

# << Develosil Column >>

## TEST REPORT

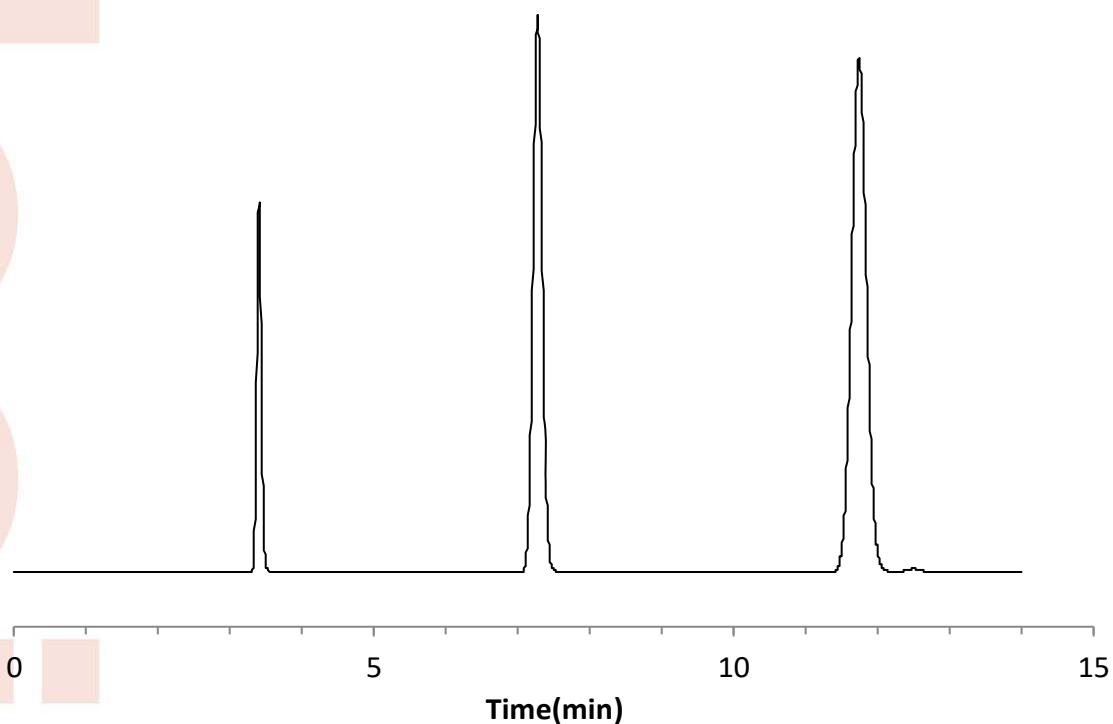
|                  |                |                   |           |        |
|------------------|----------------|-------------------|-----------|--------|
| Packings         | Develosil      | ODS-UG, 5 $\mu$ m | Batch No. | 171016 |
| Column size      | Inner diameter | 4.6 mm            | Length    | 150 mm |
| End fitting type | NW             |                   |           |        |
| Mfg. No.         | 04101863-PM    |                   |           |        |

### Operating conditions

|              |   |                          |
|--------------|---|--------------------------|
| Mobile phase | : | Acetonitrile:water=70:30 |
| Flow rate    | : | 1.0 mL/min               |
| Column temp. | : | 30 $^{\circ}$ C          |
| Pressure     | : | 4.2 MPa                  |
| Detection    | : | UV 254 nm                |

### Sample (Order of elution)

- |   |          |
|---|----------|
| 1 | Benzene  |
| 2 | Fluorene |
| 3 | Pyrene   |



|                           |                           |                                       |
|---------------------------|---------------------------|---------------------------------------|
| Theoretical plate         | (Last peak)               | $5.54 \times (t_R/W_{0.5})^2 = 14457$ |
| Asymmetry factor          | (10% Height of Last peak) | = 1.02                                |
| Mobile phase at shipment: | Acetonitrile:water=70:30  |                                       |

# Certificate of Analysis

Develosil ODS-UG-5

Batch # 171016

## Analytical Results for Develosil ODS-UG-5

Analysis of Unbonded Silica Gel

|  | Result |
|--|--------|
| Median Particle Size [ $\mu\text{m}$ ] | 5.13   |
| Surface Area [ $\text{m}^2/\text{g}$ ] | 306    |
| Pore Volume [ $\text{ml}/\text{g}$ ]   | 1.10   |
| Median Pore Diameter [ $\text{nm}$ ]   | 12.7   |

※Median Particle Size was measured using Coulter Multisizer III, and Surface Area, Pore Volume and Median Pore Diameter were measured using Coulter SA3100.

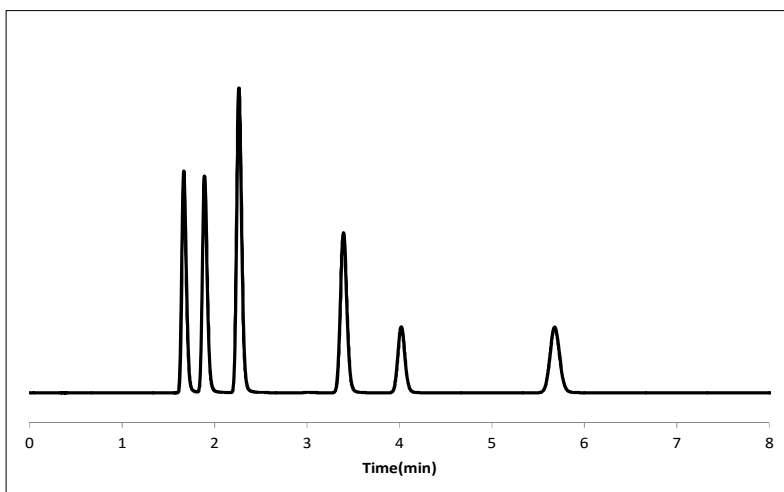
Analysis of Develosil ODS-UG-5

|                  |      |
|------------------|------|
| Total carbon [%] | 18.2 |
|------------------|------|

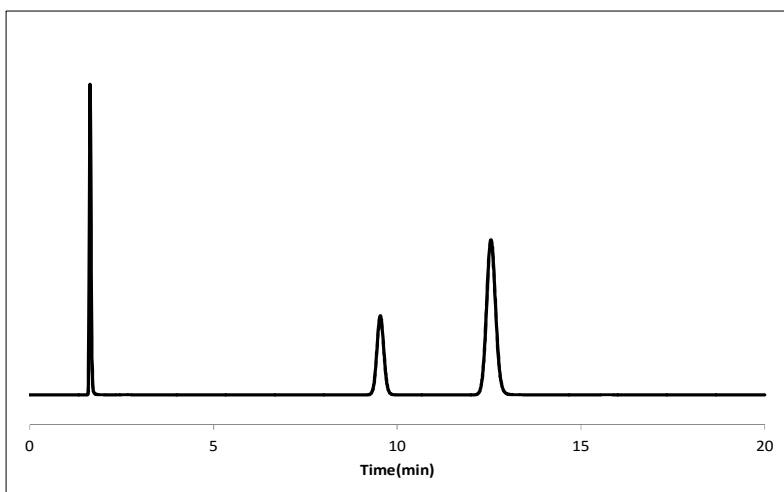
## Chromatographic Results for Develosil ODS-UG-5

Separation Factor

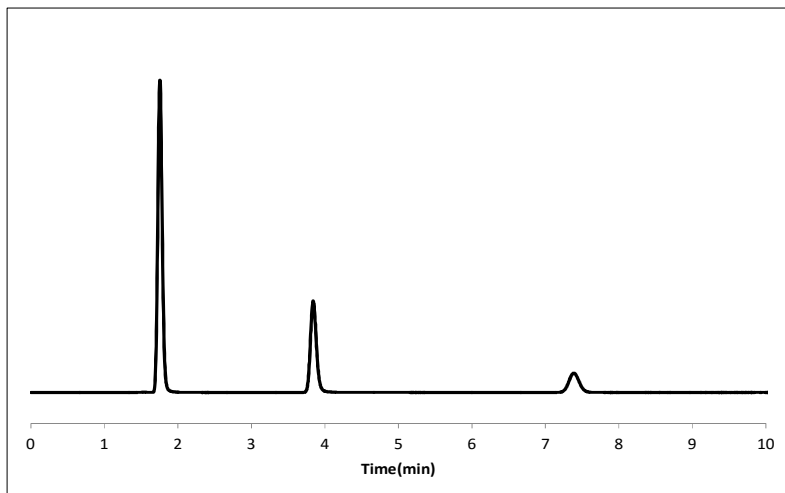
|                                     |      |
|-------------------------------------|------|
| $\alpha$ (Caffeine/Phenol)          | 0.37 |
| $\alpha$ (Toluene/Benzene)          | 1.71 |
| $\alpha$ (Methyl benzoate/Toluene)  | 0.43 |
| $\alpha$ (Triphenylene/o-Terphenyl) | 1.38 |
| $\alpha$ (Pyridine/Phenol)          | 0.37 |
| $\alpha$ (Oxine-Copper/Caffeine)    | 0.15 |



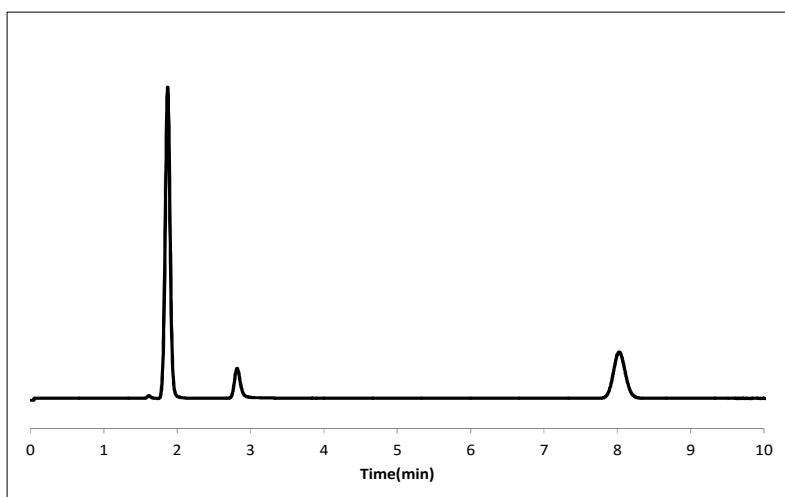
Column size :150x4.6mm I.D.  
 Mobile Phase :CH<sub>3</sub>OH/Water(70/30)  
 Flow rate :1.0ml/min  
 Detection :UV 254nm  
 Temperature :40°C  
 Sample 1:Uracil  
 2:Caffeine  
 3:Phenol  
 4:Methyl benzoate  
 5:Benzene  
 6:Toluene



Column size :150x4.6mm I.D.  
 Mobile Phase :CH<sub>3</sub>OH/Water(80/20)  
 Flow rate :1.0ml/min  
 Detection :UV 254nm  
 Temperature :40°C  
 Sample 1:Uracil  
 2:o-Terphenyl  
 3:Triphenylene



Column size :150x4.6mm I.D.  
Mobile Phase :CH<sub>3</sub>OH/Buffer(30/70)  
Flow rate :1.0ml/min  
Detection :UV 254nm  
Temperature :40°C  
Sample 1:Uracil  
2:Pyridine  
3:Phenol  
Buffer: 25mM Ammonium Phosphate (pH7.0)



Column size :150x4.6mm I.D.  
Mobile Phase :CH<sub>3</sub>OH/Buffer(20/80)  
Flow rate :1.0ml/min  
Detection :UV 254nm  
Temperature :40°C  
Sample 1:Uracil  
2:Oxine-Copper  
3:Caffeine  
Buffer: 25mM Ammonium Phosphate (pH2.0)