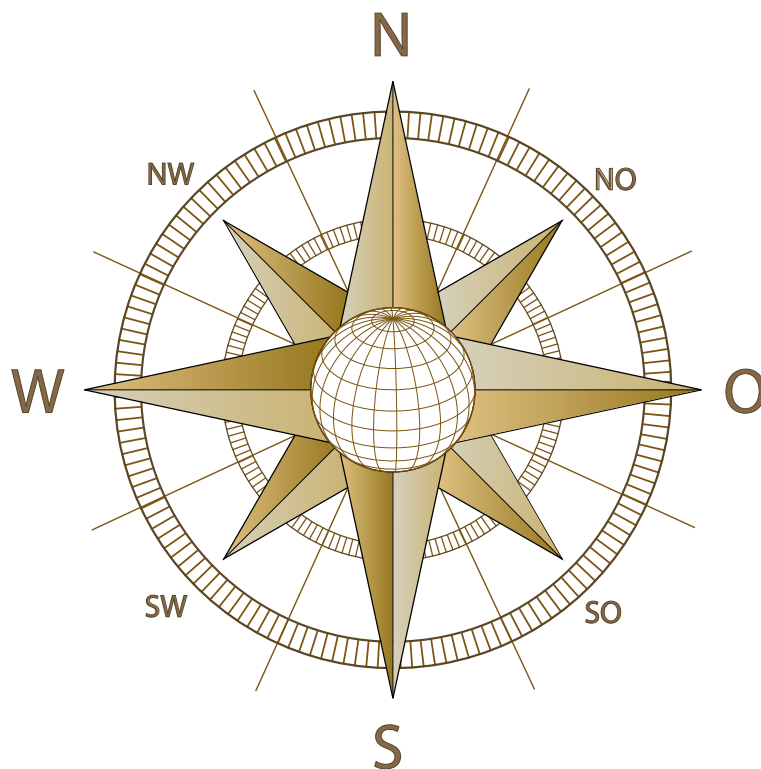


MACHEREY-NAGEL

NUCLEODUR[®] Phenyl-Hexyl

Chromatography



Highly stable phenyl-hexyl phase for HPLC

- Dual retention mechanism (π - π and hydrophobic)
- Exceptional performance for mixtures of aromatic and unsaturated analytes
- Low bleeding, suitable for LC/MS

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Key features

- Hydrophobic phase with alternative selectivity compared to classical C18 modifications
- Separation principle based on 2 retention mechanisms: π - π interactions and hydrophobic interactions
- Suitable for LC/MS due to low bleeding characteristics

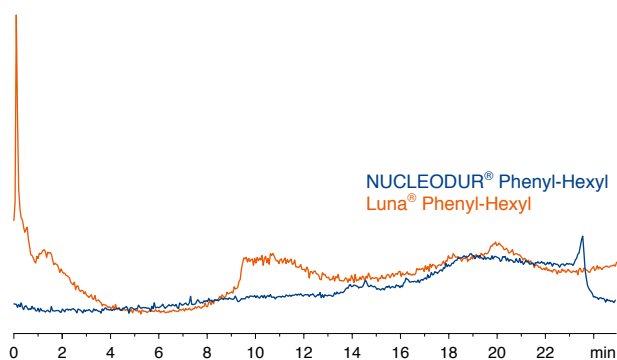
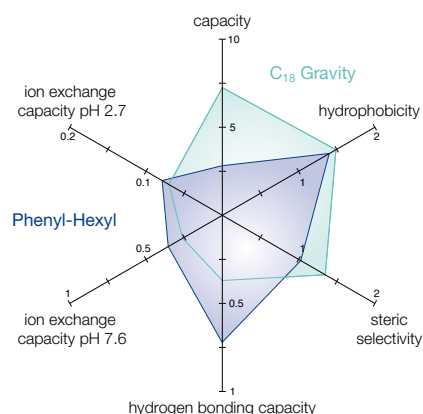
Technical characteristics

Phase with phenyl-hexyl modification and multi-endcapping; pore size 110 Å; particle sizes 1.8 μm , 3 μm and 5 μm ; carbon content 10 %; pH stability 1–10

Recommended application

Aromatic and unsaturated compounds, polar compounds like pharmaceuticals, antibiotics

USP L11



Low bleeding characteristics

Columns: 150 x 3 mm NUCLEODUR® Phenyl-Hexyl, 5 μm
150 x 3 mm Phenomenex Luna® Phenyl-Hexyl, 5 μm

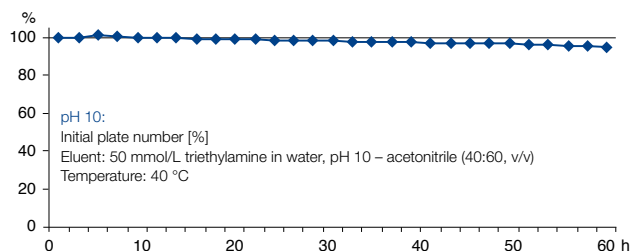
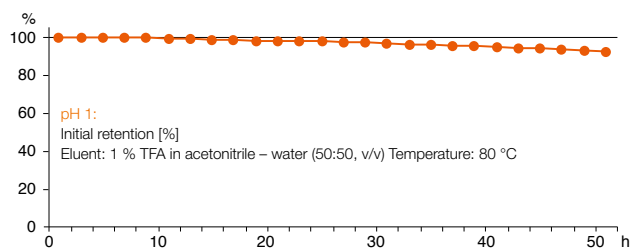
Eluent: A) acetonitrile, B) water

Gradient: 5–95 % A in 25 min

Flow rate: 0.2 mL/min

Temperature: 25 °C

Detection: ESI MS

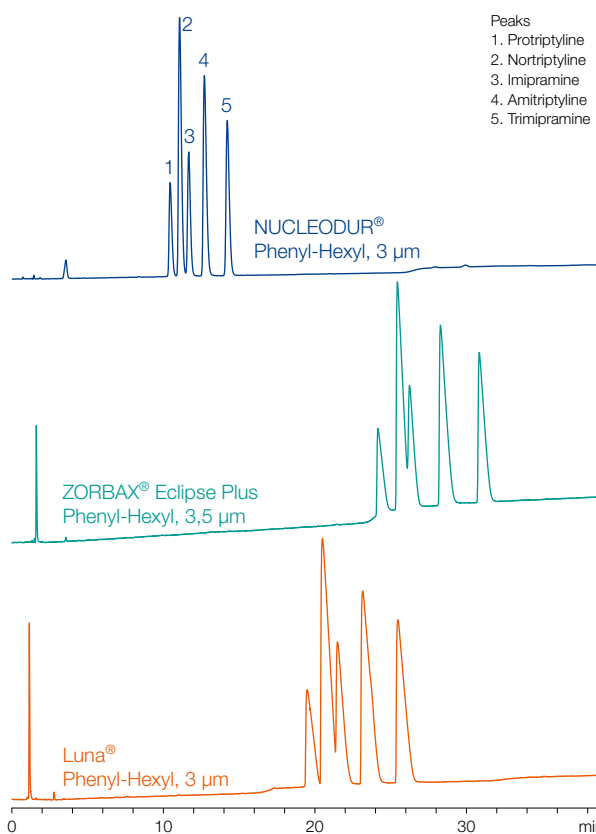


High pH stability

Columns: 150 x 3 mm NUCLEODUR® Phenyl-Hexyl, 5 μm

Flow rate: 0.56 mL/min

Detection: ESI MS



Low bleeding characteristics

Columns: 150 x 3 mm
NUCLEODUR® Phenyl-Hexyl, 3 μm
Agilent ZORBAX® Eclipse Phenyl-Hexyl, 3,5 μm
Phenomenex Luna® Phenyl-Hexyl, 3 μm

Eluent: A) 0.1 % formic acid in acetonitrile, B) 0.1 % formic acid in water
20–32.5 % A in 40 min

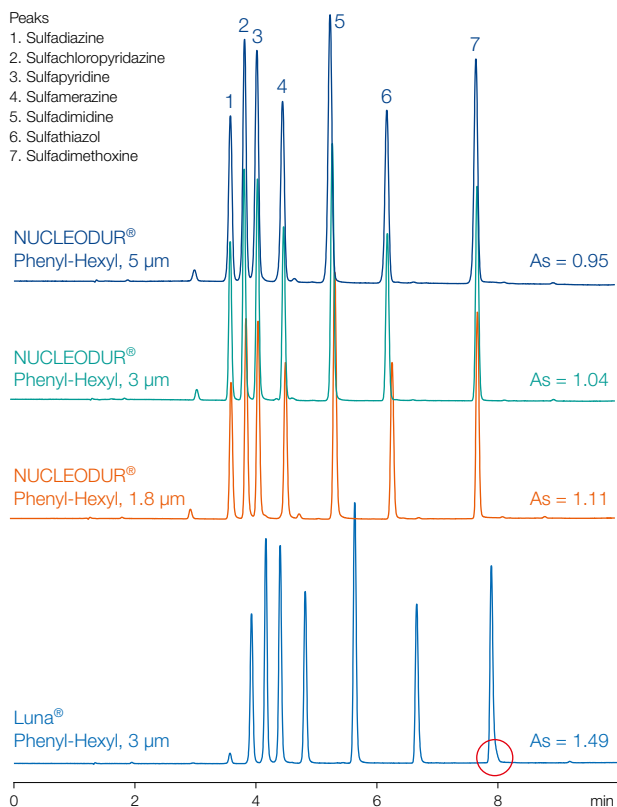
Flow rate: 0.56 mL/min

Temperature: 40 °C

Detection: UV, 254 nm

Injection 0.2 μL , 1.0 mg/mL per compound

NUCLEODUR® Phenyl-Hexyl



Sulfonamide antibiotics

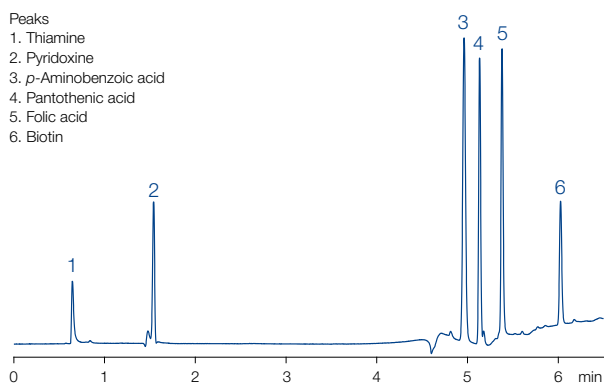
Columns: 150 x 3 mm NUCLEODUR® Phenyl-Hexyl, 5 µm
 150 x 3 mm NUCLEODUR® Phenyl-Hexyl, 3 µm
 150 x 3 mm NUCLEODUR® Phenyl-Hexyl, 1.8 µm
 150 x 3 mm Luna® Phenyl-Hexyl, 3 µm

Eluent: A) methanol, B) 0.1 % formic acid in water
 20–80 % A in 10 min

Flow rate: 0.56 mL/min, temperature 40 °C

Detection: UV, 254 nm

Injection: 0.5 µL, 1.0 mg/mL per compound



Water-soluble vitamins

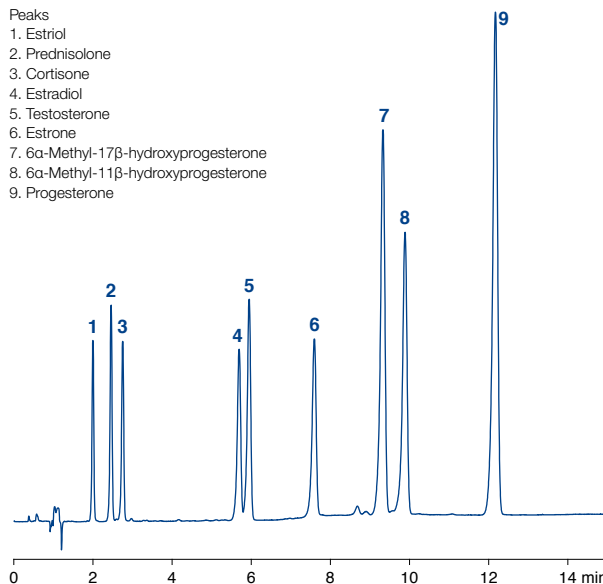
Columns: 100 x 3 mm NUCLEODUR® Phenyl-Hexyl, 3 µm

Eluent: A) 0.1 % H₃PO₄ in water, B) 0.1 % H₃PO₄ in acetonitrile; 0 %
 B (2 min) – 60 % B in 7 min

Flow rate: 0.56 mL/min, temperature 35 °C

Detection: UV, 215 nm

Injection: 0.5 µL, 1.0 mg/mL per compound



Steroids

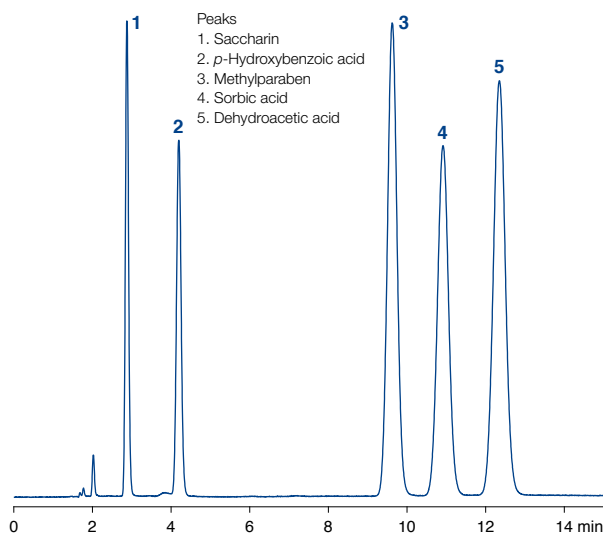
Columns: 150 x 3 mm NUCLEODUR® Phenyl-Hexyl, 3 µm

Eluent: A) acetonitrile – methanol (9:1, v/v), B) water
 40–62,5 % A in 7 min

Flow rate: 0.66 mL/min, temperature 35 °C

Detection: UV, 240 nm

Injection: 5.0 µL, 1.0 mg/mL per compound



Food additives

Columns: 150 x 4.6 mm NUCLEODUR® Phenyl-Hexyl, 5 µm

Eluent: methanol – 20 mmol/L KH₂PO₄ pH 2.5 (40:60, v/v)

Flow rate: 1 mL/min, temperature 25 °C

Detection: UV, 220 nm

Injection: 2.0 µL, 1.0 mg/mL per compound

NUCLEODUR® Phenyl-Hexyl

Ordering information

NUCLEODUR® Phenyl-Hexyl, 1.8 µm

Length	30 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm
EC columns (pack of 1 column)							
2 mm ID	760561.20	760563.20	760565.20	760566.20		760568.20	
3 mm ID	760561.30	760563.30		760566.30			
4 mm ID	760561.40	760563.40		760566.40			
4.6 mm ID	760561.46	760563.46		760566.46			
EC guard columns*			4 x 2 mm: 761985.20		4 x 3 mm: 761985.30		

NUCLEODUR® Phenyl-Hexyl, 3 µm

Length	30 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm
EC columns (pack of 1 column)							
2 mm ID		760573.20		760576.20	760577.20	760578.20	760579.20
3 mm ID		760573.30		760576.30	760577.30	760578.30	760579.30
4 mm ID		760573.40		760576.40	760577.40	760578.40	760579.40
4.6 mm ID		760573.46	760575.46	760576.46	760577.46	760578.46	760579.46
EC guard columns*			4 x 2 mm: 761985.20		4 x 3 mm: 761985.30		
CC guard columns**			8 x 3 mm: 761147.30		8 x 4 mm: 761147.40		

NUCLEODUR® Phenyl-Hexyl, 5 µm

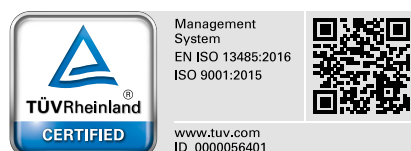
Length	30 mm	50 mm	75 mm	100 mm	125 mm	150 mm	250 mm
EC columns (pack of 1 column)							
2 mm ID		760583.20		760586.20	760587.20	760588.20	760589.20
3 mm ID		760583.30		760586.30	760587.30	760588.30	760589.30
4 mm ID		760583.40		760586.40	760587.40	760588.40	760589.40
4.6 mm ID		760583.46	760585.46	760586.46	760587.46	760588.46	760589.46
EC guard columns*			4 x 2 mm: 761987.20		4 x 3 mm: 761987.30		
CC guard columns**			8 x 3 mm: 761148.30		8 x 4 mm: 761148.40		
VarioPrep columns (pack of 1 column)							
10 mm ID		762230.100			762231.100		762233.100
21 mm ID		762230.210			762231.210		762233.210
32 mm ID							762233.320
40 mm ID						762232.400	762233.400
VP guard columns***		10 x 8 mm: 762234.80		10 x 16 mm: 762234.160		15 x 32 mm: 762236.320	

Guard column systems

Guard columns for EC columns with ID (pack of)		2 mm	3 mm	4 mm	4.6 mm
* EC guard columns for the Column Protection System guard column holder (REF 718933)	EC	4 / 2 (3)	4 / 3 (3)	4 / 3 (3)	4 / 3 (3)
** ChromCart® guard columns for the EC guard column adapter (REF 721359)	CC	8 / 3 (3)	8 / 3 (3)	8 / 4 (3)	8 / 4 (3)
Guard columns for VarioPrep columns with ID (pack of)		8, 10 mm	16, 21 mm	32, 40 mm	
*** VP guard columns	VP	10 / 8 (2)	10 / 16 (2)	15 / 32 (1)	
*** VP guard column holder		718251	718256	718253	

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