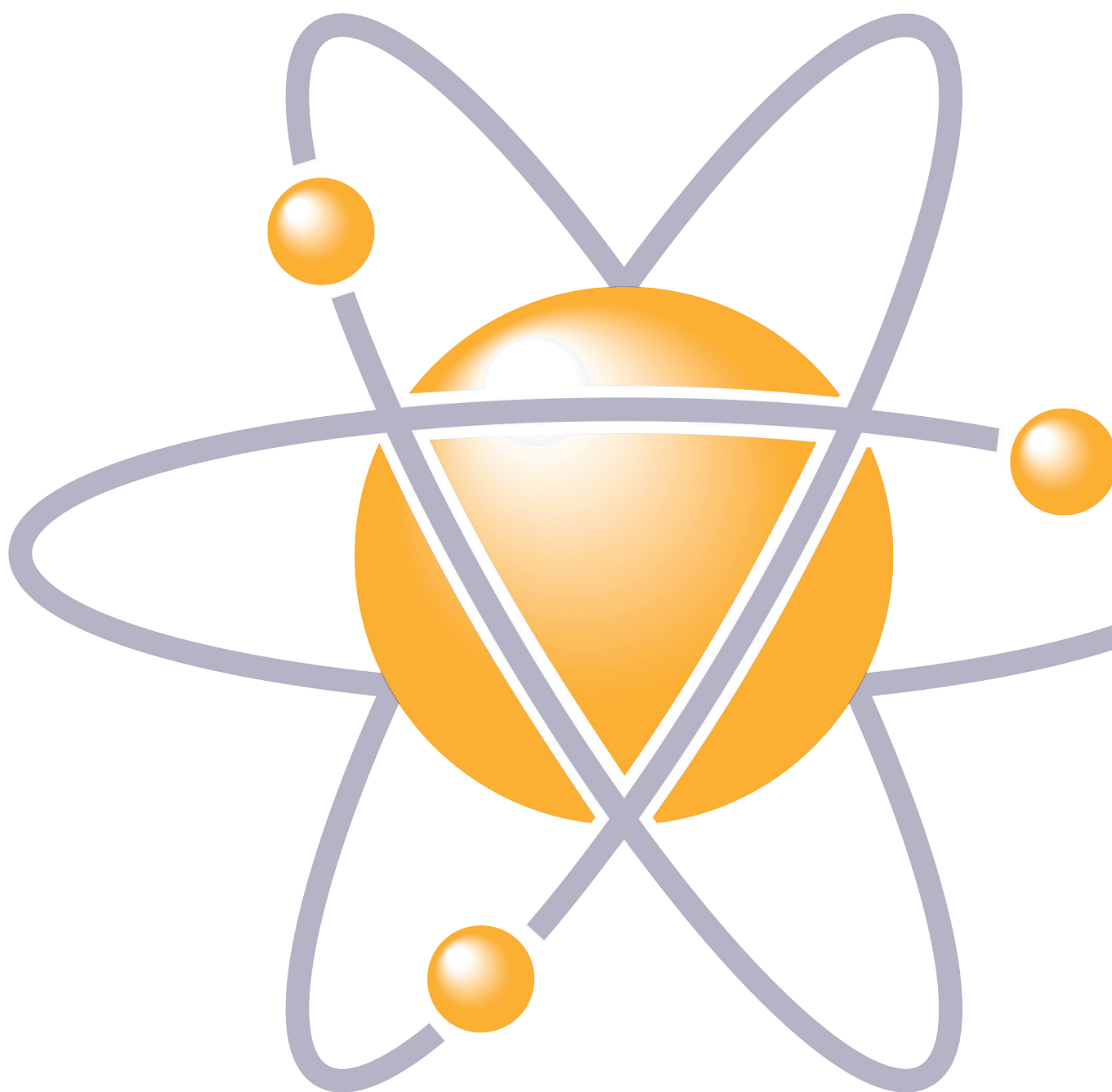
 **UniverSil**<sup>®</sup>  
HPLC COLUMNS



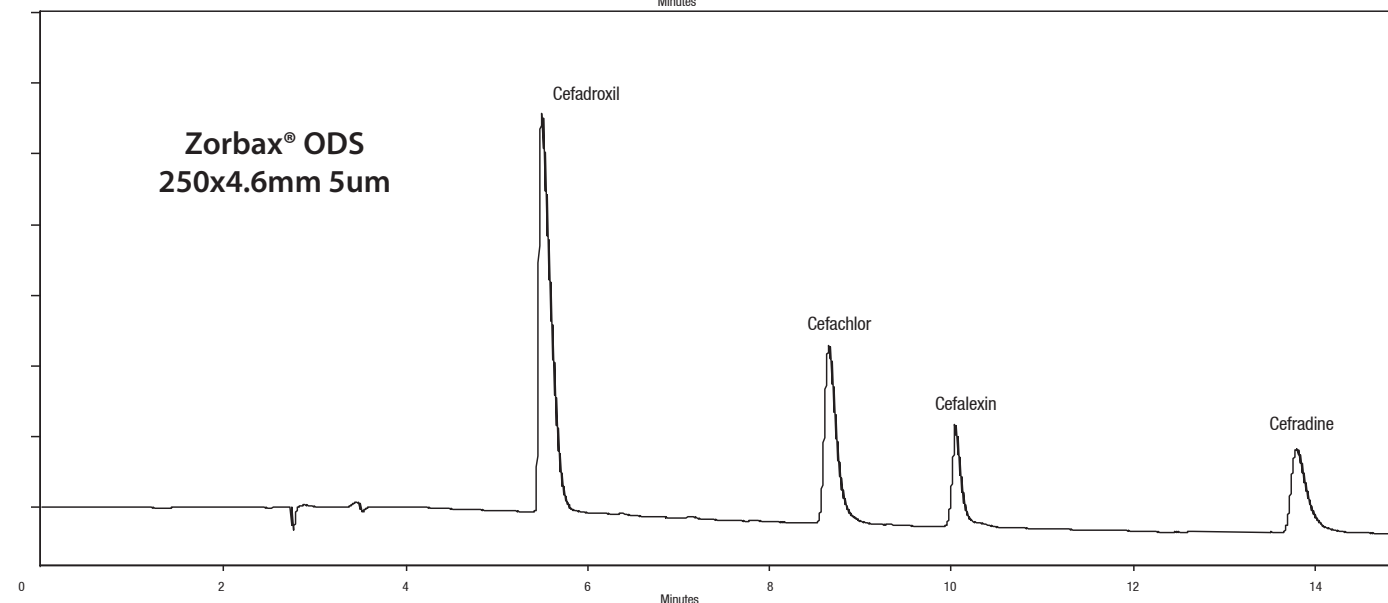
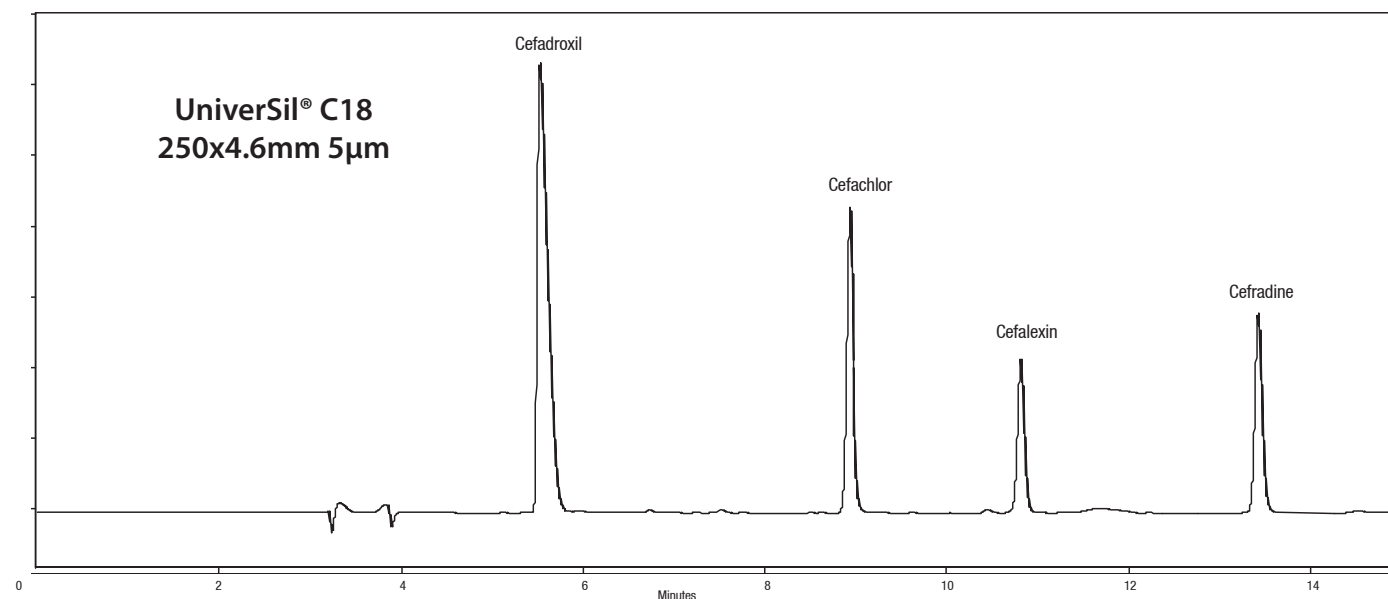
**Surface Area** - 175m<sup>2</sup>/g

**Pore Size** - 140Å

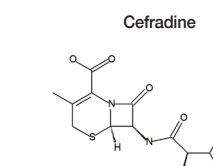
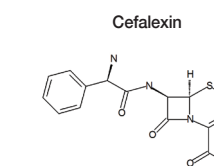
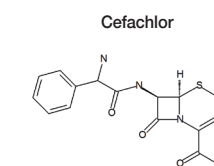
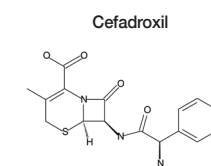
**% Carbon** - 11%C

UniverSil HPLC columns are a suitable economical alternative to many of the older brands on the marketplace from Alltech, Macherey-Nagel, Hypersil and Waters. Many of the phases have very similar physical characteristics meaning that UniverSil will provide similar selectivity and resolution as your current chromatography. Use UniverSil to upgrade your method in terms of peak shape, robustness and reproducibility, or just to provide a economical back-up to your current column. UniverSil silica is a new Type B silica meaning improved peak shape and improved lifetime.

UniverSil® C18 is an alternative to:		
Alltech® ODS2	Alltech	220m <sup>2</sup> /g
Alltech® Exsil® C18	Alltech	220m <sup>2</sup> /g
Hypersil® ODS	Thermo Electron	170m <sup>2</sup> /g
Hypersil® BDS	Thermo Electron	170m <sup>2</sup> /g
Nucleosil® 120 C18	Macherey-Nagel	200m <sup>2</sup> /g
Pinnacle® C18	Restek	170m <sup>2</sup> /g
Spherisorb® ODS1	Waters	200m <sup>2</sup> /g
Spherisorb® ODS2	Waters	200m <sup>2</sup> /g
Supelcosil® LC18	Supelco	170m <sup>2</sup> /g
Ultrasphere® C18	Beckman	200m <sup>2</sup> /g
YMC® ODS-A	YMC	170m <sup>2</sup> /g
Zorbax® Rx-C18	Agilent	180m <sup>2</sup> /g



**Column:** UniverSil® C18 250x4.6mm 5µ  
**p/n:** U18-050905  
**Mobile Phase:** A: Phosphate pH3  
 B: ACN  
**Flow:** 1.0ml/min  
**Temp:** 25°C  
**Wavelength:** 254nm



UniverSil® C18 is a registered trademark of Fortis® Technologies Ltd. Spherisorb® is a registered trademark of Waters Corporation. Alltech® and Exsil® are registered trademarks of Alltech. Zorbax® Rx C18® is a registered trademarks of Agilent Technologies. YMC® is a registered trademark of YMC. Pinnacle® is a registered trademark of Restek. Nucleosil® is a registered trademark of Macherey Nagel. Hypersil® is a registered trademark of Thermo Electron. Ultrasphere® is a registered trademark of Beckman Coulter. Supelcosil® is a registered trademark of Supelco.

Fortis is not associated with these companies. Comparative separations may not be representative of all applications. All columns are original manufacturers own.



- 4 Selectivities to choose from
- Economical Alternative
- Robust stationary phases

UniverSil HPLC columns are a suitable economical alternative to many of the older brands on the marketplace from Alltech, Macherey Nagel, Hypersil, Waters and Merck. Many of the phases have very similar physical characteristics meaning that UniverSil will provide similar selectivity and resolution as your current chromatography.



- S.A. 175m<sup>2</sup>/g
- P.S. 140Å
- %Carbon 11%
- USP L1

- UniverSil C18
- General HPLC reversed phase
- Method development pH1-10

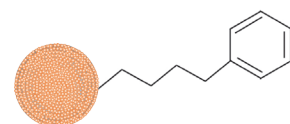
Suitable for : Acids  
Bases  
Neutrals  
Hydrophobic interactions with polar, moderately polar and non-polar analytes



- S.A. 175m<sup>2</sup>/g
- P.S. 140Å
- %Carbon 6%
- USP L7

- UniverSil C8
- Hydrophobic Interactions
- General method development

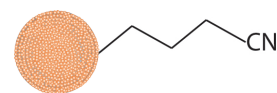
Suitable for : Wide range of compounds  
Acid, base, neutral  
Hydrophobic interactions with polar, moderately polar and non-polar analytes



- S.A. 175m<sup>2</sup>/g
- P.S. 140Å
- %Carbon 5%
- USP L11

- UniverSil Phenyl
- Metabolite profiling
- Extra selectivity, alternate elution orders

Suitable for : Metabolites  
Isomers  
Hydrophilic and Hydrophobic analytes  
 $\pi$ -bonding analytes



- S.A. 175m<sup>2</sup>/g
- P.S. 140Å
- %Carbon 4%
- USP L10

- UniverSil Cyano
- Reversed phase or normal phase
- Strong dipole-dipole interactions

Suitable for : Explosives  
Pesticides  
Steroids  
Orthogonal selectivity

## UniverSil - Part Numbers

UniverSil® C18 3µm	Column Length				
	50	100	150	250	
	2.1	U18-020303	U18-020503	U18-020703	-
Column Diameter	3.0	U18-030303	U18-030503	U18-030703	-
	4.6	U18-050303	U18-050503	U18-050703	U18-050903

UniverSil C18 Guards	Length
	10
Column Diameter	2.1
	DCU18-020003G
	4.6
	DCU18-050003G

UniverSil® C18 5µm	Column Length				
	50	100	150	250	
	2.1	U18-020305	U18-020505	U18-020705	-
Column Diameter	3.0	U18-030305	U18-030505	U18-030705	-
	4.6	U18-050305	U18-050505	U18-050705	U18-050905

UniverSil C18 Guards	Length
	10
Column Diameter	2.1
	DCU18-020005G
	4.6
	DCU18-050005G

UniverSil® C8 3µm	Column Length				
	50	100	150	250	
	2.1	U08-020303	U08-020503	U08-020703	-
Column Diameter	3.0	U08-030303	U08-030503	U08-030703	-
	4.6	U08-050303	U08-050503	U08-050703	U08-050903

UniverSil C8 Guards	Length
	10
Column Diameter	2.1
	DCU08-020003G
	4.6
	DCU08-050003G

UniverSil® C8 5µm	Column Length				
	50	100	150	250	
	2.1	U08-020305	U08-020505	U08-020705	-
Column Diameter	3.0	U08-030305	U08-030505	U08-030705	-
	4.6	U08-050305	U08-050505	U08-050705	U08-050905

UniverSil C8 Guards	Length
	10
Column Diameter	2.1
	DCU08-020005G
	4.6
	DCU08-050005G

UniverSil® HS Phenyl 3µm	Column Length				
	50	100	150	250	
	2.1	UPH-020303	UPH-020503	UPH-020703	-
Column Diameter	3.0	UPH-030303	UPH-030503	UPH-030703	-
	4.6	UPH-050303	UPH-050503	UPH-050703	UPH-050903

UniverSil Phenyl Guards	Length
	10
Column Diameter	2.1
	DCUPH-020003G
	4.6
	DCUPH-050003G

UniverSil® Phenyl 5µm	Column Length				
	50	100	150	250	
	2.1	UPH-020305	UPH-020505	UPH-020705	-
Column Diameter	3.0	UPH-030305	UPH-030505	UPH-030705	-
	4.6	UPH-050305	UPH-050505	UPH-050705	UPH-050905

UniverSil Phenyl Guards	Length
	10
Column Diameter	2.1
	DCUPH-020005G
	4.6
	DCUPH-050005G

UniverSil® Cyano 3µm	Column Length				
	50	100	150	250	
	2.1	UCN-020303	UCN-020503	UCN-020703	-
Column Diameter	3.0	UCN-030303	UCN-030503	UCN-030703	-
	4.6	UCN-050303	UCN-050503	UCN-050703	UCN-050903

UniverSil Cyano Guards	Length
	10
Column Diameter	2.1
	DCUCN-020003G
	4.6
	DCUCN-050003G

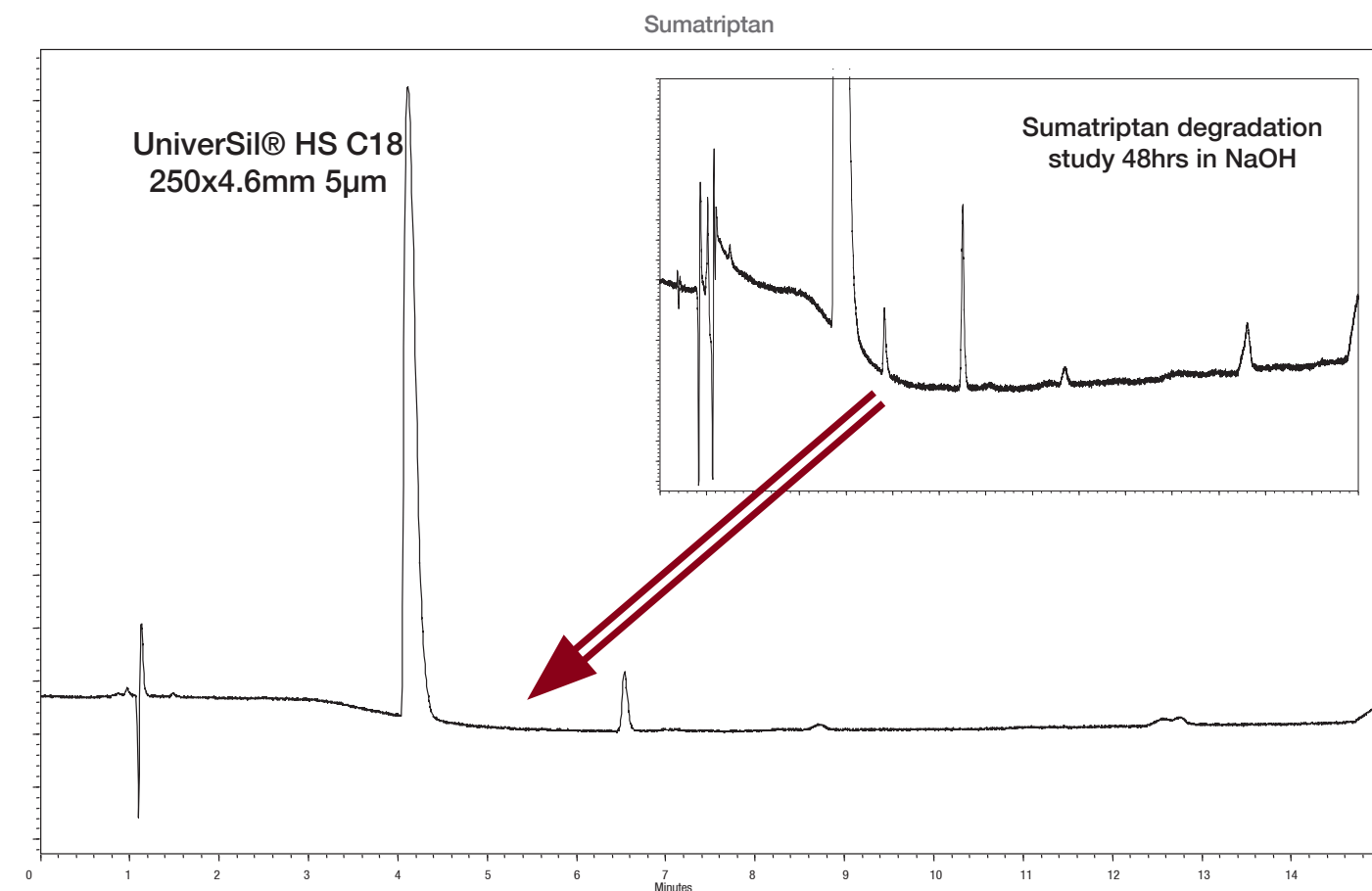
UniverSil® Cyano 5µm	Column Length				
	50	100	150	250	
	2.1	UCN-020305	UCN-020505	UCN-020705	-
Column Diameter	3.0	UCN-030305	UCN-030505	UCN-030705	-
	4.6	UCN-050305	UCN-050505	UCN-050705	UCN-050905

UniverSil Cyano Guards	Length
	10
Column Diameter	2.1
	DCUCN-020005G
	4.6
	DCUCN-050005G

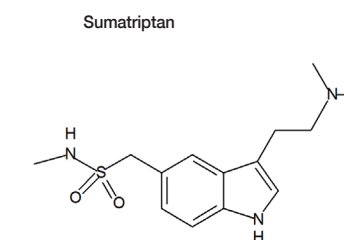
**Surface Area** - 325m<sup>2</sup>/g  
**Pore Size** - 100Å  
**% Carbon** - 16%C

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UniverSil® HS C18 is an alternative to:		
Alltech® Alltima	Alltech	300m <sup>2</sup> /g
Betasil® C18	Thermo Electron	300m <sup>2</sup> /g
Cosmosil® 18	Nacalai Tesque	330m <sup>2</sup> /g
Genesis® ODS	Jones	300m <sup>2</sup> /g
Hypersil® HS	Thermo Electron	300m <sup>2</sup> /g
Inertsil® ODS2	GL Sciences	320m <sup>2</sup> /g
Kromasil® C18	Akzo Nobel	340m <sup>2</sup> /g
Lichrosphere® RP18	Merck	350m <sup>2</sup> /g
Nucleosil® 100 C18	Macherey Nagel	350m <sup>2</sup> /g
Symmetry® C18	Waters	335m <sup>2</sup> /g
YMC® Pack ODS AL	YMC	300m <sup>2</sup> /g
Zorbax® C18	Agilent	300m <sup>2</sup> /g



**Column:** UniverSil™ HS C18 250x4.6mm 5µ  
**p/n:** UHS18-050905  
**Mobile Phase:**  
**Flow:** 1.0ml/min  
**Temp:** 25°C  
**Wavelength:** 254nm



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Fortis is not associated with these companies. Comparative separations may not be representative of all applications. All columns are original manufacturers own.



- 4 Selectivities to choose from
- Economical Alternative
- Robust stationary phases

UniverSil HPLC columns are a suitable economical alternative to many of the older brands on the marketplace from Kromasil, Macherey Nagel, GL Sciences, Waters and Merck. Many of the phases have very similar physical characteristics meaning that UniverSil will provide similar selectivity and resolution as your current chromatography.



- S.A. 325m<sup>2</sup>/g
- P.S. 100Å
- %Carbon 16%
- USP L1

- UniverSil HS C18
- General HPLC reversed phase
- Method development pH1-10

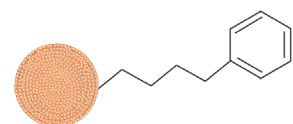
Suitable for : Acids  
Bases  
Neutrals  
Hydrophobic interactions with polar, moderately polar and non-polar analytes



- S.A. 325m<sup>2</sup>/g
- P.S. 100Å
- %Carbon 12%
- USP L7

- UniverSil HS C8
- Hydrophobic Interactions
- General method development

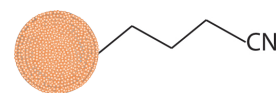
Suitable for : Wide range of compounds  
Acid, base, neutral  
Hydrophobic interactions with polar, moderately polar and non-polar analytes



- S.A. 325m<sup>2</sup>/g
- P.S. 100Å
- %Carbon 11%
- USP L11

- UniverSil HS Phenyl
- Metabolite profiling
- Extra selectivity, alternate elution orders

Suitable for : Metabolites  
Isomers  
Hydrophilic and Hydrophobic analytes  
 $\pi$ -bonding analytes



- S.A. 325m<sup>2</sup>/g
- P.S. 100Å
- %Carbon 6.5%
- USP L10

- UniverSil HS Cyano
- Reversed phase or normal phase
- Strong dipole-dipole interactions

Suitable for : Explosives  
Pesticides  
Steroids  
Orthogonal selectivity

## UniverSil HS - Part Numbers

UniverSil® HS C18 3µm	Column Length			
	50	100	150	250
2.1	UHS18-020303	UHS18-020503	UHS18-020703	-
Column Diameter	3.0	UHS18-030303	UHS18-030503	UHS18-030703
	4.6	UHS18-050303	UHS18-050503	UHS18-050703
				UHS18-050903

UniverSil HS C18 Guards	Length
	10
Column Diameter	2.1
	DCUHS18-020003G
	4.6
	DCUHS18-050003G

UniverSil® HS C18 5µm	Column Length			
	50	100	150	250
2.1	UHS18-020305	UHS18-020505	UHS18-020705	-
Column Diameter	3.0	UHS18-030305	UHS18-030505	UHS18-030705
	4.6	UHS18-050305	UHS18-050505	UHS18-050705
				UHS18-050905

UniverSil HS C18 Guards	Length
	10
Column Diameter	2.1
	DCUHS18-020005G
	4.6
	DCUHS18-050005G

UniverSil® HS C8 3µm	Column Length			
	50	100	150	250
2.1	UHS08-020303	UHS08-020503	UHS08-020703	-
Column Diameter	3.0	UHS08-030303	UHS08-030503	UHS08-030703
	4.6	UHS08-050303	UHS08-050503	UHS08-050703
				UHS08-050903

UniverSil HS HILIC Guards	Length
	10
Column Diameter	2.1
	DCUHS08-020003G
	4.6
	DCUHS08-050003G

UniverSil® HS C8 5µm	Column Length			
	50	100	150	250
2.1	UHS08-020305	UHS08-020505	UHS08-020705	-
Column Diameter	3.0	UHS08-030305	UHS08-030505	UHS08-030705
	4.6	UHS08-050305	UHS08-050505	UHS08-050705
				UHS08-050905

UniverSil HS HILIC Guards	Length
	10
Column Diameter	2.1
	DCUHS08-020005G
	4.6
	DCUHS08-050005G

UniverSil® HS Phenyl 3µm	Column Length			
	50	100	150	250
2.1	UHSPH-020303	UHSPH-020503	UHSPH-020703	-
Column Diameter	3.0	UHSPH-030303	UHSPH-030503	UHSPH-030703
	4.6	UHSPH-050303	UHSPH-050503	UHSPH-050703
				UHSPH-050903

UniverSil HS Phenyl Guards	Length
	10
Column Diameter	2.1
	DCUHSPH-020003G
	4.6
	DCUHSPH-050003G

UniverSil® HS Phenyl 5µm	Column Length			
	50	100	150	250
2.1	UHSPH-020305	UHSPH-020505	UHSPH-020705	-
Column Diameter	3.0	UHSPH-030305	UHSPH-030505	UHSPH-030705
	4.6	UHSPH-050305	UHSPH-050505	UHSPH-050705
				UHSPH-050905

UniverSil HS Phenyl Guards	Length
	10
Column Diameter	2.1
	DCUHSPH-020005G
	4.6
	DCUHSPH-050005G

UniverSil® HS Cyano 3µm	Column Length			
	50	100	150	250
2.1	UHSCN-020303	UHSCN-020503	UHSCN-020703	-
Column Diameter	3.0	UHSCN-030303	UHSCN-030503	UHSCN-030703
	4.6	UHSCN-050303	UHSCN-050503	UHSCN-050703
				UHSCN-050903

UniverSil HS Cyano Guards	Length
	10
Column Diameter	2.1
	DCUHSCN-020003G
	4.6
	DCUHSCN-050003G

UniverSil® HS Cyano 5µm	Column Length			
	50	100	150	250
2.1	UHSCN-020305	UHSCN-020505	UHSCN-020705	-
Column Diameter	3.0	UHSCN-030305	UHSCN-030505	UHSCN-030705
	4.6	UHSCN-050305	UHSCN-050505	UHSCN-050705
				UHSCN-050905

UniverSil HS Cyano Guards	Length
	10
Column Diameter	2.1
	DCUHSCN-020005G
	4.6
	DCUHSCN-050005G