

It is ideal to use an Octyl group bonded column for the analysis of samples containing hydrophobic compounds as the analysis time can be shortened. **Inertsil C8-4** provides the same separation pattern and extreme inertness to any type of compounds just like our Inertsil ODS-4, which delivers symmetric peaks enabling rapid analysis. In addition, it has high stability to 100% aqueous mobile conditions.

## Physical Properties

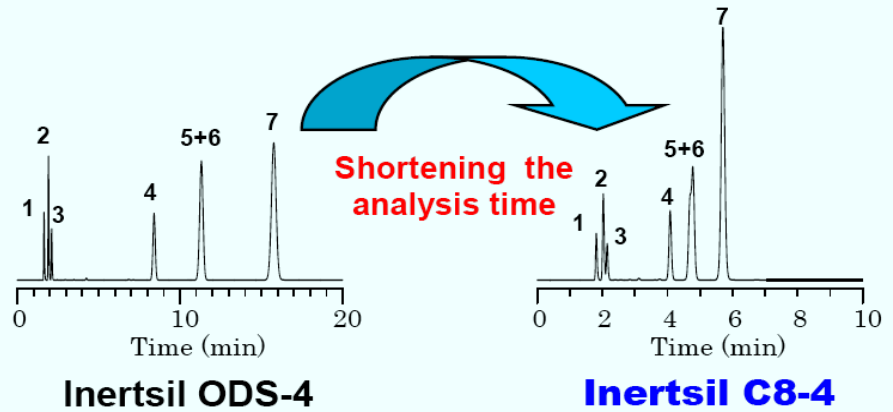
Silica:	High Purity Spherical Silica Gel
Particle Size:	5µm
Surface Area:	450 m <sup>2</sup> /g
Pore Volume:	100A
Pore Size:	1.05 µm
Bonded Phase:	Octyl groups (C8)
End-capping:	Yes
Carbon Loading:	5%
USD Code:	L7

## Comparison of retention and separation pattern

1. Virtually the same retentivity
2. The same separation pattern

### Analytical Conditions

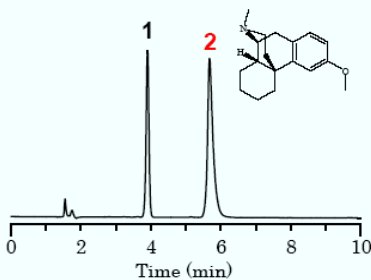
System:	GL7400 HPLC system
Column:	5µm, 150 x 4.6 mm.I.D.
Eluent :	A) CH <sub>3</sub> OH B) H <sub>2</sub> O (A / B) = (80 / 20)
Flow Rate:	1.0 mL/min
Col. Temp.:	40 °C
Detection:	UV 254 nm
Sample:	1. Uracil 2. Caffeine 3. Phenol 4. n-Butylbenzene 5. o-Terphenyl 6. n-Amylbenzene 7. Triphenylene



## Adsorption performance on various compounds

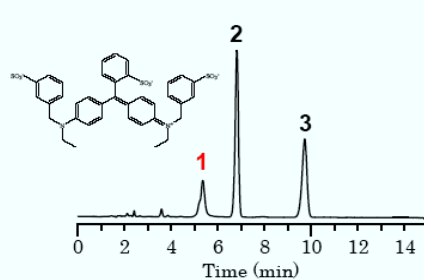
### Basic Compound (Dextromethorphan)

Column:	Inertsil C8-4 5µm 150x4.6mm.I.D.
Eluent:	A) CH <sub>3</sub> CN B) 25 mM Phosphate buffer ; pH 7.0 (A / B) = (40 / 60)
Flow rate:	1.0 mL/min
Col.Temp.:	40 °C
Detection:	UV at 220 nm
Sample:	1.0 µL (0.1 mg / mL) 1) Phenol 2) Dextromethorphan hydrobromide



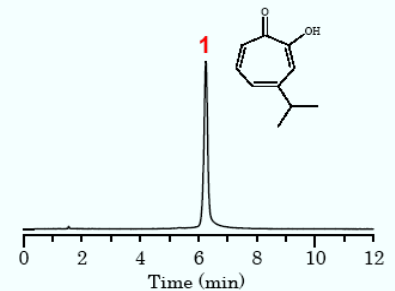
### Acidic Compound (Brilliant Blue FCF)

Column:	Inertsil C8-4 5µm 150x4.6mm.I.D.
Eluent :	A) CH <sub>3</sub> CN B) 0.1% H <sub>3</sub> PO <sub>4</sub> (A / B) = (25 / 75)
Flow rate:	1.0 mL/min
Col.Temp.:	40 °C
Detection:	UV at 254 nm
Sample:	3.0 µL 1) Brilliant Blue FCF (0.05 mg / mL) 2) Phenol (0.3 mg / mL) 3) Salicylic acid (0.2 mg / mL)



### Chelating Compound (Hinokitiol)

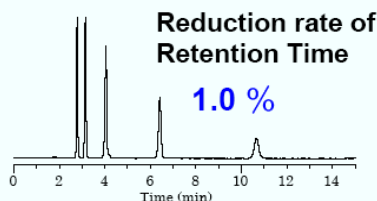
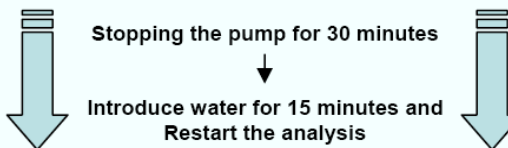
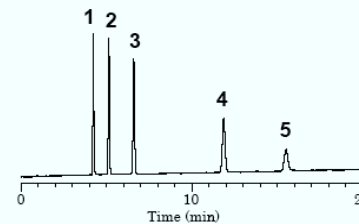
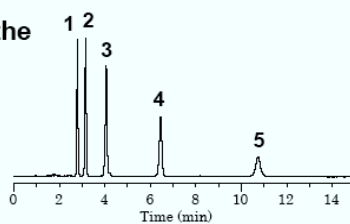
Column:	Inertsil C8-4 5µm 150x4.6mm.I.D.
Eluent:	A) CH <sub>3</sub> CN B) 0.1% H <sub>3</sub> PO <sub>4</sub> (A / B) = (40 / 60)
Flow rate:	1.0 mL/min
Col.Temp.:	40 °C
Detection:	UV at 254 nm
Sample:	1.0 µL (0.1 mg / mL) 1) β-Thujaplicin (Hinokitiol)



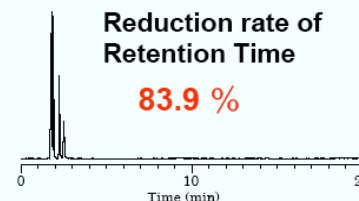
## Confirming the stability to 100% aqueous mobile phase

As **Inertsil C8-4** was designed to minimize the dewetting phenomenon, it provides superb stability and reproducibility even to those critical water rich mobile phase conditions. As a result, rapid analysis can be achieved in a gradient mode as well as the equilibration time of the column is short.

Condition System: GL7400 HPLC system  
 Column: 5µm, 150x4.6 mm I.D.  
 Eluent: 100% H<sub>2</sub>O  
 Flow Rate: 1.0 mL/min  
 Col. Temp.: 40 °C  
 Detection: UV 254 nm  
 Sample: 1. Cytosine  
 2. Uracil  
 3. Guanine  
 4. Thymine  
 5. Adenine



**Inertsil C8-4**



**Commercially Available C8 column**

## Analytical / Preparative Column Ordering Guide

Particle Size	I.D. (mm)	1	1.5	1.0 · 1.5	2.1	3	4	4.6	2.1 ~ 4.6
		Length (mm)	Cat.No.	Cat.No.	List Price	Cat.No.	Cat.No.	Cat.No.	Cat.No.
5 µm	30	5020-81221	5020-81231		5020-04051	5020-04061	5020-04071	5020-04081	
	50	5020-81222	5020-81232		5020-04052	5020-04062	5020-04072	5020-04082	
	75	5020-81223	5020-81233		5020-04053	5020-04063	5020-04073	5020-04083	
	100	5020-81224	5020-81234		5020-04054	5020-04064	5020-04074	5020-04084	
	150	5020-81225	5020-81235		5020-04055	5020-04065	5020-04075	5020-04085	
	250	5020-81226	5020-81236		5020-04056	5020-04066	5020-04076	5020-04086	

Particle Size	I.D. (mm)	6		7.6		10		20	
		Length (mm)	Cat.No.	List Price	Cat.No.	List Price	Cat.No.	List Price	Cat.No.
5 µm	Guard 50	5020-04091		5020-04096		5020-81247		5020-81257	
	50	5020-04087		5020-04092		5020-81243		5020-81253	
	100	5020-04088		5020-04093		5020-81244		5020-81254	
	150	5020-04089		5020-04094		5020-81245		5020-81255	
	250	5020-04090		5020-04095		5020-81246		5020-81256	

\* End-fitting is Waters 1/16" type.

\* For other column sizes, please send us an enquiry. (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.

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