

Hypersil GOLD Columns

Excellent peak shape for all analyte types

- Excellent peak symmetry
- Narrow peaks for outstanding efficiency
- Increased sensitivity and improved resolution
- Variety of chemistries
- 1.9 to 12µm particles



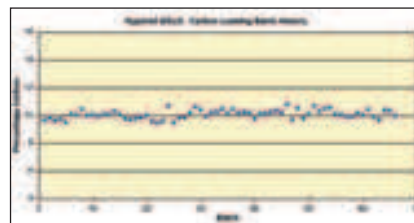
Thermo Scientific Hypersil GOLD columns are exceptionally reproducible for reliable chromatography, column after column. This allows the user to be confident that assays developed with Hypersil GOLD columns will be robust and stable for the life of the assay, making them an ideal choice for new method development. Built on more than 30 years of experience in product development and manufacturing of HPLC media and columns, we successfully continue to extend the capabilities of this state-of-the-art family of columns, designed for improved chromatography. Hypersil GOLD columns are manufactured in ISO 9001:2000 accredited laboratories under strict protocols using a robust manufacturing procedure and extensive quality control testing.

Improved Selectivity, Resolution and Productivity

Hypersil GOLD columns are available in an

array of chemistries to optimize separations and maximize productivity:

- **Hypersil GOLD** offers outstanding peak shape using generic gradients with C18 selectivity
- **Hypersil GOLD C8** offers similar selectivity but with less retention
- **Hypersil GOLD aQ** can be used for challenging reverse phase separations employing highly aqueous mobile phases
- **Hypersil GOLD PFP** can offer alternative selectivity in reverse phase applications
- **Hypersil GOLD Phenyl** offers alternative selectivity and is particularly suitable for aromatic and moderately polar compounds
- **Hypersil GOLD CN** can be used for both reversed and normal phase separations
- **Hypersil GOLD C4** has short alkyl chain length, low hydrophobicity column for less retention
- **Hypersil GOLD Amino** demonstrates excellent chromatographic properties in three modes: weak anion exchange, reversed phase and normal phase.
- **Hypersil GOLD AX** can be used to separate proteins, peptides, other anionic species and polar molecules
- **Hypersil GOLD SAX** is a highly stable silica-based quarternary amine strong anion exchange column, designed for aqueous mobile phase
- **Hypersil GOLD Silica** is a powerful and efficient tool in the chromatography of non-polar and moderately polar organic compounds by normal phase

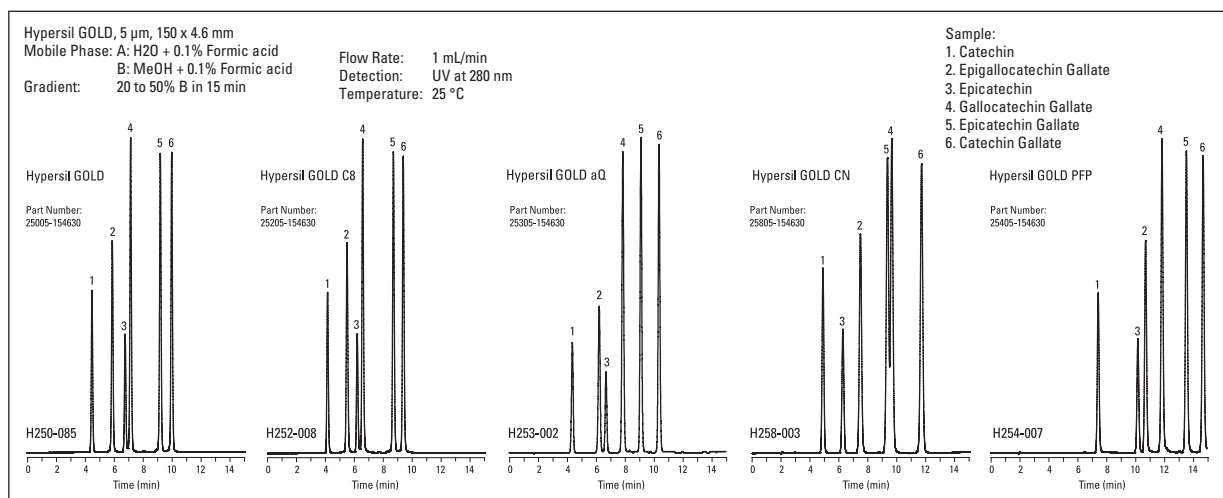


Excellent reproducibility is illustrated with the percent carbon on the Hypersil GOLD media

These chemistries offer alternative selectivities in the same column family, providing enhanced retention or changes in elution order for flexibility in method development. Each phase is made with the same care and attention to quality that defines all Thermo Scientific columns.

Solutions for High Throughput Screening, Capillary to Preparative Analysis

Hypersil GOLD columns are available in particle sizes and column designs to meet all separation needs, including improved resolution, enhanced sensitivity and faster analyses. From 1.9µm to 12µm particles, Hypersil GOLD columns offer chromatographic solutions with consistent separations and performance. Specialized hardware includes KAPPA™ capillary columns, PicoFrit™ and IntegraFrit™ nanobore columns, Javelin™ HTS direct-connection columns and DASH™ HTS columns, designed for high throughput screening.



1.9 μ m Hypersil GOLD

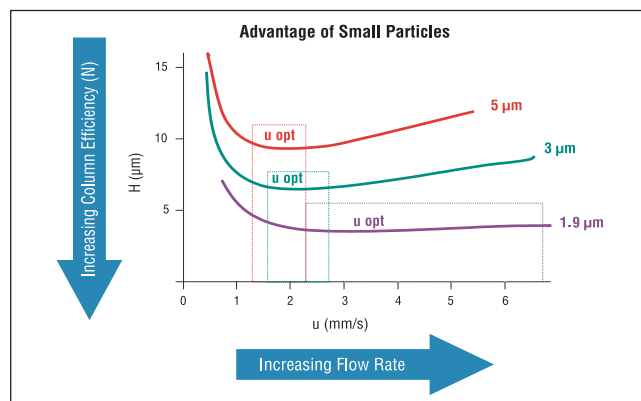
Small particles to improve speed and efficiency

The use of sub-2 μ m particles is becoming increasingly popular for applications in either High Throughput Screening (HTS) assays or in Ultra High Pressure Liquid Chromatography (U-HPLC). 1.9 μ m Hypersil GOLD columns offer advantages over the more traditional columns containing 3 and 5 μ m particles by delivering a higher efficiency over a wider range of linear velocity. The van Deemter curve (below left) illustrates how the limitations in column efficiency at higher linear velocities can be overcome by employing smaller particles. As the particle size is reduced, the optimum mobile phase velocity (u) is increased and the curve becomes flatter. This means that columns packed with smaller particles can be operated over a wider range of flow rates while maintaining higher efficiencies, enabling considerable improvements in speed of analysis.

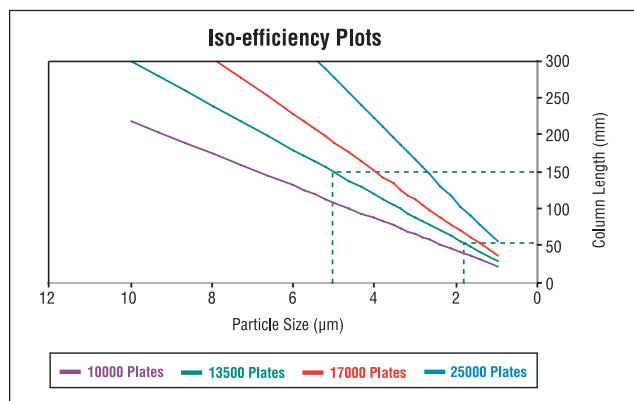
In addition, resolution and analysis time are determined by the ratio of column length to particle size. When particle size is reduced, column length can also be reduced while keeping separation efficiency constant (and therefore resolution if all other experimental conditions remain unchanged). The figure below on the right illustrates this concept. For example, if 13500 plates (green line on graph) are needed to obtain the required resolution, a 150mm column packed with 5 μ m particles would be required. However, if the particle size is reduced to 1.9 μ m then only 50mm of column are needed to obtain the same efficiency (13500 plates). For a constant flow rate, analysis time would be reduced approximately 3-fold with this change in particle size and column length.

1.9 μ m particles bring increased flexibility to the practice of chromatography. If speed is the most important consideration, it is possible to use a high flow rate and a short (20 to 50mm) column. It is also possible to adjust parameters to increase resolution for difficult separations. Using a longer (100 to 200mm) column will increase efficiency and therefore improve resolution.

It is important when using these columns that the instrument is also optimized for analysis. Full details on how to optimize your separation using 1.9 μ m Hypersil GOLD columns can be found in the Hypersil GOLD 1.9 μ m HPLC Columns Technical Guide. Some guidelines for method transfer from standard HPLC to U-HPLC are given on page 475.



The Advantages of 1.9 μ m Particles. The van Deemter plot highlights how columns packed with smaller particles can operate over a wider range of linear velocity and maintain higher efficiencies. This allows the use of higher flow rates, resulting in considerable improvements in speed, without loss in performance.



Iso efficiency plots. High throughput, high efficiency separations can be obtained with short columns packed with small particles.

Hypersil GOLD Columns

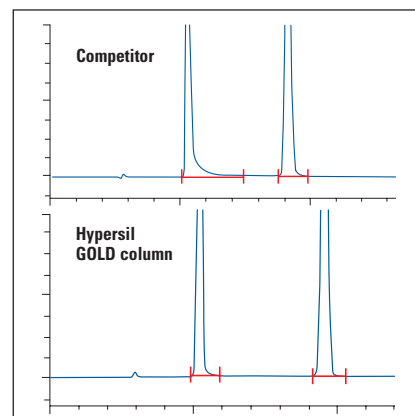
Excellent peak shape for all analyte types

- C18 selectivity
- Excellent peak symmetry
- Increased sensitivity
- Improved resolution

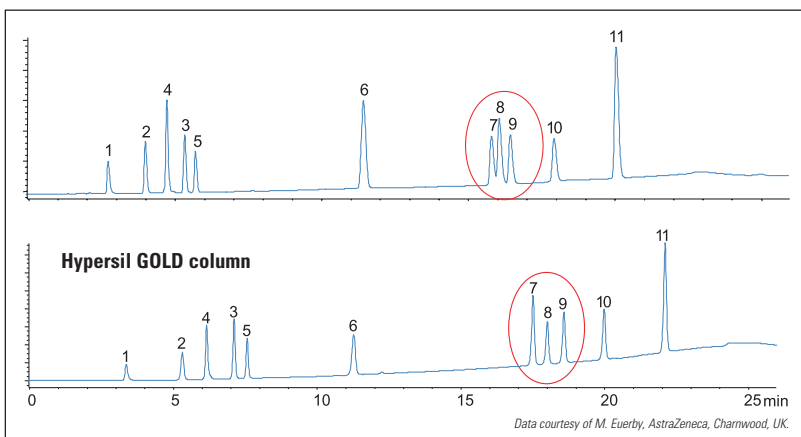
Outstanding Peak Shape

Based on an improved, highly pure silica and a novel proprietary derivatization and endcapping procedure using alkyl chemistry, Hypersil GOLD columns offer next generation silica-based

columns with enhanced performance. The manufacturing process was designed to create an even surface which reduces the unwanted secondary and tertiary interactions that can occur between analytes and the acidic silanols of the silica support. This significantly reduces peak tailing while retaining C18 (USP L1) selectivity. This results in improved resolution, efficiency, sensitivity, and confidence in the accuracy and quality of your analytical data.



Hypersil GOLD columns offer improved peak shape, even for basic analytes.



Resolution of analytes is improved using a Hypersil GOLD column.

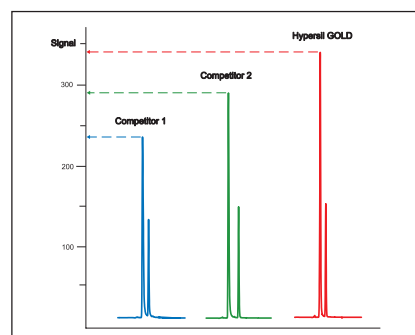
Improved Sensitivity

Good peak shape means greater sensitivity. When peaks exhibit tailing, peak height is reduced causing the sensitivity of the analysis to be compromised. The more symmetrical the chromatographic peaks, the more confidence you derive from your data. Using Hypersil GOLD, peak height is enhanced and peak integration calculations are optimized.

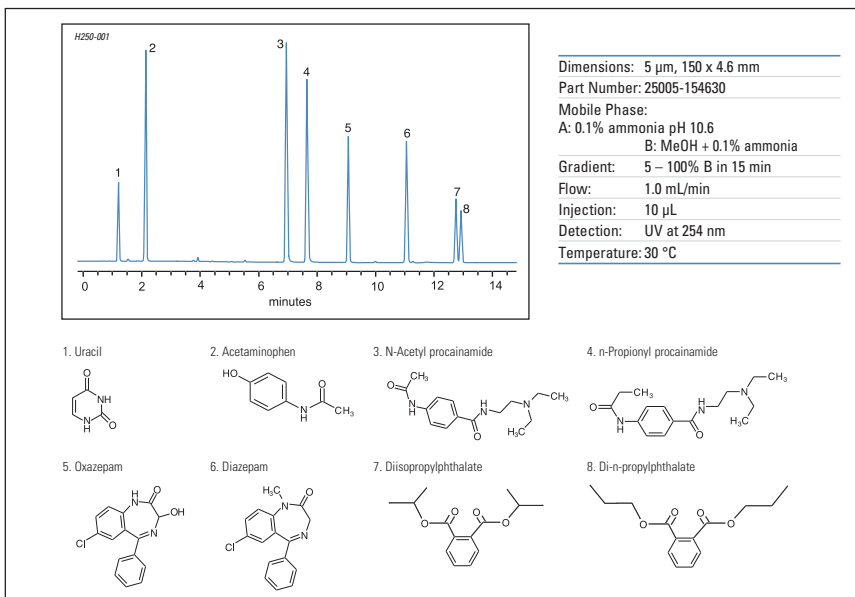
Enhanced peak height can be particularly critical when low concentrations of an analyte are present, for example in an impurity assay. The increase in sensitivity gained with the Hypersil GOLD columns over competitor C18 columns is illustrated above.

Enhanced Resolution

Robust assay development requires a clear definition of resolution expectations. Narrow symmetrical chromatographic peaks ensure that optimum resolution is achieved. Obtaining narrow peak widths is especially challenging for basic pharmaceutical compounds. The figure above shows how Hypersil GOLD columns provide excellent resolution between critical pairs, aiding in separation of closely related species.



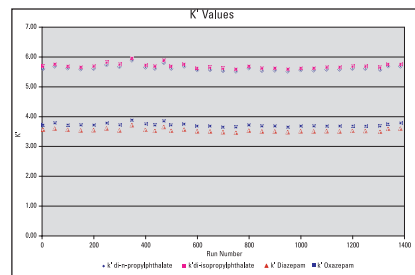
The improved peak symmetry provides additional peak height to increase sensitivity of analysis of trace components.



High pH stability assay (pH 10.6) of Hypersil GOLD columns

pH Stability

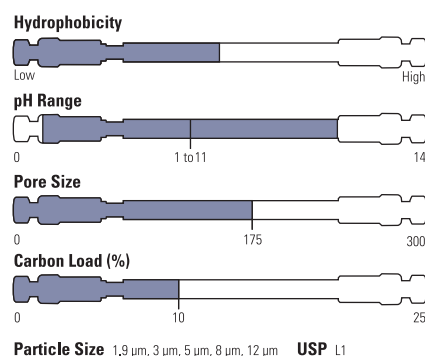
Hypersil GOLD columns are well suited to extended pH applications. Hypersil GOLD columns have been shown to produce robust assays at high pH. At low pH, excellent column stability and reproducibility are illustrated.



Stability of Hypersil GOLD columns at low pH. No loss of retention after 28L of mobile phase in 19.5 days of analysis.

Hypersil GOLD HPLC Columns


Endcapped, ultrapure, silica-based columns with exceptional peak shape and resolution for HPLC and LC/MS



- ▶ Significant reduction in peak tailing while retaining C18 selectivity
- ▶ Excellent resolution, efficiency and sensitivity
- ▶ Confidence in the accuracy and quality of analytical data
- ▶ 1.9μm particle size columns can be used to improve speed and efficiency

Hypersil GOLD Analytical HPLC Columns					
Length	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9μm					
20mm	25002-021030	25002-022130	25002-023030	--	--
30mm	25002-031030	25002-032130	25002-033030	--	--
50mm	25002-051030	25002-052130	25002-053030	--	25002-054630
100mm	25002-101030	25002-102130	25002-103030	--	--
150mm	--	25002-152130	--	--	--
200mm	--	25002-202130	--	--	--
Particle Size 3μm					
30mm	25003-031030	25003-032130	25003-033030	25003-034030	25003-034630
50mm	25003-051030	25003-052130	25003-053030	25003-054030	25003-054630
100mm	25003-101030	25003-102130	25003-103030	25003-104030	25003-104630
150mm	25003-151030	25003-152130	25003-153030	25003-154030	25003-154630
Particle Size 5μm					
30mm	25005-031030	25005-032130	25005-033030	25005-034030	25005-034630
50mm	25005-051030	25005-052130	25005-053030	25005-054030	25005-054630
100mm	25005-101030	25005-102130	25005-103030	25005-104030	25005-104630
150mm	25005-151030	25005-152130	25005-153030	25005-154030	25005-154630
250mm	25005-251030	25005-252130	25005-253030	25005-254030	25005-254630

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

Hypersil GOLD Drop-in Guard Cartridges						
Particle Size	Length	1.0mm ID	2.1mm ID	3.0mm ID	4.0/4.6mm ID	Quantity
3μm	10mm	25003-011001	25003-012101	25003-013001	25003-014001	4 Pack
5μm	10mm	25005-011001	25005-012101	25005-013001	25005-014001	4 Pack
	UNIGUARD Drop-in Guard Cartridge Holder	851-00	852-00	852-00	850-00	1 Each

Hypersil GOLD HPLC Columns



Hypersil GOLD KAPPA Capillary HPLC Columns					
Length	75mm I.D.	100mm I.D.	180mm I.D.	320mm I.D.	500mm I.D.
Particle Size 1.9µm					
50mm	--	--	--	25002-050365	--
100mm	--	--	--	25002-100365	--
Particle Size 3µm					
50mm	--	--	25003-050265	25003-050365	25003-050565
100mm	--	--	25003-100265	25003-100365	25003-100565
150mm	--	--	25003-150265	25003-150365	25003-150565
Particle Size 5µm					
50mm	25005-050065	25005-050165	25005-050265	25005-050365	25005-050565
100mm	25005-100065	25005-100165	25005-100265	25005-100365	25005-100565
150mm	25005-150065	25005-150165	25005-150265	25005-150365	25005-150565

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

Hypersil GOLD KAPPA Capillary Guard Columns				
Particle Size	Length	180µm I.D.	320µm I.D.	500µm I.D.
3µm	30mm	25003-030215	25003-030315	25003-030515
5µm	30mm	25005-030215	25005-030315	25005-030515

Hypersil GOLD Nanobore HPLC Columns							
Particle Size	Length	75µm ID	75µm ID Multipack	Quantity	150µm ID	150µm ID Multipack	Quantity
IntegraFrit							
1.9µm	10mm	25002-017563	25002-017564	4 Pack	25002-011563	25002-011564	4 Pack
1.9µm	50mm	25002-057563	25002-057564	3 Pack	25002-051563	25002-051564	3 Pack
1.9µm	100mm	25002-107563	25002-107564	3 Pack	--	--	--
5µm	50mm	25005-057563	25005-057564	3 Pack	25005-051563	25005-051564	3 Pack
5µm	100mm	25005-107563	25005-107564	3 Pack	25005-101563	25005-101564	3 Pack
PicoFrit, 15µm Tip							
1.9µm	10mm	25002-017581	25002-017583	4 Pack	--	--	--
1.9µm	50mm	25002-057581	25002-057582	3 Pack	--	--	--
1.9µm	100mm	25002-107581	25002-107582	3 Pack	--	--	--
5µm	10mm	25005-017581	25005-017583	4 Pack	--	--	--
5µm	50mm	25005-057581	25005-057582	3 Pack	--	--	--
5µm	100mm	25005-107581	25005-107582	3 Pack	--	--	--

Unless otherwise specified, IntegraFrit and PicoFrit are sold in single-column units



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See our range of Certified Vials


Hypersil GOLD Javelin HTS HPLC Columns

Particle Size	20 x 4.0mm	20 x 2.1mm	20 x 1.0mm	10 x 2.1mm	Quantity
1.9µm	--	--	--	25002-012135	3 Pack
5µm	25005-024035	25005-022135	25005-021035	--	3 Pack
5µm	25005-024036	25005-022136	25005-021036	--	10 Pack

Hypersil GOLD DASH HTS HPLC Columns

Particle Size	Length	2.1mm I.D.	Quantity
5µm	20mm	25005-022151	3 Pack
5µm	20mm	25005-022152	10 Pack

Hypersil GOLD Preparative HPLC Columns

Length	10mm I.D.	21mm I.D.	30mm I.D.	50mm I.D.
Particle Size 5µm				
50mm	25005-059070	25005-059270	25005-059370	25005-059570
100mm	25005-109070	25005-109270	25005-109370	25005-109570
150mm	25005-159070	25005-159270	25005-159370	25005-159570
250mm	25005-259070	25005-259270	25005-259370	25005-259570
Particle Size 8µm				
50mm	25008-059070	25008-059270	25008-059370	25008-059570
100mm	25008-109070	25008-109270	25008-109370	25008-109570
150mm	25008-159070	25008-159270	25008-159370	25008-159570
250mm	25008-259070	25008-259270	25008-259370	25008-259570
Particle Size 12µm				
50mm	25012-059070	25012-059270	25012-059370	25012-059570
100mm	25012-109070	25012-109270	25012-109370	25012-109570
150mm	25012-159070	25012-159270	25012-159370	25012-159570
250mm	25012-259070	25012-259270	25012-259370	25012-259570

Other custom column dimensions are available. Please call your local Customer Service for more information. Stainless steel internal reducing unions to connect 30 to 50mm ID preparative columns to 1/16" tubing are available.


Hypersil GOLD Preparative Guard Cartridge Systems

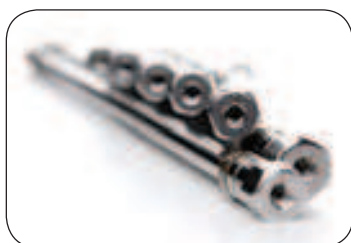
Particle Size	10 x 10mm (I.D. x L)	20 x 20mm (I.D. x L)	Quantity
5µm	25005-019023	25005-029223	3 Pack
8µm	25008-019023	25008-029223	3 Pack
12µm	25012-019023	25012-029223	3 Pack
Preparative Guard Holder	C-1000	F1403	1 Each

Hypersil GOLD Preparative HPLC Guard Columns

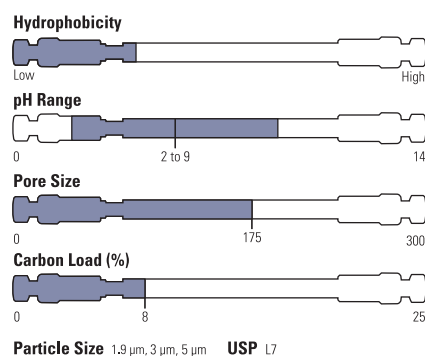
Particle Size	10mm ID	21mm ID	Quantity
5µm	25005-039022	25005-039222	1 Each
8µm	25008-039022	25008-039222	1 Each
12µm	25012-039022	25012-039222	1 Each

Hypersil GOLD C8 HPLC Columns

Recommended for analytes with medium hydrophobicity or when a less hydrophobic phase is required to obtain optimum retention



- ▶ Similar selectivity to C18 columns but with reduced retention
- ▶ Lower hydrophobicity, allowing compounds to elute quicker
- ▶ Faster separations
- ▶ Excellent peak shape
- ▶ High efficiency
- ▶ Outstanding sensitivity
- ▶ 1.9µm particle size columns can be used to improve speed and efficiency



Hypersil GOLD C8 HPLC Columns					
Length (mm)	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9µm					
20mm	25202-021030	25202-022130	25202-023030	--	--
30mm	25202-031030	25202-032130	25202-033030	--	--
50mm	25202-051030	25202-052130	25202-053030	--	25202-054630
100mm	25202-101030	25202-102130	25202-103030	--	--
150mm	--	25202-152130	--	--	--
200mm	--	25202-202130	--	--	--
Particle Size 3µm					
30mm	25203-031030	25203-032130	25203-033030	25203-034030	25203-034630
50mm	25203-051030	25203-052130	25203-053030	25203-054030	25203-054630
100mm	25203-101030	25203-102130	25203-103030	25203-104030	25203-104630
150mm	25203-151030	25203-152130	25203-153030	25203-154030	25203-154630
Particle Size 5µm					
30mm	25205-031030	25205-032130	25205-033030	25205-034030	25205-034630
50mm	25205-051030	25205-052130	25205-053030	25205-054030	25205-054630
100mm	25205-101030	25205-102130	25205-103030	25205-104030	25205-104630
150mm	25205-151030	25205-152130	25205-153030	25205-154030	25205-154630
250mm	25205-251030	25205-252130	25205-253030	25205-254030	25205-254630

Hypersil GOLD C8 Drop-In Guard Cartridges						
Particle Size	Length	4.6mm/4.0mm ID	3.0mm ID	2.1mm ID	1.0mm ID	Quantity
3µm	10mm	25203-014001	25203-013001	25203-012101	25203-011001	4 Pack
5µm	10mm	25205-014001	25205-013001	25205-012101	25205-011001	4 Pack
		850-00	852-00	852-00	851-00	1 Each

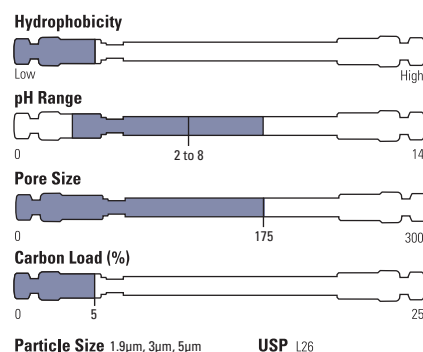
Hypersil GOLD C8 KAPPA Capillary HPLC Columns					
Length	75µm ID	100µm ID	180µm ID	320µm ID	500µm ID
Particle Size 1.9µm					
50mm	--	--	--	25202-050365	--
100mm	--	--	--	25202-100365	--
Particle Size 3µm					
50mm	--	--	25203-050265	25203-050365	25203-050565
100mm	--	--	25203-100265	25203-100365	25203-100565
150mm	--	--	25203-150265	25203-150365	25203-150565
Particle Size 5µm					
50mm	25205-050065	25205-050165	25205-050265	25205-050365	25205-050565
100mm	25205-100065	25205-100165	25205-100265	25205-100365	25205-100565
150mm	25205-150065	25205-150165	25205-150265	25205-150365	25205-150565

Hypersil GOLD C4 HPLC Columns


Lower hydrophobicity than C18 or C8 recommended for very hydrophobic analytes

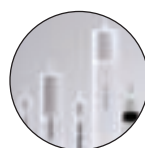
Hypersil GOLD C4 columns provide similar selectivity to C18 and C8 columns but with reduced retention.

- ▶ Lower hydrophobicity
- ▶ Faster separations
- ▶ Excellent peak shape
- ▶ High efficiency
- ▶ Outstanding sensitivity
- ▶ 1.9µm particle size columns can be used to improve speed and efficiency



Hypersil GOLD C4 Analytical HPLC Columns					
Length	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9µm					
20mm	25502-021030	25502-022130	25502-023030	--	--
30mm	25502-031030	25502-032130	25502-033030	--	--
50mm	25502-051030	25502-052130	25502-053030	--	25502-054630
100mm	25502-101030	25502-102130	25502-103030	--	--
150mm	--	25502-152130	--	--	--
200mm	--	25502-202130	--	--	--
Particle Size 3µm					
30mm	25503-031030	25503-032130	25503-033030	25503-034030	25503-034630
50mm	25503-051030	25503-052130	25503-053030	25503-054030	25503-054630
100mm	25503-101030	25503-102130	25503-103030	25503-104030	25503-104630
150mm	25503-151030	25503-152130	25503-153030	25503-154030	25503-154630
Particle Size 5µm					
30mm	25505-031030	25505-032130	25505-033030	25505-034030	25505-034630
50mm	25505-051030	25505-052130	25505-053030	25505-054030	25505-054630
100mm	25505-101030	25505-102130	25505-103030	25505-104030	25505-104630
150mm	25505-151030	25505-152130	25505-153030	25505-154030	25505-154630
250mm	25505-251030	25505-252130	25505-253030	25505-254030	25505-254630

Hypersil GOLD C4 Drop-In Guard Cartridges						
Particle Size	Length	4.6mm/ 4.0mm I.D.	3.0mm I.D.	2.1mm I.D.	1.0mm I.D.	Quantity
3µm	10mm	25503-014001	25503-013001	25503-012101	25503-011001	4 Pack
5µm	10mm	25505-014001	25505-013001	25505-012101	25505-011001	4 Pack
	UNIGUARD Drop-in Guard Cartridge Holder	850-00	852-00	852-00	851-00	1 Each



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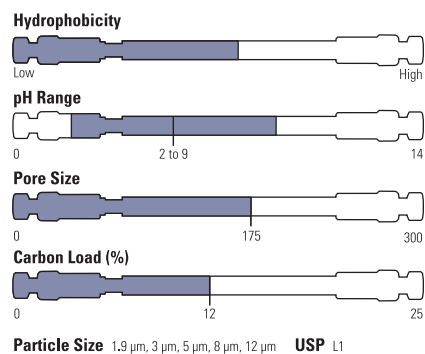
See our range of HyperSep SPE Products

Hypersil GOLD aQ HPLC Columns

Hypersil GOLD aQ polar endcapped C18 columns provide a controlled interaction mechanism by which polar analytes can be retained and resolved


Hypersil GOLD aQ columns provide enhanced retention and resolution of polar analytes.

- ▶ **Polar endcapped C18 phase for alternative selectivity**
- ▶ **Retention and resolution of polar analytes**
- ▶ **Excellent peak shape**
- ▶ **Stable in 100% aqueous mobile phases**
- ▶ **1.9µm particle size columns can be used to improve speed and efficiency**



Hypersil GOLD aQ Analytical HPLC Columns					
Length	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9µm					
20mm	25302-021030	25302-022130	25302-023030	--	--
30mm	25302-031030	25302-032130	25302-033030	--	--
50mm	25302-051030	25302-052130	25302-053030	--	25302-054630
100mm	25302-101030	25302-102130	25302-103030	--	--
150mm	--	25302-152130	--	--	--
200mm	--	25302-202130	--	--	--
Particle Size 3µm					
30mm	25303-031030	25303-032130	25303-033030	25303-034030	25303-034630
50mm	25303-051030	25303-052130	25303-053030	25303-054030	25303-054630
100mm	25303-101030	25303-102130	25303-103030	25303-104030	25303-104630
150mm	25303-151030	25303-152130	25303-153030	25303-154030	25303-154630
Particle Size 5µm					
30mm	25305-031030	25305-032130	25305-033030	25305-034030	25305-034630
50mm	25305-051030	25305-052130	25305-053030	25305-054030	25305-054630
100mm	25305-101030	25305-102130	25305-103030	25305-104030	25305-104630
150mm	25305-151030	25305-152130	25305-153030	25305-154030	25305-154630
250mm	25305-251030	25305-252130	25305-253030	25305-254030	25305-254630

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

Hypersil GOLD aQ Drop-In Guard Cartridges						
Particle Size	Length	4.6mm/4.0mm ID	3.0mm ID	2.1mm ID	1.0mm ID	Quantity
3µm	10mm	25303-014001	25303-013001	25303-012101	25303-011001	4 Pack
5µm	10mm	25305-014001	25305-013001	25305-012101	25305-011001	4 Pack
	UNIGUARD Drop-In Guard Cartridge Holder	850-00	852-00	852-00	851-00	1 Each



Hypersil GOLD aQ KAPPA Capillary HPLC Columns					
Length	75µm I.D.	100µm I.D.	180µm I.D.	320µm I.D.	500µm I.D.
Particle Size 1.9µm					
50mm	--	--	--	25302-050365	--
100mm	--	--	--	25302-100365	--
Particle Size 3µm					
50mm	--	--	25303-050265	25303-050365	25303-050565
100mm	--	--	25303-100265	25303-100365	25303-100565
150mm	--	--	25303-150265	25303-150365	25303-150565
Particle Size 5µm					
50mm	25305-050065	25305-050165	25305-050265	25305-050365	25305-050565
100mm	25305-100065	25305-100165	25305-100265	25305-100365	25305-100565
150mm	25305-150065	25305-150165	25305-150265	25305-150365	25305-150565

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

Hypersil GOLD aQ KAPPA Capillary Guard HPLC Columns					
Particle Size	Length	180µm ID	320µm ID	500µm ID	
3µm	30mm	25303-030215	25303-030315	25303-030515	
5µm	30mm	25305-030215	25305-030315	25305-030515	

Hypersil GOLD aQ Nanobore HPLC Columns							
Particle Size	Length	75µm ID	75µm ID Multipack	Quantity	150µm ID	150µm ID Multipack	Quantity
IntegraFrit							
1.9µm	10mm	25302-017563	25302-017564	4 Pack	25302-011563	25302-011564	4 Pack
1.9µm	50mm	25302-057563	25302-057564	3 Pack	25302-051563	25302-051564	3 Pack
5µm	50mm	25305-057563	25305-057564	3 Pack	25305-051563	25305-051564	3 Pack
5µm	100mm	25305-107563	25305-107564	3 Pack	25305-101563	25305-101564	3 Pack
PicoFrit, 15µm tip							
1.9µm	10mm	25302-017581	25302-017583	4 Pack	--	--	
1.9µm	50mm	25302-057581	25302-057582	3 Pack	--	--	
5µm	50mm	25305-057581	25305-057582	3 Pack	--	--	
5µm	100mm	25305-107581	25305-107582	3 Pack	--	--	

Unless otherwise specified, IntegraFrit and PicoFrit are sold in single-column units.



Hypersil GOLD aQ HPLC Columns

Hypersil GOLD aQ Javelin HTS Columns

Particle Size	20 x 4.0mm	20 x 2.1mm	20 x 1.0mm	10 x 2.1mm	Quantity
1.9µm	--	--	--	25302-012135	3 Pack
5µm	25305-024035	25305-022135	25305-021035	--	3 Pack
5µm	25305-024036	25305-022136	25305-021036	--	10 Pack

Hypersil GOLD aQ DASH HTS Columns

Particle Size	Length	2.1mm I.D.	Quantity
5µm	20mm	25305-022151	3 Pack
5µm	20mm	25305-022152	10 Pack

Hypersil GOLD aQ Preparative HPLC Columns

Length	10mm I.D.	21mm I.D.	30mm I.D.	50mm I.D.
Particle Size 5µm				
50mm	25305-059070	25305-059270	25305-059370	25305-059570
100mm	25305-109070	25305-109270	25305-109370	25305-109570
150mm	25305-159070	25305-159270	25305-159370	25305-159570
250mm	25305-259070	25305-259270	25305-259370	25305-259570
Particle Size 8µm				
50mm	25308-059070	25308-059270	25308-059370	25308-059570
100mm	25308-109070	25308-109270	25308-109370	25308-109570
150mm	25308-159070	25308-159270	25308-159370	25308-159570
250mm	25308-259070	25308-259270	25308-259370	25308-259570
Particle Size 12µm				
50mm	25312-059070	25312-059270	25312-059370	25312-059570
100mm	25312-109070	25312-109270	25312-109370	25312-109570
150mm	25312-159070	25312-159270	25312-159370	25312-159570
250mm	25312-259070	25312-259270	25312-259370	25312-259570

Other custom column dimensions are available. Please call your local Customer Service for more information. Stainless steel internal reducing unions to connect 30 to 50mm ID preparative columns to 1/16" tubing are available.

Hypersil GOLD aQ Preparative Guard Cartridge Systems

Particle Size	10 x 10mm	20 x 20mm	Quantity
5µm	25305-019023	25305-029223	3 Pack
8µm	25308-019023	25308-029223	3 Pack
12µm	25312-019023	25312-029223	3 Pack
Preparative Guard Holder	C-1000	F1403	1 Each

Hypersil GOLD aQ Preparative Guard HPLC Columns

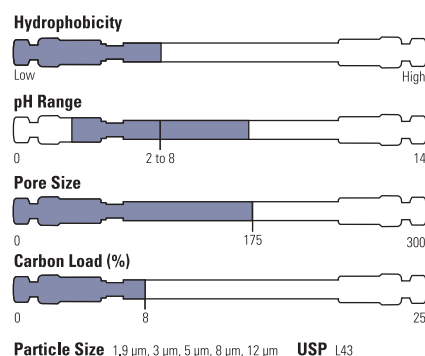
Particle Size	Length	10mm I.D.	21mm I.D.	Quantity
5µm	30mm	25305-039022	25305-039222	1 Each
8µm	30mm	25308-039022	25308-039222	1 Each
12µm	30mm	25312-039022	25312-039222	1 Each

Hypersil GOLD PFP HPLC Columns

Introduction of a fluorine group into the stationary phase causes significant changes in solute-stationary phase interaction



- ▶ The fluorine atoms around the phenyl ring enhance pi-pi interactions with aromatic molecules
- ▶ Alternative selectivity to C18
- ▶ Extra retention for halogenated species
- ▶ Selectivity for non-halogenated polar compounds
- ▶ Excellent peak shape and sensitivity
- ▶ 1.9µm particle size columns can be used to improve speed and efficiency



Hypersil GOLD PFP HPLC Columns					
Length	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9µm					
20mm	25402-021030	25402-022130	25402-023030	--	--
30mm	25402-031030	25402-032130	25402-033030	--	--
50mm	25402-051030	25402-052130	25402-053030	--	25402-054630
100mm	25402-101030	25402-102130	25402-103030	--	--
150mm	--	25402-152130	--	--	--
200mm	--	25402-202130	--	--	--
Particle Size 3µm					
30mm	25403-031030	25403-032130	25403-033030	25403-034030	25403-034630
50mm	25403-051030	25403-052130	25403-053030	25403-054030	25403-054630
100mm	25403-101030	25403-102130	25403-103030	25403-104030	25403-104630
150mm	25403-151030	25403-152130	25403-153030	25403-154030	25403-154630
Particle Size 5µm					
30mm	25405-031030	25405-032130	25405-033030	25405-034030	25405-034630
50mm	25405-051030	25405-052130	25405-053030	25405-054030	25405-054630
100mm	25405-101030	25405-102130	25405-103030	25405-104030	25405-104630
150mm	25405-151030	25405-152130	25405-153030	25405-154030	25405-154630
250mm	25405-251030	25405-252130	25405-253030	25405-254030	25405-254630

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

Hypersil GOLD PFP Drop-In Guard Cartridges						
Particle Size	Length	4.6mm/4.0mm ID	3.0mm ID	2.1mm ID	1.0mm ID	Quantity
3µm	10mm	25403-014001	25403-013001	25403-012101	25403-011001	4 Pack
5µm	10mm	25405-014001	25405-013001	25405-012101	25405-011001	4 Pack
		850-00	852-00	852-00	851-00	1 Each



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See our range of NS Certified Vials

Hypersil GOLD PFP HPLC Columns



Hypersil GOLD PFP KAPPA Capillary Columns					
Length	75µm I.D.	100µm I.D.	180µm I.D.	320µm I.D.	500µm I.D.
1.9µm Particle Size					
50mm	--	--	--	25402-050365	--
100mm	--	--	--	25402-100365	--
3µm Particle Size					
50mm	--	--	25403-050265	25403-050365	25403-050565
100mm	--	--	25403-100265	25403-100365	25403-100565
150mm	--	--	25403-150265	25403-150365	25403-150565
5µm Particle Size					
50mm	25405-050065	25405-050165	25405-050265	25405-050365	25405-050565
100mm	25405-100065	25405-100165	25405-100265	25405-100365	25405-100565
150mm	25405-150065	25405-150165	25405-150265	25405-150365	25405-150565

Thermo Scientific Hypersil GOLD PFP KAPPA Capillary Guard Columns				
Particle Size	Length	500µm I.D.	320µm I.D.	180µm I.D.
3µm	30mm	25403-030515	25403-030315	25403-030215
5µm	30mm	25405-030515	25405-030315	25405-030215



Hypersil GOLD PFP Nanobore HPLC Columns							
Particle Size	Length	75µm ID	75µm ID Multipack	Quantity	150µm ID	150µm ID Multipack	Quantity
IntegraFrit							
1.9µm	10mm	25402-017563	25402-017564	4 Pack	25402-011563	25402-011564	4 Pack
1.9µm	50mm	25402-057563	25402-057564	3 Pack	25402-051563	25402-051564	3 Pack
5µm	50mm	25405-057563	25405-057564	3 Pack	25402-051563	25405-051564	3 Pack
5µm	100mm	25405-107563	25405-107564	3 Pack	25405-051563	25405-101564	3 Pack
PicoFrit, 15µm Tip							
1.9µm	10mm	25402-017581	25402-017583	4 Pack	--	--	--
1.9µm	50mm	25402-057581	25402-057582	3 Pack	--	--	--
5µm	50mm	25405-057581	25405-057582	3 Pack	--	--	--
5µm	100mm	25405-107581	25405-107582	3 Pack	--	--	--

Unless otherwise specified, IntegraFrit and PicoFrit are sold in single-column units.

Hypersil GOLD PFP Javelin HTS HPLC Columns					
Particle Size	20 x 1.0mm ID	20 x 2.1mm ID	20 x 4.0mm ID	10 x 2.1mm ID	Quantity
1.9µm	--	--	--	25402-012135	3 Pack
5µm	25405-021035	25405-022135	25405-024035	--	3 Pack
5µm	25405-021036	25405-022136	25405-024036	--	10 Pack

Hypersil GOLD PFP DASH HTS HPLC Columns				
Particle Size	Length	2.1mm ID		Quantity
5µm	20mm	25405-022151		3 Pack
5µm	20mm	25405-022152		10 Pack

Hypersil GOLD PFP Preparative HPLC Columns					
Length	10mm I.D.	21mm I.D.	30mm I.D.	50mm I.D.	
Particle Size 5µm					
50mm	25405-059070	25405-059270	25405-059370	25405-059570	
100mm	25405-109070	25405-109270	25405-109370	25405-109570	
150mm	25405-159070	25405-159270	25405-159370	25405-159570	
250mm	25405-259070	25405-259270	25405-259370	25405-259570	
Particle Size 8µm					
50mm	25408-059070	25408-059270	25408-059370	25408-059570	
100mm	25408-109070	25408-109270	25408-109370	25408-109570	
150mm	25408-159070	25408-159270	25408-159370	25408-159570	
250mm	25408-259070	25408-259270	25408-259370	25408-259570	
Particle Size 12µm					
50mm	25412-059070	25412-059270	25412-059370	25412-059570	
100mm	25412-109070	25412-109270	25412-109370	25412-109570	
150mm	25412-159070	25412-159270	25412-159370	25412-159570	
250mm	25412-259070	25412-259270	25412-259370	25412-259570	

Other custom column dimensions are available. Please call your local Customer Service for more information. Stainless steel internal reducing unions to connect 30 to 50mm ID preparative columns to 1/16" tubing are available.

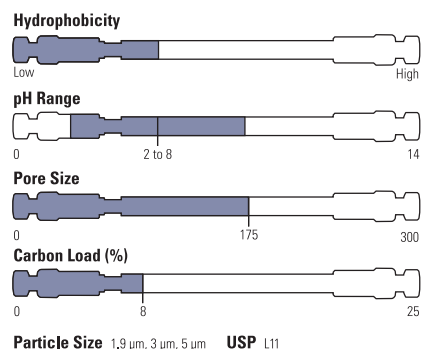
Hypersil GOLD PFP Preparative Guard Cartridges				
Particle Size	10 x 10mm		20 x 20mm	Quantity
5µm	25405-019023		25405-029223	3 Pack
8µm	25408-019023		25408-029223	3 Pack
12µm	25412-019023		25412-029223	3 Pack
Preparative Guard Holder	C-1000		F1403	1 Each

Hypersil GOLD PFP Preparative HPLC Guard Columns				
Particle Size	Length	10mm I.D.	21mm I.D.	Quantity
5µm	30mm	25405-039022	25405-039222	1 Each
8µm	30mm	25408-039022	25408-039222	1 Each
12µm	30mm	25412-039022	25412-039222	1 Each

Hypersil GOLD Phenyl HPLC Columns


Contain a C₄ linker which allows for superior alignment of the phenyl ring with aromatic molecules

- ▶ Enhanced pi-pi interactions with aromatics
- ▶ Moderate hydrophobicity
- ▶ Outstanding peak shape and sensitivity
- ▶ 1.9µm particle size columns can be used to improve speed and efficiency



Hypersil GOLD Phenyl Analytical HPLC Columns					
Length (mm)	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9µm					
20mm	25902-021030	25902-022130	25902-023030	--	--
30mm	25902-031030	25902-032130	25902-033030	--	--
50mm	25902-051030	25902-052130	25902-053030	--	25902-054630
100mm	25902-101030	25902-102130	25902-103030	--	--
150mm	--	25902-152130	--	--	--
200mm	--	25902-202130	--	--	--
Particle Size 3µm					
30mm	25903-031030	25903-032130	25903-033030	25903-034030	25903-034630
50mm	25903-051030	25903-052130	25903-053030	25903-054030	25903-054630
100mm	25903-101030	25903-102130	25903-103030	25903-104030	25903-104630
150mm	25903-151030	25903-152130	25903-153030	25903-154030	25903-154630
Particle Size 5µm					
30mm	25905-031030	25905-032130	25905-033030	25905-034030	25905-034630
50mm	25905-051030	25905-052130	25905-053030	25905-054030	25905-054630
100mm	25905-101030	25905-102130	25905-103030	25905-104030	25905-104630
150mm	25905-151030	25905-152130	25905-153030	25905-154030	25905-154630
250mm	25905-251030	25905-252130	25905-253030	25905-254030	25905-254630

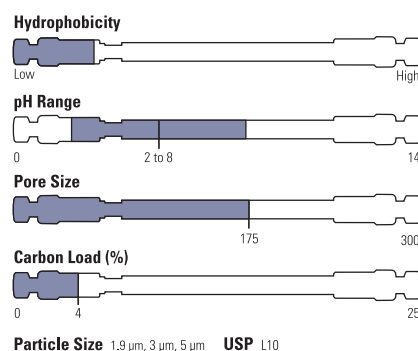
Other custom column dimensions are available. Please call your local Customer Service for more information.

Hypersil GOLD Phenyl Drop-in Guard Cartridges						
Particle Size	Length	4.6/4.0mm ID	3.0mm ID	2.1mm ID	1.0mm ID	Quantity
3µm	10mm	25903-014001	25903-013001	25903-012101	25905-011001	4 Pack
5µm	10mm	25905-014001	25905-013001	25905-012101	25903-011001	4 Pack
	UNIGUARD Drop-in Guard Cartridge Holder	850-00	852-00	852-00	851-00	1 Each

Hypersil GOLD CN HPLC Columns

Hypersil GOLD CN columns can be used for both normal phase and reversed phase separations

- ▶ **Hypersil GOLD CN columns provide alternative selectivity with lower hydrophobicity**
- ▶ **Excellent peak shape**
- ▶ **Outstanding sensitivity**
- ▶ **Less retention for faster analysis**
- ▶ **1.9µm particle size columns can be used to improve speed and efficiency**




Hypersil GOLD CN Analytical HPLC Columns

Length	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9µm					
20mm	25802-021030	25802-022130	25802-023030	--	--
30mm	25802-031030	25802-032130	25802-033030	--	--
50mm	25802-051030	25802-052130	25802-053030	--	25802-054630
100mm	25802-101030	25802-102130	25802-103030	--	--
150mm	--	25802-152130	--	--	--
200mm	--	25802-202130	--	--	--
Particle Size 3µm					
30mm	25803-031030	25803-032130	25803-033030	25803-034030	25803-034630
50mm	25803-051030	25803-052130	25803-053030	25803-054030	25803-054630
100mm	25803-101030	25803-102130	25803-103030	25803-104030	25803-104630
150mm	25803-151030	25803-152130	25803-153030	25803-154030	25803-154630
Particle Size 5µm					
30mm	25805-031030	25805-032130	25805-033030	25805-034030	25805-034630
50mm	25805-051030	25805-052130	25805-053030	25805-054030	25805-054630
100mm	25805-101030	25805-102130	25805-103030	25805-104030	25805-104630
150mm	25805-151030	25805-152130	25805-153030	25805-154030	25805-154630
250mm	25805-251030	25805-252130	25805-253030	25805-254030	25805-254630

Other custom column dimensions are available. Please call your local Customer Service for more information. Please note that Hypersil GOLD CN columns are shipped in iso-octane:ethanol. For reversed phase applications, flush with ethanol or 2-propanol prior to use.

Hypersil GOLD CN Drop-in Guard Cartridges

Particle Size	Length	4.6/4.0mm ID	3.0mm ID	2.1mm ID	1.0mm ID	Quantity
3µm	10mm	25803-014001	25803-013001	25803-012101	25803-011001	4 Pack
5µm	10mm	25805-014001	25805-013001	25805-012101	25805-011001	4 Pack
	UNIGUARD Drop-in Guard Cartridge Holder	850-00	852-00	852-00	851-00	1 Each

Hypersil GOLD CN Preparative HPLC Columns

Length	10mm I.D.	21mm I.D.	30mm I.D.	50mm I.D.
5µm Particle Size				
50mm	25805-059070	25805-059270	25805-059370	25805-059570
100mm	25805-109070	25805-109270	25805-109370	25805-109570
150mm	25805-159070	25805-159270	25805-159370	25805-159570
250mm	25805-259070	25805-259270	25805-259370	25805-259570

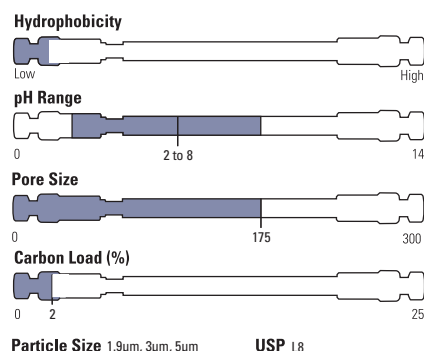
Other custom column dimensions are available. Please call your local Customer Service for more information.

Hypersil GOLD Amino HPLC Columns


A high performance aminopropyl phase that gives excellent chromatographic properties in three modes: weak anion exchange, reversed phase and normal phase

Hypersil GOLD Amino columns have an aminopropyl ligand bonded to highly pure base deactivated silica.

- ▶ Retains anions and organic acids in weak anion exchange
- ▶ Excellent for carbohydrate analysis in reversed phase
- ▶ Alternative selectivity to silica columns in normal phase chromatography
- ▶ Outstanding peak shape and sensitivity
- ▶ 1.9µm particle size columns can be used to improve speed and efficiency



Hypersil GOLD Amino HPLC Columns					
Length (mm)	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9µm					
20mm	25702-021030	25702-022130	25702-023030	--	--
30mm	25702-031030	25702-032130	25702-033030	--	--
50mm	25702-051030	25702-052130	25702-053030	--	25702-054630
100mm	25702-101030	25702-102130	25702-103030	--	--
150mm	--	25702-152130	--	--	--
200mm	--	25702-202130	--	--	--
Particle Size 3µm					
30mm	25703-031030	25703-032130	25703-033030	25703-034030	25703-034630
50mm	25703-051030	25703-052130	25703-053030	25703-054030	25703-054630
100mm	25703-101030	25703-102130	25703-103030	25703-104030	25703-104630
150mm	25703-151030	25703-152130	25703-153030	25703-154030	25703-154630
Particle Size 5µm					
30mm	25705-031030	25705-032130	25705-033030	25705-034030	25705-034630
50mm	25705-051030	25705-052130	25705-053030	25705-054030	25705-054630
100mm	25705-101030	25705-102130	25705-103030	25705-104030	25705-104630
150mm	25705-151030	25705-152130	25705-153030	25705-154030	25705-154630
250mm	25705-251030	25705-252130	25705-253030	25705-254030	25705-254630

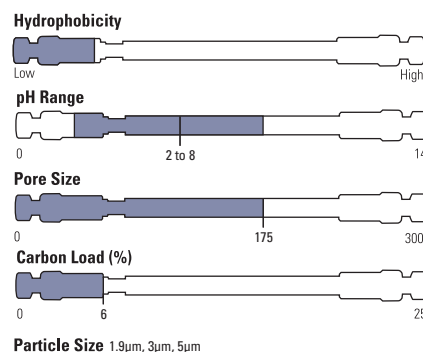
Hypersil GOLD Amino Drop-In Guard Cartridges						
Particle Size	Length	4.6mm/ 4.0mm I.D.	3.0mm I.D.	2.1mm I.D.	1.0mm I.D.	Quantity
3µm	10mm	25703-014001	25703-013001	25703-012101	25703-011001	4 Pack
5µm	10mm	25705-014001	25705-013001	25705-012101	25705-011001	4 Pack
	UNIGUARD Drop-in Guard Cartridge Holder	850-00	852-00	852-00	851-00	1 Each

Hypersil GOLD AX HPLC Columns

A novel polymeric amine ligand bonded to highly pure base deactivated silica

Hypersil GOLD AX provides separation of smaller proteins, peptides, anionic species and polar molecules.


- ▶ **Weak anion exchange phase for multiple charged species**
- ▶ **Suitable for HILIC retention and separation of highly polar molecules**
- ▶ **Higher efficiency than polymer based ion exchange columns**
- ▶ **Outstanding peak shape and selectivity**
- ▶ **1.9µm particle size columns can be used to improve speed and efficiency**



Hypersil GOLD AX HPLC Columns

Length (mm)	1.0mm I.D.	2.1mm I.D.	3.0mm I.D.	4.0mm I.D.	4.6mm I.D.
Particle Size 1.9µm					
20mm	26102-021030	26102-022130	26102-023030	--	--
30mm	26102-031030	26102-032130	26102-033030	--	--
50mm	26102-051030	26102-052130	26102-053030	--	26102-054630
100mm	26102-101030	26102-102130	26102-103030	--	--
150mm	--	26102-152130	--	--	--
200mm	--	26102-202130	--	--	--
Particle Size 3µm					
30mm	26103-031030	26103-032130	26103-033030	26103-034030	26103-034630
50mm	26103-051030	26103-052130	26103-053030	26103-054030	26103-054630
100mm	26103-101030	26103-102130	26103-103030	26103-104030	26103-104630
150mm	26103-151030	26103-152130	26103-153030	26103-154030	26103-154630
Particle Size 5µm					
30mm	26105-031030	26105-032130	26105-033030	26105-034030	26105-034630
50mm	26105-051030	26105-052130	26105-053030	26105-054030	26105-054630
100mm	26105-101030	26105-102130	26105-103030	26105-104030	26105-104630
150mm	26105-151030	26105-152130	26105-153030	26105-154030	26105-154630
250mm	26105-251030	26105-252130	26105-253030	26105-254030	26105-254630

Hypersil GOLD AX Drop-In Guard Cartridges

Particle Size	Length	4.6mm/4.0mm I.D.	3.0mm I.D.	2.1mm I.D.	1.0mm I.D.	Quantity
3µm	10mm	26103-014001	26103-013001	26103-012101	26103-011001	4 Pack
5µm	10mm	26105-014001	26105-013001	26105-012101	26105-011001	4 Pack
	UNIGUARD Drop-In Guard Cartridge Holder	850-00	852-00	852-00	851-00	1 Each

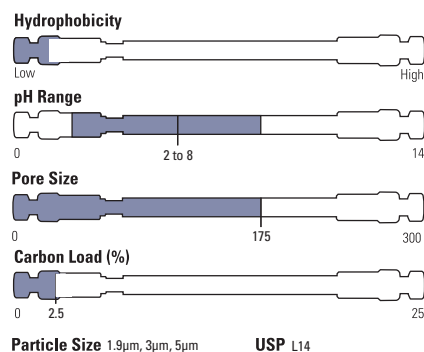


Hypersil GOLD SAX HPLC Columns


A highly stable quaternary amine strong anion exchange column for aqueous and low pH mobile phases

Hypersil GOLD SAX columns have a quaternary amine ion exchange ligand bonded to highly pure silica.

- ▶ **High stability to aqueous and low pH mobile phases**
- ▶ **Ideally suited to the analysis of smaller organic molecules including nucleotides and organic acids**
- ▶ **Outstanding peak shape and sensitivity**
- ▶ **1.9µm particle size columns can be used to improve speed and efficiency**



Hypersil GOLD SAX HPLC Columns					
Length	1.0mm ID	2.1mm ID	3.0mm ID	4.0mm ID	4.6mm ID
Particle Size 1.9µm					
20mm	26302-021030	26302-022130	26302-023030	--	--
30mm	26302-031030	26302-032130	26302-033030	--	--
50mm	26302-051030	26302-052130	26302-053030	--	26302-054630
100mm	26302-101030	26302-102130	26302-103030	--	--
150mm	--	26302-152130	--	--	--
200mm	--	26302-202130	--	--	--
Particle Size 3µm					
30mm	26303-031030	26303-032130	26303-033030	26303-034030	26303-034630
50mm	26303-051030	26303-052130	26303-053030	26303-054030	26303-054630
100mm	26303-101030	26303-102130	26303-103030	26303-104030	26303-104630
150mm	26303-151030	26303-152130	26303-153030	26303-154030	26303-154630
Particle Size 5µm					
30mm	26305-031030	26305-032130	26305-033030	26305-034030	26305-034630
50mm	26305-051030	26305-052130	26305-053030	26305-054030	26305-054630
100mm	26305-101030	26305-102130	26305-103030	26305-104030	26305-104630
150mm	26305-151030	26305-152130	26305-153030	26305-154030	26305-154630
250mm	26305-251030	26305-252130	26305-253030	26305-254030	26305-254630

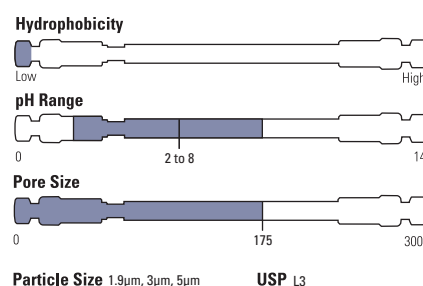
Hypersil GOLD SAX Drop-In Guard Cartridges						
Particle Size	Length	4.6mm/4.0mm I.D.	3.0mm I.D.	2.1mm I.D.	1.0mm I.D.	
3µm	10mm	26303-014001	26303-013001	26303-012101	26303-011001	4 Pack
5µm	10mm	26305-014001	26305-013001	26305-012101	26305-011001	4 Pack
	UNIGUARD Drop-in Guard Cartridge Holder	850-00	852-00	852-00	851-00	1 Each

Hypersil GOLD Silica HPLC Columns

Unbonded, highly pure base deactivated silica media that is the backbone of the Hypersil GOLD range of columns

Hypersil GOLD Silica columns are a powerful and efficient tool for the chromatography of nonpolar and moderately polar organic compounds by normal phase chromatography.


- ▶ **Highly pure base deactivated silica media**
- ▶ **Outstanding peak shape and sensitivity**
- ▶ **1.9µm particle size columns can be used to improve speed and efficiency**



Hypersil GOLD Silica HPLC Columns

Length (mm)	1.0mm ID	2.1mm ID	3.0mm ID	4.0mm ID	4.6mm ID
Particle Size 1.9µm					
20mm	25102-021030	25102-022130	25102-023030	--	--
30mm	25102-031030	25102-032130	25102-033030	--	--
50mm	25102-051030	25102-052130	25102-053030	--	25102-054630
100mm	25102-101030	25102-102130	25102-101030	--	--
150mm	--	25102-152130	--	--	--
200mm	--	25102-202130	--	--	--
Particle Size 3µm					
30mm	25103-031030	25103-032130	25103-033030	25103-034030	25103-034630
50mm	25103-051030	25103-052130	25103-053030	25103-054030	25103-054630
100mm	25103-101030	25103-102130	25103-103030	25103-104030	25103-104630
150mm	25103-151030	25103-152130	25103-151030	25103-154030	25103-154630
Particle Size 5µm					
30mm	25105-031030	25105-032130	25105-033030	25105-034030	25105-034630
50mm	25105-051030	25105-052130	25105-053030	25105-054030	25105-054630
100mm	25105-101030	25105-102130	25105-103030	25105-104030	25105-104630
150mm	25105-151030	25105-152130	25105-153030	25105-154030	25105-154630
250mm	25105-251030	25105-252130	25105-253030	25105-254030	25105-254630

Hypersil GOLD Silica Drop-In Guard Cartridges

Particle Size	Length	4.6mm/4.0mm I.D.	3.0mm I.D.	2.1mm I.D.	1.0mm I.D.	Quantity
3µm	10mm	25103-014001	25103-013001	25103-012101	25103-011001	4 Pack
5µm	10mm	25105-014001	25105-013001	25105-012101	25105-011001	4 Pack
	UNIGUARD Drop-in Guard Cartridge Holder	850-00	852-00	852-00	851-00	1 Each

