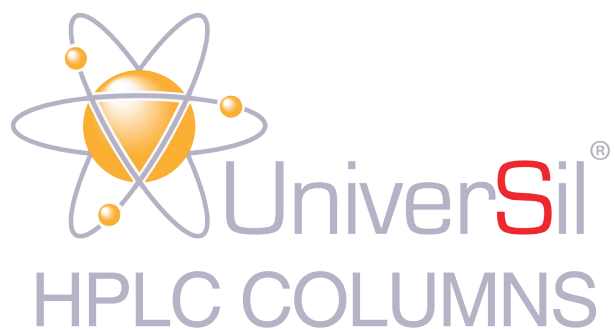




% Carbon - 11%C

UniverSil® C18
250x4.6mm 5µm

Chromatogram showing the separation of four cephalosporins: Cefadroxil, Cefachlor, Cefalexin, and Cefradine. The x-axis represents time in minutes (0 to 14), and the y-axis represents detector response. Cefadroxil elutes first at approximately 5.5 minutes, followed by Cefachlor at 9.0 minutes, Cefalexin at 10.8 minutes, and Cefradine at 13.2 minutes. The baseline is stable with minor noise.

Compound	Retention Time (min)
Cefadroxil	~5.5
Cefachlor	~9.0
Cefalexin	~10.8
Cefradine	~13.2

Chromatogram showing the separation of four cephalosporins: Cefadroxil, Cefachlor, Cefalexin, and Cefradine. The x-axis represents time in minutes (0 to 14), and the y-axis represents detector response. Cefadroxil is the most polar component, eluting first at approximately 5.5 minutes. Cefachlor elutes at approximately 8.5 minutes, Cefalexin at approximately 10.2 minutes, and Cefradine at approximately 13.8 minutes. The peaks are well-resolved, indicating good chromatographic performance.

Cefradine



The chemical structure of Cefradine is a first-generation cephalosporin. It features a four-membered beta-lactam ring fused to a five-membered thiazolidine ring. A methyl group is attached to the 6-position of the thiazolidine ring. A carboxylate group is attached to the 3-position of the beta-lactam ring. A side chain is attached to the 4-position of the beta-lactam ring, consisting of a methylene group, a carbonyl group, and a 2-methyl-2-penten-1-yl group.



- 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. 175m²/g
- P.S. 140Å
- %Carbon 11%
- USP L1

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

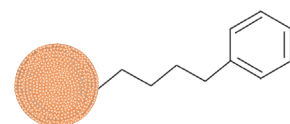
Suitable for :
Acids
Bases
Neutrals
Hydrophobic interactions with polar, moderately polar and non-polar analytes



- S.A. 175m²/g
- P.S. 140Å
- %Carbon 6%
- USP L7

- **UniverSil C8**
- **Hydrophobic Interactions**
- **General method development**

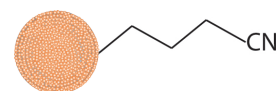
Suitable for :
Wide range of compounds
Acid, base, neutral
Hydrophobic interactions with polar, moderately polar and non-polar analytes



- S.A. 175m²/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
 π -bonding analytes



- S.A. 175m²/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
Column Diameter	2.1	UCN-020305	UCN-020505	UCN-020705	-
	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

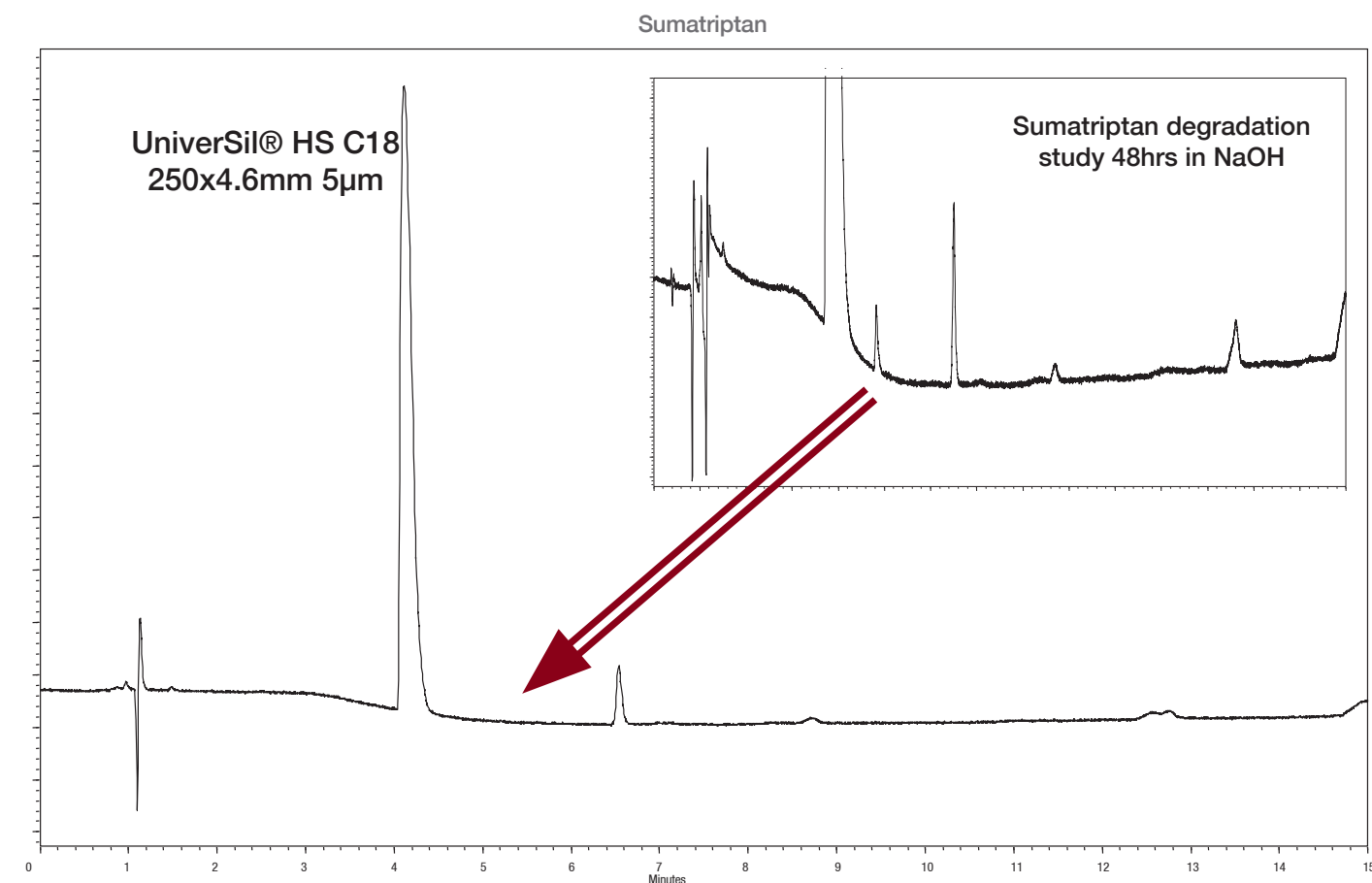
Surface Area - 325m²/g

Pore Size - 100Å

% Carbon - 16%C

UniverSil HPLC columns are a suitable economical alternative to many of the older brands on the marketplace from Kromasil, Macherey Nagel, GL Sciences and Merck. 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® HS C18 is an alternative to:		
Alltech® Alltima	Alltech	300m ² /g
Betasil® C18	Thermo Electron	300m ² /g
Cosmosil® 18	Nacalai Tesque	330m ² /g
Genesis® ODS	Jones	300m ² /g
Hypersil® HS	Thermo Electron	300m ² /g
Inertsil® ODS2	GL Sciences	320m ² /g
Kromasil® C18	Akzo Nobel	340m ² /g
Lichrosphere® RP18	Merck	350m ² /g
Nucleosil® 100 C18	Macherey Nagel	350m ² /g
Symmetry® C18	Waters	335m ² /g
YMC® Pack ODS AL	YMC	300m ² /g
Zorbax® C18	Agilent	300m ² /g



Column: UniverSil™ HS C18 250x4.6mm 5µ

p/n: UHS18-050905

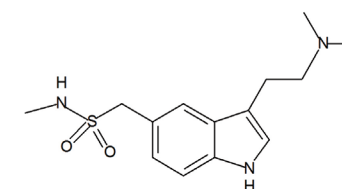
Mobile Phase:

Flow: 1.0ml/min

Temp: 25°C

Wavelength: 254nm

Sumatriptan



UniverSil® HS C18 is a registered trademark of Fortis® Technologies Ltd. Symmetry® is a registered trademark of Waters Corporation. Alltech® is a registered trademark of Alltech. Zorbax® is a registered trademarks of Agilent Technologies. YMC® is a registered trademark of YMC. Lichrosphere® is a registered trademark of Merck. Nucleosil® is a registered trademark of Macherey Nagel. Betasil® and Hypersil® are registered trademark of Thermo Electron. Genesis® is a registered trademark of Jones. Kromasil® is a registered trademark of Akzo Nobel. Inertsil® is a registered trademark of GL Sciences. Cosmosil® is a registered trademark of Nacalai Tesque.

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. 325m²/g
- P.S. 100Å
- %Carbon 16%
- USP L1

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

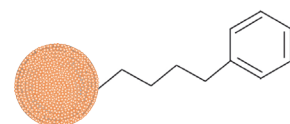
Suitable for : Acids
Bases
Neutrals
Hydrophobic interactions with polar, moderately polar and non-polar analytes



- S.A. 325m²/g
- P.S. 100Å
- %Carbon 12%
- USP L7

- UniverSil HS C8
- Hydrophobic Interactions
- General method development

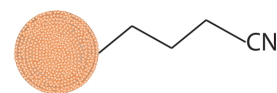
Suitable for : Wide range of compounds
Acid, base, neutral
Hydrophobic interactions with polar, moderately polar and non-polar analytes



- S.A. 325m²/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
 π -bonding analytes



- S.A. 325m²/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
Column Diameter	2.1	UHSCN-020305	UHSCN-020505	UHSCN-020705	-
	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

WORLDWIDE AVAILABILITY



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VAT No. 866 8966 43

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For technical support or applications contact :
technicalsupport@fortis-technologies.com

For more information VISIT :
www.fortis-technologies.com

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