



Inertsil[®] ODS-4 2um

Inertsil ODS-4 columns have proven superior for analysis of pharmaceutical bases, acids, chelating compounds, and zwitterions. Analysts currently using Inertsil ODS-4 3um or 5um in their methods can now achieve ultra high speed UHPLC separations as well.

Column lengths of 30 to 150mm are available to accommodate any range of sample complexity.

BENEFITS:

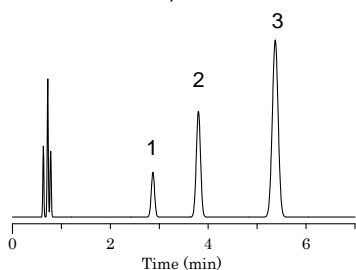
- ◆ Maintain high efficiency over a wide range of flow rates.
- ◆ Symmetric peaks for basic, acidic and chelating compounds.
- ◆ Column lengths up to 150mm operating up to 80MPa (800bar).
- ◆ 2 micron shows exact same selectivity as larger particles.

Physical Properties

Silica:	High Purity Spherical Silica Gel
Particle Size:	2um
Surface Area:	450 m ² / g
Pore Size:	100 Å
Pore Volume:	1.05 mL/g
Bonded Phase:	Octadecyl groups
End-capping:	Complete
Carbon Loading:	11 %
USP Code:	L1

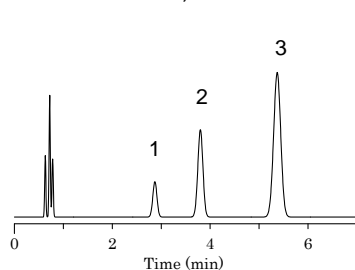
Comparison of Selectivity and Efficiency for Analytical Particle Sizes (50 x 2.1 mm I.D.)

Number of Theoretical Plates
=8,300



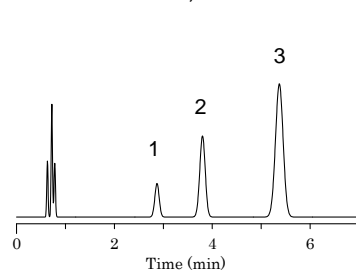
Particle Size: 2um

Number of Theoretical Plates
=5,800



Particle Size: 3um

Number of Theoretical Plates
=5,100

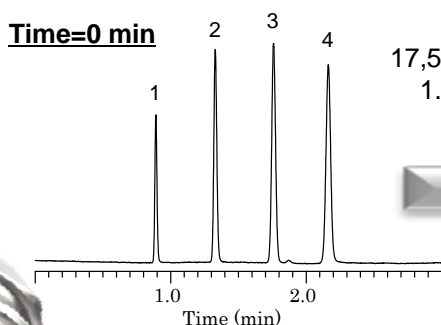


Particle Size: 5um

Many commercially available 2 micron-class columns show different selectivity than their 3um and 5um counterparts. As you can see above, Inertsil ODS-4 delivers absolutely the same selectivity from 2um through 5um.

Column Durability at 80MPa (800bar) for 500 hours

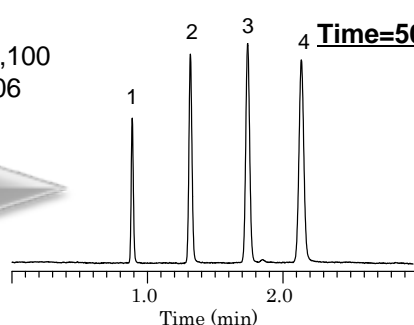
Time=0 min



17,500 N 16,100
1.02 Peak Symmetry 1.06
(Peak 4)

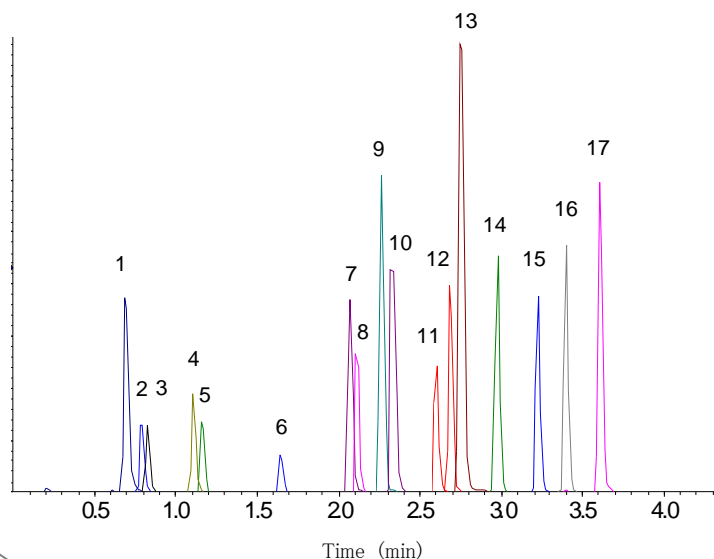
80MPa for 500 hours

Time=500 hrs



This durability test illustrates that column efficiency and peak symmetry did not deteriorate significantly even after 500 hours under the operating pressure of 80MPa (800bar).

Analysis of Drugs



Conditions

System : LC800 HPLC system
Column : Inertsil ODS-4 (2 μ m, 75 x 2.1 mm I.D.)
Eluent : A) CH₃CN
 : B) 0.05 % HCOOH in H₂O
Flow Rate : 750 μ L/min
Col. Temp. : 50 °C
Detection : LC/MS/MS 4000QTRAP
Injection Vol. : 10 μ L
Sample : As indicated below

- | | |
|---------------------|-------------------------|
| 1. Ranitidine | 10. Doxepin |
| 2. Acetaminophen | 11. Amitriptyline |
| 3. Theophylline | 12. Isopropylantipyrine |
| 4. Scopolamine | 13. Reserpine |
| 5. Caffeine | 14. Ketoprofen |
| 6. Metoprolol | 15. Warfarin |
| 7. Chlorpheniramine | 16. Capsaicin |
| 8. Propranolol | 17. Dihydrocapsaicin |
| 9. Diphenhydramine | each 100 mg/L |

Analytical Column Ordering Guide

Description	Maximum Operating Pressure (MPa)	Length (mm)	I.D. 2.1 mm	I.D. 3.0 mm
			Cat. No.	Cat. No.
Inertsil ODS-4 2 μ m	80 Mpa (800 bar) (~12,000 psi)	30	5020-81200	5020-81210
		50	5020-81202	5020-81212
		75	5020-81203	5020-81213
		100	5020-81204	5020-81214
		150	5020-81205	5020-81215

75mm, 100mm and 150mm length columns has now been added to our existing ODS-3 , C8-3 and Ph-3 2 μ m columns!

Description	Maximum Operating Pressure (MPa)	Length (mm)	I.D. 2.1 mm	I.D. 3.0 mm
			Cat. No.	Cat. No.
Inertsil ODS-3 2 μ m	80 Mpa (800 bar) (~12,000 psi)	75	5020-84653	5020-84663
		100	5020-84654	5020-84664
		150	5020-84655	5020-84665
Inertsil C8-3 2 μ m		75	5020-84932	5020-84937
		100	5020-84933	5020-84938
		150	5020-84934	5020-84939
Inertsil Ph-3 2 μ m		75	5020-85132	5020-85137
		100	5020-85133	5020-85138
		150	5020-85134	5020-85139

* End-fittings are 1/16" Waters –compatible.

* Other column sizes available upon request

● The specification and the column type are subject to change without notice due to continual improvements.

● All brand names and product names are trademarks or registered trademarks of GL Sciences Inc.