Silia*Chrom* XDB1 Family

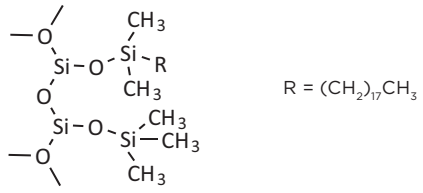
Description

Silia*Chrom* XDB1 phases have a wider range of polarity than other SiliCycle HPLC phases (*C18 to normal phase*). These phases have the maximum bonding density regardless of the compound's polarity. This allows for the least amount of interaction between the analytes and the surface OH's. These phases are not recommended for samples containing highly hydrophobic compounds.

All Silia*Chrom* XDB1 are available in 3, 5 and 10 µm except the Diol-300 which is not available in 3 µm.

The Silia*Chrom* XDB1 C18 is designed for maximum hydrophobicity and efficiency for dirty samples.

Structure



R = $(CH_2)_{17}CH_3$

Silia*Chrom* XDB1 C18

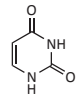
Sorbent Characteristics

See table next page.

Silia*Chrom* XDB1 Family Main Characteristics

- **Better choice for molecules > 500 Dalton**
- **High loading capacity**
- **Double endcapped**

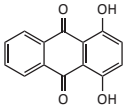
Highly Base Deactivated C18



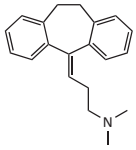
1. Uracil

2. Toluene

3. Ethylbenzene



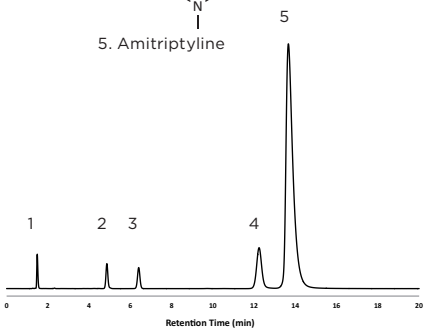
4. Quinizarin



5. Amitriptyline

Chromatographic conditions

- **Column**: Silia*Chrom* XDB1 C18, 5 µm
- **Column size**: 4.6 x 150 mm
  SiliCycle P/N: H121805H-N150
- **Mobile phase**: MeOH/20 mM potassium phosphate monobasic pH = 7.00 (*80/20*)
- **Temperature**: 23°C
- **Flow rate**: 1.000 mL/min
- **Detector**: UV at 254 nm
- **Injection Volume**: 1 µL



Column Performance Results

Compounds	Retention Time (min)	Peak Asymmetry Factor (USP)	Theoretical Plates (USP)
Uracil	1.49	1.27	3,778
Toluene	4.86	1.09	12,144
Ethylbenzene	6.40	1.02	13,026
Quinizarin	12.24	1.07	11,525
Amitriptyline	13.66	1.76	8,190

SiliaChrom XDB1 Sorbent Characteristics

SiliaChrom XDB1 Sorbent Characteristics						
SiliaChrom Phases	Description	USP Code	%C	Pore Size (Å)	Surface Area (m^2/g)	pH Stability Range
Reversed-Phases						
SiliaChrom XDB1 C18	Designed for maximum hydrophobicity and efficiency for dirty samples.	L1	22	100	380 - 400	1.5 - 10.0
SiliaChrom XDB1 C18-300		L1	8	300	80	1.5 - 9.0
SiliaChrom XDB1 C8	Exceptionally stable with high bonding coverage and low silanol activity.	L7	14	100	380 - 400	1.5 - 10.0
SiliaChrom XDB1 C8-300		L7	4	300	80	1.5 - 8.5
SiliaChrom XDB1 C4		L26	7	100	380 - 400	1.5 - 8.5
SiliaChrom XDB1 C4-300		L26	3	300	80	2.0 - 8.0
SiliaChrom XDB1 C1		L13	3	100	380 - 400	1.5 - 8.5
SiliaChrom XDB1 C1-300		L13	1	300	80	2.0 - 8.0
SiliaChrom XDB1 CN	Maximum hydrophobicity and works in normal and reversed-phase conditions.	L10	5	100	380 - 400	1.5 - 8.5
SiliaChrom XDB1 CN-300		L10	3.5	300	80	2.0 - 8.0
SiliaChrom XDB1 Phenyl	Highly retentive phase for aromatic and unsaturated compounds.	L11	12	100	380 - 400	1.5 - 9.0
SiliaChrom XDB1 Phenyl-300		L11	4.5	300	80	2.0 - 8.0
Normal Phases						
SiliaChrom XDB1 Si	Designed for normal phase conditions, presents a high surface area and a low metal content.	L3	n/a	100	380 - 400	1.0 - 8.0
SiliaChrom XDB1 Si-300		L3	n/a	300	80	1.0 - 8.0
SiliaChrom XDB1 Diol	Excellent for normal phase applications with the highest hydrophobic activity.	NA	5	100	380 - 400	2.0 - 8.0
SiliaChrom XDB1 Diol-300		NA	1	300	80	2.0 - 8.0
SiliaChrom XDB1 Amino	Superior general purpose amino phase. Recommended for normal phase analysis and excellent for sugar analysis.	L8	6	100	380 - 400	2.0 - 8.5
SiliaChrom XDB1 Amino-300		L8	2.5	300	80	2.0 - 8.0

« I have successfully used regular HPLC Analytical Columns for some analytical purpose, it works perfectly and accomdate good separation. »

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