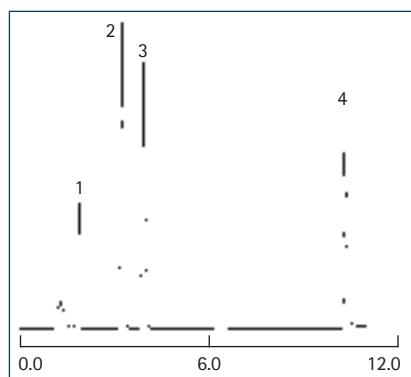
Separation of Polar and Acidic compounds (Contents of Energy Drinks)

Column: LiChroCART® 150-4.6, Purospher® STAR RP-18 endcapped, 5 µm
Mobile Phase: A: Acetonitrile
B: 0.02 M Phosphate buffer pH 5.0
Gradient: 0.0 min 15% A | 3.0 min 15% A | 10.0 min 30% A
Flow rate: 1.0 mL/min
Detection: UV 227 nm
Temperature: 30°C
Inject. volume: 10 µl
Sample:
1. Acesulfame - K (23 µg/ml)
2. Saccharin (29 µg/ml)
3. Benzoic acid (13 µg/ml)
4. Sorbic acid (14 µg/ml)
5. Caffeine (47 µg/ml)
6. Aspartame (100 µg/ml)



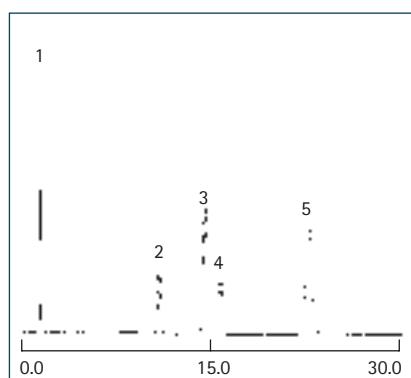
Separation of Metal Chelating Compounds (Flavonoids)

Column: LiChroCART® 150-4.6, Purospher® STAR RP-18 endcapped, 5 µm
Mobile Phase: A: Acetonitrile
B: 0.1% phosphoric acid
Gradient: 0.0 min 40% A
3.0 min 40% A
8.0 min 95% A
Flow rate: 1.0 ml/min
Detection: UV 365 nm
Temperature: 30°C
Inject. volume: 10 µl
Sample:
1. Rutin
2. Morin
3. Quercetin
4. 3-Hydroxyflavon



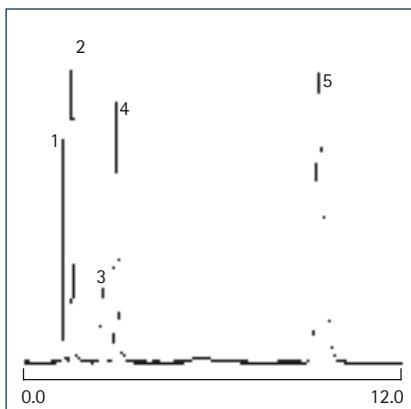
Separation of Non-Polar Compounds (Tanaka Mix 1)

Column: LiChroCART® 150-4.6, Purospher® STAR RP-18 endcapped, 5 µm
Mobile phase: Methanol/Water 80:20
Flow rate: 1.0 ml/min
Detection: UV 254 nm
Temperature: 30°C
Inject. Volume: 10 µl
Sample:
1. Uracil
2. Butylbenzene
3. o-Terphenyl
4. Pentylbenzene
5. Triphenylene



Separation of catecholamines under aqueous conditions

Column: LiChroCART® 150-4.6, Purospher® STAR RP-18 endcapped, 5 μ m
Mobile phase: 20mM Potassium phosphate, pH 3.0/Methanol (97:3)
Flow rate: 1.5 ml/min
Detection: 270 nm
Temperature: 30°C
Inject. Volume: 10 μ l
Sample:
1. Norepinephrin 195 μ g/ml
2. Epinephrin 202 μ g/ml
3. Dopamin 214 μ g/ml
4. L-Dopa 205 μ g/ml
5. Serotonin 099 μ g/ml

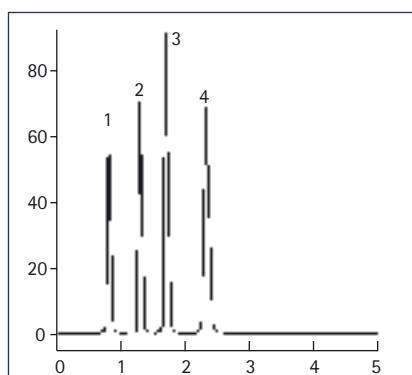


Purospher® STAR RP-8 endcapped

Purospher® STAR RP-8 endcapped is suited very well for the separation of strong hydrophobic compounds and peptides.

Purospher® STAR Si

Excellently suited for normal-phase separations with highest separation efficiency

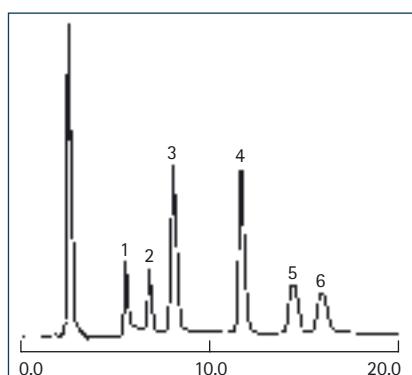


Separation of Anisoles

Column: LiChroCART® 125-4 Purospher® STAR Si (5 μ m)
Mobile phase: Heptane/Dioxan 95/5 v/v
Flow rate: 2 ml/min
Detection: UV 254 nm response fast
Temperature: RT
Inject. Volume: 5 μ l
Sample:
1. Anisole
2. 3-Nitroanisole
3. 4-Nitroanisole
4. 2-Nitroanisole

Purospher® STAR NH₂

Enables the high efficient separation of carbohydrates



Separation of Saccharides

Column: LiChroCART® 250-4, Purospher® STAR NH₂, 5 μ m
Mobile phase: Acetonitrile / Water 75:25
Flow rate: 1.0 ml/min
Detection: RI
Temperature: 30 °C
Inject. Volume: 10 μ l
Sample:
1. Xylose
2. Fructose
3. Glucose
4. Saccharose
5. Lactose
6. Maltose

Purospher® RP-18 endcapped

Designed for both the separation of basic compounds with simple neutral eluents and for the elution of strongly acidic compounds

Excellent peak symmetry with either basic or strongly acidic compounds

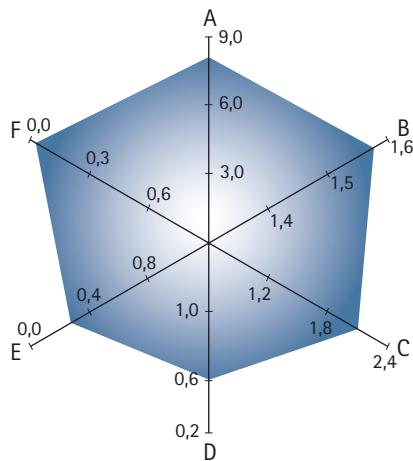
Purospher® RP-18 endcapped is a versatile HPLC column producing excellent peak shapes, designed for both the separation of basic compounds with simple neutral eluents and for the elution of strongly acidic compounds. Excellent separations in a shorter period of time with very good peak symmetry saves time and money.

Separation of Tanaka Test

Chromatographic conditions:

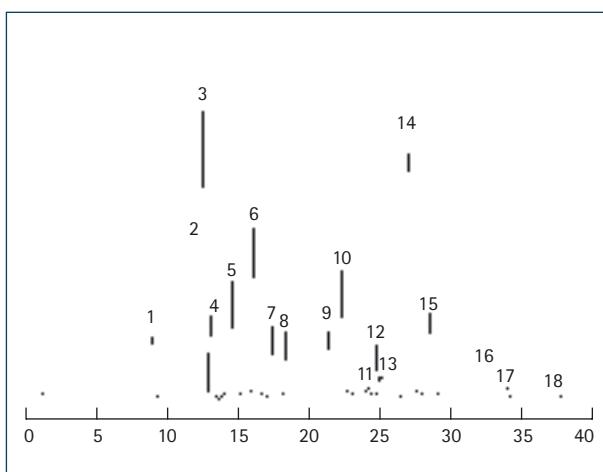
Column: LiChroCART® 250-4, Purospher® RP-18 endcapped, 5 µm
Mobile phase: Methanol/Water 80:20 (v/v)
Flow rate: 1.0 ml/min
Detection: UV 254 nm
Temperature: 30 °C
Inject. Volume: 5 µl

A: k' (Pentylbenzene) 8.00
B: α (Pentyl-/Butylbenzene) 1.52
C: α (Triphenylene/o-Terphenyl) 2.08
D: α (Caffeine/Phenol) 0.48
E: α (Benzylamine/Phenol; pH 7.6) 0.35
F: α (Benzylamine/Phenol; pH 2.7) 0.08



Separation of Amines from Azo Dyes

Column: LiChroCART® 125-4, Purospher® RP-18 endcapped, 5 µm
Mobile phase: A: Acetonitrile
B: 20 mM Phosphate buffer pH 7.0 (H₃PO₄ with ammonia)
Gradient: 0.0 - 19.9 min 25% A
19.9 - 20.0 min 28 - 60 %
20.0 - 30.0 min 60 % A
Flow rate: 1.0 ml/min
Detection: UV 254nm
Temperature: 55 °C
Inject. volume: 10 µl
Sample:
1. 2,4-Diaminoanisole
2. 2,4-Diaminotoluene
3. 4,4'-Oxydianiline
4. Benzidine
5. o-Toluidine
6. 4,4'-Diaminodiphenylmethane
7. p-Chloroaniline
8. p-Cresidine
9. 3,3'-Dimethoxybenzidine
10. 4,4'-Thiodianiline
11. 3,3'-Dimethylbenzidine
12. 2-Naphthylamine
13. 4-Chloro-o-toluidine
14. 2,4,5-Trimethylaniline
15. 4,4'-Diamino-3,3'-dimethyldiphenylmethane
16. 4-Aminobiphenyl
17. 3,3'-Dichlorobenzidine
18. 4,4'-Diamino-3,3'-dichlorodiphenylmethane

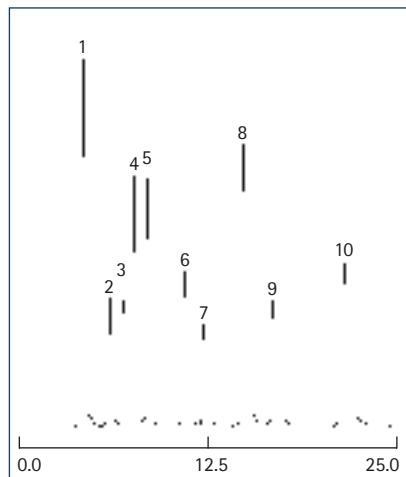




Separation of Beta-Blocking Agents

Column: LiChroCART® 125-4, Purospher® RP-18 endcapped, 5 µm
Mobile phase: Methanol/0.05 M Phosphate buffer pH 3.0 45/55 (v/v)
Flow rate: 0.5 ml/min
Detection: UV 265 nm
Temperature: 32°C
Inject. volume: 2 µl
Sample:

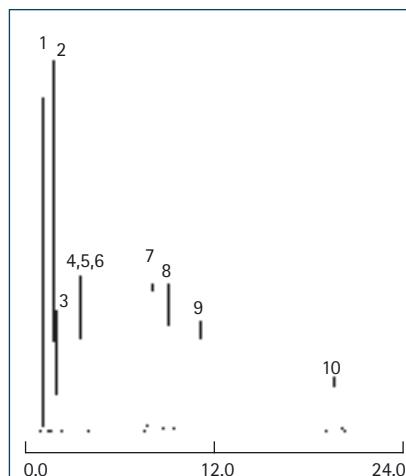
1. *Practolol*
2. *Pafenolol*
3. *Metoprolol*
4. *Celiprolol*
5. *Carazolol*
6. *Bisoprolol*
7. *Metipranolol*
8. *Propanolol*
9. *Alprenolol*
10. *Carvedilol*



Separation of Engelhardt - Test

Column: LiChroCART® 125-4, Purospher® RP-18 endcapped, 5 µm
Mobile phase: Methanol / Water 49:51 (w/w)
Flow rate: 1.0 ml/min
Detection: UV 254 nm
Sample:

1. *Thiourea*
2. *Aniline*
3. *Phenol*
4. *p-Ethylaniline*
5. *m-Ethylaniline*
6. *o-Ethylaniline*
7. *N,N-Dimethylaniline*
8. *Ethylbenzoate*
9. *Toluene*
10. *Ethylbenzene*



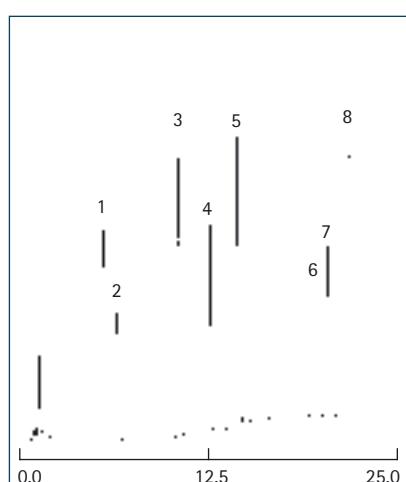
Separation of Antiepileptic drugs

Column: LiChroCART® 250-4, Purospher® RP-18 endcapped, 5 µm
Mobile phase:

- A: Water
- B: Acetonitrile

Gradient: 0-5 min 90 % A
 6 min 80 % A
 8-30 min 76 % A
Flow rate: 0.8 ml/min
Detection: UV 205 nm
Sample:

1. *2-Ethyl-2-phenylmalonamide*
2. *Ethosuximide*
3. *Primidone*
4. *α-Methyl-α-propylsuccinamide*
5. *Phenobarbital*
6. *Hexobarbital*
7. *Carbamazepine*
8. *Phenytoin*



Purospher® RP-18

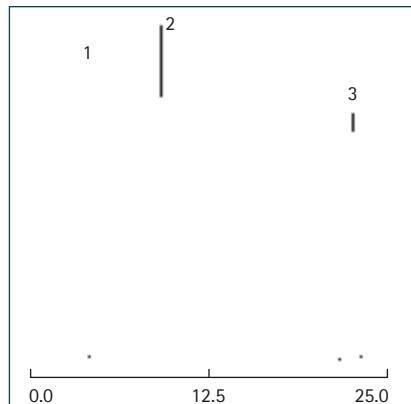
Polar endcapped stationary phase that enables the peak-tailing free elution of basic compounds, as well as the separations of hydrophilic compounds using up to 100% of aqueous solutions

Excellent for strongly basic compounds

The excessive endcapping of Purospher® RP-18 using polymeric coating and shielding of the group by including polar or even charged groups into carbon chains makes Purospher® RP-18 an excellent basic compatible RP sorbent for the separation of problematic basic compounds with simple neutral eluents up to 100% aqueous buffer.

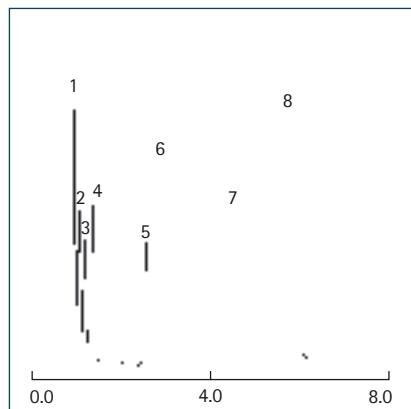
Separation of Anilines

Column: LiChroCART® 125-4, Purospher® RP-18, 5 µm
Precolumn: LiChroCART® 4-4, Purospher® RP-18, 5 µm
Mobile Phase: Acetonitrile / Water 30:70
Flow rate: 1.0 ml/min
Detection: UV254 nm
Temperature: ambient
Inject. volume: 10 µl
Sample: 1. Aniline
2. N-Methylaniline
3. N,N-Dimethylaniline



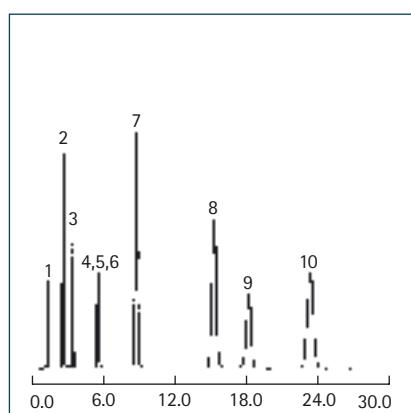
Separation of Catecholamines with aqueous conditions

Column: LiChroCART® 125-4, Purospher® RP-18, 5 µm
Mobile phase: 20mM KH₂PO₄ with H₃PO₄ to pH 3.0
Flow rate: 1.0 ml/min
Detection: 210 nm
Temperature: 22°C
Inject. volume: 5 µl
Sample: 1. 4 µg/mL Norepinephrine (Noradrenalin tartrat)
2. 3 µg/mL Epinephrinhydrogentartrat
3. 2 µg/mL DL-Normetanephrine HCl
4. 2 µg/mL Dopamin (3-Hydroxytyraminiumchlorid)
5. 3 µg/mL L-Dopa (3,4-Dihydroxyphenylalanin)
6. 9 µg/mL Norephedrine
7. 12 µg/mL Ephedrine
8. 25 µg/mL N-Methylephedrinhydrochlorid



Separation of Toluidines

Column: LiChroCART® 125-4, Purospher® RP-18, 5 µm
Precolumn: LiChroCART® 4-4, Purospher® RP-18, 5 µm
Mobile phase: Acetonitrile/Water
Flow rate: 1.0 ml/min
Detection: UV254 nm
Temperature: Ambient
Inject. volume: 10 µl
Sample: 1. Caffein
2. Aniline
3. Pyridine
4. o-, m-, p- Ethylanilin
5. N-Methylanilin
6. 2-Ethylanilin
7. 3-Nitroanisol
8. N,N-Dimethylanilin



Purospher® RP-18 HC

Not endcapped, excellently suitable for high resolution separations of explosives and related compounds

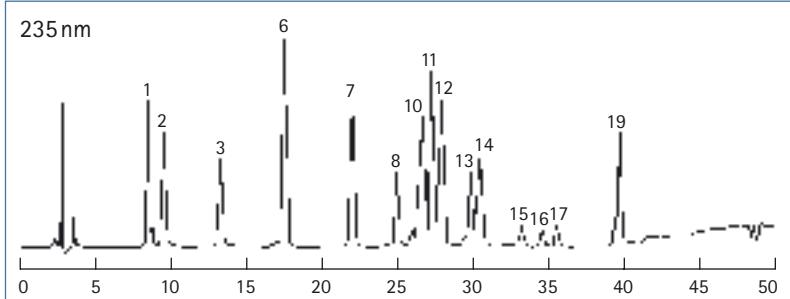
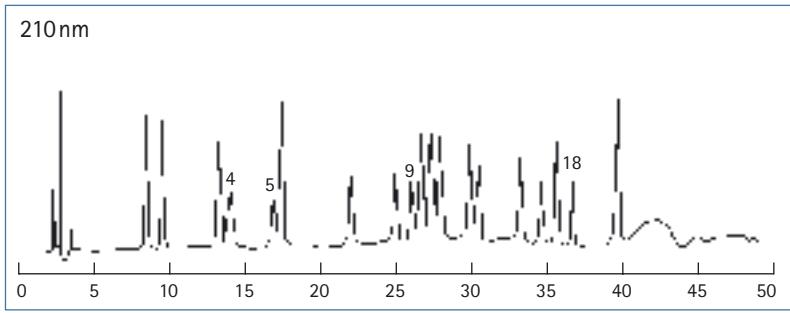
High resolution separation of explosives

Purospher® RP-18 HC is a versatile HPLC column designed for high resolution separation of 19 explosives and related compounds. The determination of explosives themselves is of great importance, and also the quantification of their by-products like nitrotoluene and nitrophenol, as well as nitroaminotoluene and aminotoluene. Purospher® RP-18 HC is suitable for the separation of picric acid and hexyl and ethyleneglycol dinitrate and ethyleneglycol nitrate too.

Separation of explosives from drinking water

Column: LiChroCART® 250-4, Purospher® RP-18 HC, 5 µm
Mobile Phase: A: Acetonitrile / Methanol; 20/80, v/v
B: Sodium dihydrogenphosphate buffer ($c=0.01\text{ mol/l}$, pH 4.5)
Gradient: 0 min 35 % A; 28 min 55 % A; 40 min 85 % A;
50 min 85 % A; 51 min 35 % A; 71 min 35 % A
Flow rate: 0.8 ml/min
Detection: DAD 210 and 235 nm
Temperature: 36°C
Inject. volume: 40 µl

Sample:
1. Octogen
2. Picric acid
3. Hexogen
4. EGDN
5. DEGN
6. 1,3,5-Trinitrobenzene
7. 1,3-Dinitrobenzene
8. Tetryl
9. Nitroglycerine
10. 2,4,6-Trinitrotoluene
11. 4-Amino-2,6-dinitrotoluene
12. 2-Amino-4,6-dinitrotoluene
13. 2,6-Dinitrotoluene
14. 2,4-Dinitrotoluene
15. 2-Nitrotoluene
16. 4-Nitrotoluene
17. 3-Nitrotoluene
18. Nitropenta
19. Hexyl



Ordering information

Purospher® STAR in stainless steel cartridges LiChroCART®

Packaging materials	Particle size	Dimension Length	Dimension i.d.	Content	Ordering No.
Purospher® STAR RP-18 endcapped	3 µm	30 mm	2 mm	1 set	1.50237.0001
Purospher® STAR RP-18 endcapped	3 µm	30 mm	2 mm	3 pieces	1.50238.0001
Purospher® STAR RP-18 endcapped	3 µm	55 mm	2 mm	1 set	1.50240.0001
Purospher® STAR RP-18 endcapped	3 µm	55 mm	2 mm	3 pieces	1.50241.0001
Purospher® STAR RP-18 endcapped	5 µm	125 mm	2 mm	1 piece	1.50255.0001
Purospher® STAR RP-18 endcapped	5 µm	250 mm	2 mm	1 piece	1.50256.0001
Purospher® STAR RP-18 endcapped	5 µm	125 mm	3 mm	1 piece	1.50253.0001
Purospher® STAR RP-18 endcapped	5 µm	250 mm	3 mm	1 piece	1.50254.0001
Purospher® STAR RP-18 endcapped	3 µm	30 mm	4 mm	1 set	1.50239.0001
Purospher® STAR RP-18 endcapped	3 µm	30 mm	4 mm	3 pieces	1.50225.0001
Purospher® STAR RP-18 endcapped	3 µm	55 mm	4 mm	1 set	1.50242.0001
Purospher® STAR RP-18 endcapped	3 µm	55 mm	4 mm	3 pieces	1.50231.0001
Purospher® STAR RP-18 endcapped	3 µm	75 mm	4 mm	1 piece	1.51460.0001
Purospher® STAR RP-18 endcapped	5 µm	4 mm	4 mm	10 pieces	1.50250.0001
Purospher® STAR RP-18 endcapped	5 µm	125 mm	4 mm	1 piece	1.50251.0001
Purospher® STAR RP-18 endcapped	5 µm	250 mm	4 mm	1 piece	1.50252.0001
Purospher® STAR RP-18 endcapped	5 µm	150 mm	4.6 mm	1 piece	1.50358.0001
Purospher® STAR RP-18 endcapped	5 µm	250 mm	4.6 mm	1 piece	1.50359.0001
Purospher® STAR RP-18 endcapped	5 µm	250 mm	10 mm	1 piece	1.50257.0001
Purospher® STAR RP-8 endcapped	3 µm	30 mm	2 mm	1 piece	1.50229.7220
Purospher® STAR RP-8 endcapped	3 µm	55 mm	2 mm	1 piece	1.50234.7220
Purospher® STAR RP-8 endcapped	5 µm	125 mm	2 mm	1 piece	1.50274.0001
Purospher® STAR RP-8 endcapped	5 µm	250 mm	2 mm	1 piece	1.50275.0001
Purospher® STAR RP-8 endcapped	5 µm	125 mm	3 mm	1 piece	1.50038.0001
Purospher® STAR RP-8 endcapped	5 µm	250 mm	3 mm	1 piece	1.50273.0001
Purospher® STAR RP-8 endcapped	3 µm	30 mm	4 mm	1 piece	1.50302.7220
Purospher® STAR RP-8 endcapped	3 µm	55 mm	4 mm	1 piece	1.50228.7220
Purospher® STAR RP-8 endcapped	3 µm	75 mm	4 mm	1 piece	1.50171.7220
Purospher® STAR RP-8 endcapped	5 µm	4 mm	4 mm	10 pieces	1.50270.0001
Purospher® STAR RP-8 endcapped	5 µm	125 mm	4 mm	1 piece	1.50271.0001
Purospher® STAR RP-8 endcapped	5 µm	250 mm	4 mm	1 piece	1.50272.0001
Purospher® STAR RP-8 endcapped	5 µm	150 mm	4.6 mm	1 piece	1.50031.0001
Purospher® STAR RP-8 endcapped	5 µm	250 mm	4.6 mm	1 piece	1.50032.0001
Purospher® STAR RP-8 endcapped	5 µm	250 mm	10 mm	1 piece	1.50276.0001
Purospher® STAR Si	5 µm	4 mm	4 mm	10 pieces	1.50249.0001
Purospher® STAR Si	5 µm	125 mm	4 mm	1 piece	1.50268.0001
Purospher® STAR Si	5 µm	250 mm	4 mm	1 piece	1.50269.0001
Purospher® STAR Si	5 µm	150 mm	4.6 mm	1 piece	1.50356.0001
Purospher® STAR Si	5 µm	250 mm	4.6 mm	1 piece	1.50357.0001
Purospher® STAR NH ₂	5 µm	4 mm	4 mm	10 pieces	1.50267.0001
Purospher® STAR NH ₂	5 µm	125 mm	4 mm	1 piece	1.50244.0001
Purospher® STAR NH ₂	5 µm	250 mm	4 mm	1 piece	1.50245.0001
Purospher® STAR NH ₂	5 µm	150 mm	4.6 mm	1 piece	1.50247.0001
Purospher® STAR NH ₂	5 µm	250 mm	4.6 mm	1 piece	1.50248.0001

Additional dimensions available as customised packings

Purospher® STAR RP-18 endcapped cartridge set 30mm
1 LiChroCART® cartridge 30mm
and 1 manu-CART® 30mm

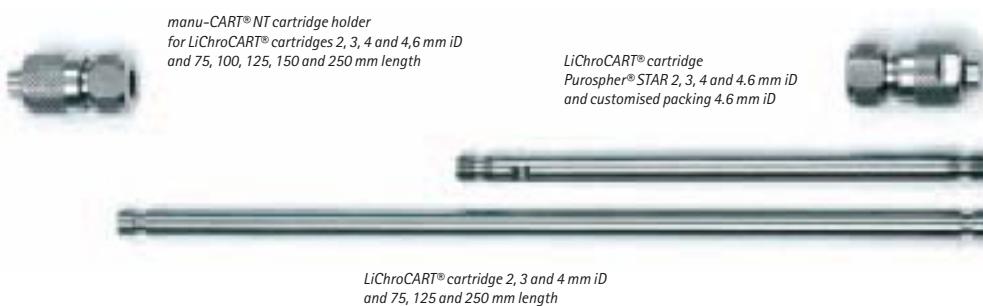
Purospher® STAR RP-18 endcapped cartridge set 55mm
1 LiChroCART® cartridge 55mm
and 1 manu-CART® 55mm



Purospher® in stainless steel cartridges LiChroCART®

Packaging materials	Particle size	Dimension Length	Dimension i.d.	Content	Ordering No.
Purospher® RP-18 endcapped	5 µm	125 mm	3 mm	1 piece	1.50798.0001
Purospher® RP-18 endcapped	5 µm	125 mm	3 mm	3 pieces	1.50799.0001
Purospher® RP-18 endcapped	5 µm	250 mm	3 mm	1 piece	1.51384.0001
Purospher® RP-18 endcapped	5 µm	4 mm	4 mm	10 pieces	1.50167.0001
Purospher® RP-18 endcapped	5 µm	125 mm	4 mm	1 piece	1.50168.0001
Purospher® RP-18 endcapped	5 µm	250 mm	4 mm	1 piece	1.50169.0001
Purospher® RP-18	5 µm	4 mm	4 mm	10 pieces	1.50141.0001
Purospher® RP-18	5 µm	125 mm	4 mm	1 piece	1.50142.0001
Purospher® RP-18	5 µm	250 mm	4 mm	1 piece	1.50144.0001
Purospher® RP-18 HC	5 µm	250 mm	4 mm	1 piece	1.51436.0001

Additional dimensions available as customised packings



Purospher® STAR in stainless steel ready-to-use columns Hibar®

Packaging materials	Particle size	Dimension Length	Dimension i.d.	Content	Ordering No.
Purospher® STAR RP-18 endcapped	5 µm	125 mm	4 mm	1 piece	1.50036.0001
Purospher® STAR RP-18 endcapped	5 µm	250 mm	4 mm	1 piece	1.50037.0001
Purospher® STAR RP-18 endcapped	5 µm	150 mm	4.6 mm	1 piece	1.51455.0001
Purospher® STAR RP-18 endcapped	5 µm	250 mm	4.6 mm	1 piece	1.51456.0001
Purospher® STAR RP-8 endcapped	5 µm	125 mm	4 mm	1 piece	1.50033.0001
Purospher® STAR RP-8 endcapped	5 µm	250 mm	4 mm	1 piece	1.50035.0001
Purospher® STAR RP-8 endcapped	5 µm	150 mm	4.6 mm	1 piece	1.51453.0001
Purospher® STAR RP-8 endcapped	5 µm	250 mm	4.6 mm	1 piece	1.51454.0001

Additional dimensions available as customised packings



Hibar® RT, Purospher® STAR
ready-to-use column

Ordering information of customised packings

For ordering please combine the customised packing ordering number of the column hardware and the sorbent number!

Example

Customised packing ordering number of LiChroCART® 125-4	1.50170.
Sorbent number of Purospher® RP-18 HC, 5 µm	7131
Ordering number of LiChroCART® 125-4, Purospher® RP-18 HC, 5 µm	1.50170.7131

Stainless steel cartridges LiChroCART®

The LiChroCART® columns (75, 125, 150 and 250 mm length) in the list below (2, 3, 4 and 4.6 mm i.d.) require part number 1.51486.0001 manu-CART® cartridge column holder, which can be used to hold one cartridge column with or without a 4-4 mm guard column.

LiChroCART® columns 250-10 mm require part number 1.51419.0001 manu-CART® 10. The short LiChroCART® columns (30 and 55 mm length) can be ordered as a set including the corresponding cartridge holder and one cartridge, or as a pack of 3 cartridges without cartridges holder.

The separate part numbers for the cartridge are as follows.

- 1.50227.0001 LiChroCART® cartridge holder for 30 mm cartridge
- 1.50226.0001 LiChroCART® cartridge holder for 55 mm cartridge

Product	Dimensions Length	Dimensions i.d.	Ordering No.	Packing material
LiChroCART® 10-2	10 mm	2 mm	1.50201.*	*as specified (sorbent numbers)
LiChroCART® 30-2	30 mm	2 mm	1.50229.*	*as specified (sorbent numbers)
LiChroCART® 55-2	55 mm	2 mm	1.50234.*	*as specified (sorbent numbers)
LiChroCART® 125-2	125 mm	2 mm	1.50195.*	*as specified (sorbent numbers)
LiChroCART® 250-2	250 mm	2 mm	1.50190.*	*as specified (sorbent numbers)
LiChroCART® 30-3	30 mm	3 mm	1.50233.*	*as specified (sorbent numbers)
LiChroCART® 55-3	55 mm	3 mm	1.50236.*	*as specified (sorbent numbers)
LiChroCART® 125-3	125 mm	3 mm	1.50175.*	*as specified (sorbent numbers)
LiChroCART® 250-3	250 mm	3 mm	1.50177.*	*as specified (sorbent numbers)
LiChroCART® 4-4	4 mm	4 mm	1.50173.*	*as specified (sorbent numbers)
LiChroCART® 25-4	25 mm	4 mm	1.50172.*	*as specified (sorbent numbers)
LiChroCART® 30-4	30 mm	4 mm	1.50302.*	*as specified (sorbent numbers)
LiChroCART® 55-4	55 mm	4 mm	1.50228.*	*as specified (sorbent numbers)
LiChroCART® 75-4	75 mm	4 mm	1.50171.*	*as specified (sorbent numbers)
LiChroCART® 125-4	125 mm	4 mm	1.50170.*	*as specified (sorbent numbers)
LiChroCART® 250-4	250 mm	4 mm	1.50174.*	*as specified (sorbent numbers)
LiChroCART® 100-4.6	100 mm	4.6 mm	1.51448.*	*as specified (sorbent numbers)
LiChroCART® 125-4.6	125 mm	4.6 mm	1.51442.*	*as specified (sorbent numbers)
LiChroCART® 150-4.6	150 mm	4.6 mm	1.51432.*	*as specified (sorbent numbers)
LiChroCART® 250-4.6	250 mm	4.6 mm	1.51431.*	*as specified (sorbent numbers)
LiChroCART® 10-10	10 mm	10 mm	1.50178.*	*as specified (sorbent numbers)
LiChroCART® 75-10	75 mm	10 mm	1.51449.*	*as specified (sorbent numbers)
LiChroCART® 100-10	100 mm	10 mm	1.51445.*	*as specified (sorbent numbers)
LiChroCART® 125-10	125 mm	10 mm	1.51443.*	*as specified (sorbent numbers)
LiChroCART® 150-10	150 mm	10 mm	1.50444.*	*as specified (sorbent numbers)
LiChroCART® 250-10	250 mm	10 mm	1.50179.*	*as specified (sorbent numbers)

manu-CART® NT cartridge holder
for LiChroCART® cartridges 2, 3, 4 and 4.6 mm iD
and 75, 100, 125, 150 and 250 mm length



LiChroCART® cartridge
Purospher® STAR 2, 3, 4 and 4.6 mm iD
and customised packing 4.6 mm iD



LiChroCART® cartridge 2, 3 and 4 mm iD
and 75, 125 and 250 mm length

Stainless steel ready-to-use columns Hibar® RT

The Hibar® columns are complete with end-fittings and ready-to-use.
When using a guard column with a Hibar® column, we recommend part number 1.51487.0001
guard column cartridge holder for 4-4 mm guard column cartridges LiChroCART®.

Product	Dimensions Length	Dimensions i.d.	Ordering No.	Packing material
Hibar® RT 250-3	250 mm	3 mm	1.00423*	*as specified (sorbent numbers)
Hibar® RT 30-4	30 mm	4 mm	1.51196*	*as specified (sorbent numbers)
Hibar® RT 125-4	125 mm	4 mm	1.50181*	*as specified (sorbent numbers)
Hibar® RT 250-4	250 mm	4 mm	1.50182*	*as specified (sorbent numbers)
Hibar® RT 100-4.6	100 mm	4.6 mm	1.50013*	*as specified (sorbent numbers)
Hibar® RT 125-4.6	125 mm	4.6 mm	1.50012*	*as specified (sorbent numbers)
Hibar® RT 150-4.6	150 mm	4.6 mm	1.50009*	*as specified (sorbent numbers)
Hibar® RT 250-4.6	250 mm	4.6 mm	1.00424*	*as specified (sorbent numbers)
Hibar® RT 250-10	250 mm	10 mm	1.50183*	*as specified (sorbent numbers)

Hibar® RT
ready-to-use column
Purospher® STAR 3, 4 and 4.6 mm iD and customised
packing 4.6 mm iD



Hibar® RT
ready-to-use column
3 and 4 mm iD

Ordering information of sorbent numbers

Purospher® STAR	Sorbent number	Purospher®	Sorbent number
Purospher® STAR RP-18 endcapped, 3 µm	7184	Purospher® RP-18 endcapped, 5 µm	7130
Purospher® STAR RP-18 endcapped, 5 µm	7185	Purospher® RP-18 endcapped, 10 µm	7207
Purospher® STAR RP-18 endcapped, 10 µm	7186	Purospher® RP-18 HC	7131
Purospher® STAR RP-8 endcapped, 3 µm	7220	Purospher® RP-18, 5 µm	7127
Purospher® STAR RP-8 endcapped, 5 µm	7194	Purospher® 80 Si, 3 µm	7179
Purospher® STAR NH ₂ , 5 µm	7177	Purospher® Si, 5 µm	7180
Purospher® STAR Si, 3 µm	7174		
Purospher® STAR Si, 5 µm	7175		

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