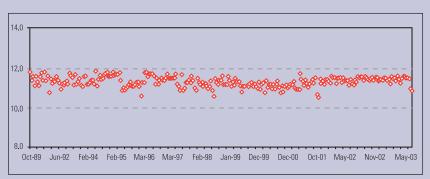
Hypersil BDS Columns

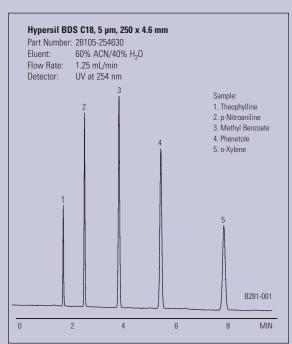
Reproducible, reliable and trusted worldwide

- Base deactivated and endcapped for reduced peak tailing
- Highly reproducible, robust columns with long lifetimes
- Hypersil™ columns directly from the manufacturer for the best quality, service and technical support

Built on the renowned Hypersil silica backbone, Thermo Scientific Hypersil BDS (Base Deactivated Silica) is an excellent reversed phase material for a wide range of applications and is one of the most popular packing materials available. Introduced to the chromatography market in 1988 as one of the first base deactivated silicas, Hypersil BDS columns have gained respect worldwide for their quality, reliability, range of applications, robustness, and reproducibility. Hypersil BDS columns are the only Hypersil columns within the marketplace that come with a Certificate of Authenticity.



Our 30 years of quality control data demonstrates the excellent batch-to-batch reproducibility of Thermo Scientific Hypersil products



Each Hypersil BDS column is individually tested before it leaves our factory, as illustrated by the column QC test

Hypersil BDS media and columns are manufactured to the highest standards and are rigorously quality controlled under fully documented, ISO 9001:2000 certified processes. When you purchase a Thermo Scientific Hypersil BDS column you are assured of consistent and efficient performance, column after column and year after year.

Hypersil™Column Certificate of Authenticity

This genuine Hypersil column has been entirely manufactured and tested at Thermo Fisher Scientific facilities.

When you purchase Thermo Scientific Hypersil columns, we guarantee the high quality of the column because we control the complete process, from silica manufacture to column packing, backed by 30 years of experience in making Hypersil columns. Each column is individually tested to meet our well-defined, high specifications before we ship it to you.

Only Thermo Scientific Hypersil columns can make this claim, and that means you can expect outstanding technical support, superior customer service, and quality workmanship. You have our word.

Visit www.thermo.com/columns to learn more about genuine Hypersil columns.



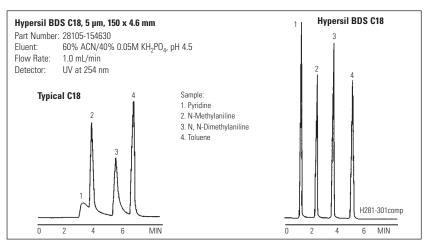
Hypersil BDS C18 Columns

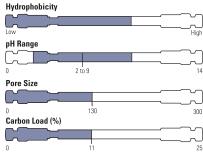
The standard for base deactivated columns

- Original Hypersil columns from the manufacturer
- . Base deactivated with minimal residual silanol activity
- Exceptional reproducibility
- Economical, general purpose columns

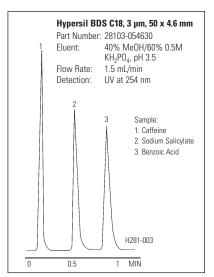
Hypersil™ BDS C18 media is an excellent reversed phase material for a variety of applications and is one of the most popular packing materials available. Hypersil BDS columns are a good choice for QA/QC labs as a robust general purpose column in applications where reproducibility and long column lifetimes are required.

Hypersil BDS C18 columns are applicable to a wide range of analytes including acids, bases and neutrals as shown, and are popular in methods worldwide. Hypersil BDS columns are also available in a 3 µm particle size. The smaller particle size typically yields 25% greater efficiency than the $5 \, \mu m$ particles, for an increase in resolution which allows for faster separations.





Particle Size 3 µm, 5 µm USP L1



3 µm Hypersil BDS C18 for faster separations

Comparison of a typical C18 and Hypersil BDS C18 columns for the analysis of basic compounds

Ordering Information

Hypersil BDS C18 Columns



Particle Size	Length (mm)	4.6 mm ID	4.0 mm ID	3.0 mm ID	2.1 mm ID
3 μm	30	28103-034630	28103-034030	28103-033030	28103-032130
	50	28103-054630	28103-054030	28103-053030	28103-052130
	100	28103-104630	28103-104030	28103-103030	28103-102130
	150	28103-154630	28103-154030	28103-153030	28103-152130
5 µm	50	28105-054630	28105-054030	28105-053030	28105-052130
	100	28105-104630	28105-104030	28105-103030	28105-102130
	125	28105-124630	28105-124030	28105-123030	28105-122130
	150	28105-154630	28105-154030	28105-153030	28105-152130
	200	28105-204630	28105-204030	28105-203030	28105-202130
	250	28105-254630	28105-254030	28105-253030	28105-252130

Other column dimensions are available. Please call Customer Service for more information.

Hypersil BDS C18 Drop-in Guard Cartridges (pk/4)



Particle Size	Length (mm)	4.6 mm ID	4.0 mm ID	3.0 mm ID	2.1 mm ID
3 µm	10	28103-014001	28103-014001	28103-013001	28103-012101
5 μm	10	28105-014001	28105-014001	28105-013001	28105-012101
UNIGUARD™ Direct-Cond Drop-in Guard Cartridge	The second secon	850-00	850-00	852-00	852-00

Hypersil BDS C8 Columns

Reduce retention and increase speed

- Ideal choice for acids, bases and neutral compounds
- Less retentive than C18 for faster analyses
- Robust columns with long column lifetimes
- Very reliable for routine assays

Hydrophobicity

Low High

PH Range

0 2 to 9 14

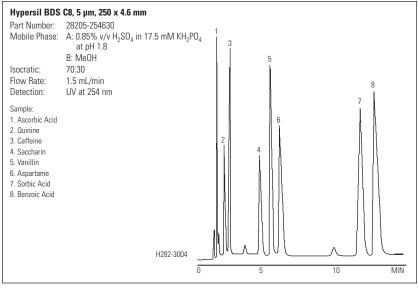
Pore Size

Carbon Load (%)

0 7 25

Particle Size 3 µm, 5 µm USP L7

Hypersil™ BDS columns have gained respect worldwide for their quality, reliability, range of applications, robustness and reproducibility. Hypersil BDS C8 columns offer the same high quality base-deactivated, fully end-capped phase as Hypersil BDS C18, with similar selectivity but slightly less retention. They are applicable to the analysis of acids, bases and neutrals including soft drink additives as shown.



28205-253030

28205-252130

Additives in soft drinks can be readily separated using a Hypersil BDS C8 column

Ordering Information

Hypersil BDS C8 Columns Particle Size Length (mm) 4.6 mm ID 4.0 mm ID 3.0 mm ID 2.1 mm ID $3 \, \mu m$ 28203-054630 28203-054030 28203-053030 28203-052130 100 28203-104630 28203-104030 28203-103030 28203-102130 150 28203-154630 28203-154030 28203-153030 28203-152130 5 μm 50 28205-054630 28205-054030 28205-053030 28205-052130 100 28205-104630 28205-104030 28205-103030 28205-102130 150 28205-154630 28205-154030 28205-153030 28205-152130

28205-254030

28205-254630

Other column dimensions are available. Please call Customer Service for more information.

250

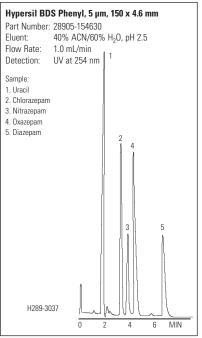
Hypersil BDS C8 Drop-in Guard Cartridges (pk/4) **Particle Size** Length (mm) 4.6 mm ID 4.0 mm ID 3.0 mm ID 2.1 mm ID 28203-014001 28203-013001 28203-012101 3 µm 10 28203-014001 10 28205-014001 28205-013001 5 µm 28205-014001 28205-012101 UNIGUARD™ Direct-Connect 850-00 850-00 852-00 852-00 Drop-in Guard Cartridge Holder

Hypersil BDS Phenyl Columns

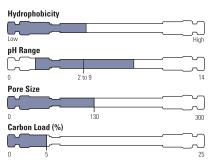
Alternative selectivity in a trusted column family

- High quality, base deactivated columns
- Unique selectivity for aromatic and slightly polar compounds
- Manufactured under ISO 9001:2000 conditions

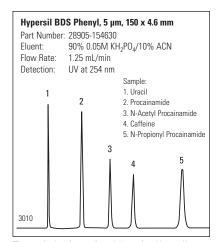
Hypersil™ BDS Phenyl columns offer alternative selectivity to Hypersil BDS C18 and C8 columns. It is well established that phenyl phases offer clear advantages over alkyl chains when certain types of compounds must be resolved. The exceptional stability and unique selectivity of Hypersil BDS Phenyl can be used to accomplish a difficult separation. As with all Hypersil BDS columns, the base deactivation procedure and endcapping process minimize peak tailing, even for basic drugs. Each Hypersil BDS column comes with a Certificate of Authenticity.



Challenging pharmaceutical compounds such as benzodiazapines are easily separated using a Hypersil BDS Phenyl column



Particle Size 3 µm, 5 µm USP L11



The analysis of procainamides using Hypersil BDS Phenyl

Ordering Information

Hypersil	BDS	Phenyl	Columns
D41-1- C1-	_		I

Particle Size Length (mm) 4.6 mm ID 4.0 mm ID 3.0 mm ID 2.1 mm ID 3 μm 50 28903-054630 28903-054030 28903-053030 28903-052 100 28903-104630 28903-104030 28903-103030 28903-102	
)
100 28903-104630 28903-104030 28903-103030 28903-102	30
	30
150 28903-154630 28903-154030 28903-153030 28903-152	30
5 μm 50 28905-054630 28905-054030 28905-053030 28905-052	30
100 28905-104630 28905-104030 28905-103030 28905-102	30
150 28905-154630 28905-154030 28905-153030 28905-152	30
250 28905-254630 28905-254030 28905-253030 28905-252	30

Other column dimensions are available. Please call Customer Service for more information.

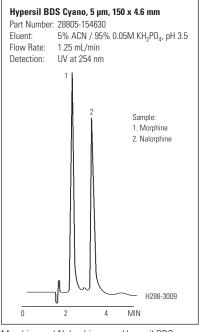
Hypersil BDS Phenyl Drop-in Guard Cartridges (pk/4)							
Particle Size	Length (mm)	4.6 mm ID	4.0 mm ID	3.0 mm ID	2.1 mm ID		
3 µm	10	28903-014001	28903-014001	28903-013001	28903-012101		
5 μm	10	28905-014001	28905-014001	28905-013001	28905-012101		
UNIGUARD™ Direct-Con Drop-in Guard Cartridge	The second secon	850-00	850-00	852-00	852-00		

Hypersil BDS Cyano Columns

For reversed or normal phase applications

- Reliable cyano columns with long lifetimes
- Use in reversed phase for alternative selectivity
- Use in normal phase for less retention than silica columns

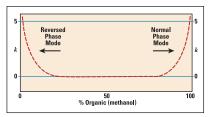
Hypersil™ BDS Cyano columns can be used in both reversed phase and normal phase chromatography. In reversed phase, they offer different selectivity compared to C18 or C8 phases. In normal phase, they are less retentive than silica columns. Hypersil BDS Cyano columns are packed and shipped in normal phase solvents. For reversed phase applications, flush with appropriate solvents before use.



Morphine and Nalorphine on a Hypersil BDS Cyano column

Hydrophobicity Low High PH Range 0 2 to 9 14 Pore Size Carbon Load (%)

Particle Size 3 µm, 5 µm USP L10



Cyano columns can retain and separate compounds under reversed or normal phase conditions due to their dual modes of retention

Ordering Information

Hypersil BDS Cyano Columns



Particle Size	Length (mm)	4.6 mm ID	4.0 mm ID	3.0 mm ID	2.1 mm ID
3 µm	50	28803-054630	28803-054030	28803-053030	28803-052130
	100	28803-104630	28803-104030	28803-103030	28803-102130
	150	28803-154630	28803-154030	28803-153030	28803-152130
5 μm	50	28805-054630	28805-054030	28805-053030	28805-052130
	100	28805-104630	28805-104030	28805-103030	28805-102130
	150	28805-154630	28805-154030	28805-153030	28805-152130
	250	28805-254630	28805-254030	28805-253030	28805-252130

Other column dimensions are available. Please call Customer Service for more information. Please note that Hypersil BDS Cyano columns are shipped in isooctane:ethanol. For reversed phase applications, flush with ethanol or 2-propanol prior to use.

Hypersil BDS Cyano Drop-in Guard Cartridges (pk/4)



Particle Size	Length (mm)	4.6 mm ID	4.0 mm ID	3.0 mm ID	2.1 mm ID
3 μm	10	28803-014001	28803-014001	28803-013001	28803-012101
5 μm	10	28805-014001	28805-014001	28805-013001	28805-012101
UNIGUARD™ Direct-Connect Drop-in Guard Cartridge Holde	er =	850-00	850-00	852-00	852-00