

# << Develosil Column >>

## TEST REPORT

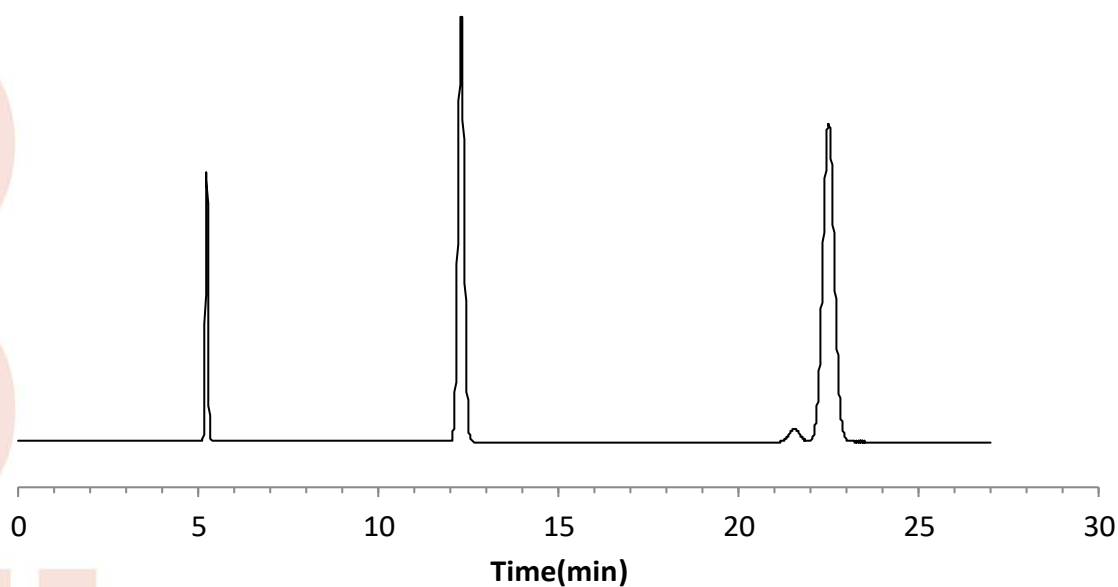
|                  |                |             |           |        |
|------------------|----------------|-------------|-----------|--------|
| Packings         | Develosil      | C30-UG, 5um | Batch No. | 020317 |
| Column size      | Inner diameter | 4.6 mm      | Length    | 250 mm |
| End fitting type | NW             |             |           |        |
| Mfg. No.         | 23031844-QP    |             |           |        |

### Operating conditions

|              |   |                          |
|--------------|---|--------------------------|
| Mobile phase | : | Acetonitrile:water=70:30 |
| Flow rate    | : | 1.0 mL/min               |
| Column temp. | : | 30 °C                    |
| Pressure     | : | 5.7 MPa                  |
| Detection    | : | UV 254 nm                |

### Sample (Order of elution)

- 1 Benzene
- 2 Fluorene
- 3 Pyrene



|                   |                          |                                       |
|-------------------|--------------------------|---------------------------------------|
| Theoretical plate | (2nd peak)               | $5.54 \times (t_R/W_{0.5})^2 = 23448$ |
| Asymmetry factor  | (10% Height of 2nd peak) | = 1.00                                |

Mobile phase at shipment: Acetonitrile:water=70:30

# Certificate of Analysis

Develosil C30-UG-5

Batch # 020317

## Analytical Results for Develosil C30-UG-5

| Analysis of Unbonded Silica Gel        | Result      |
|--|-------------|
| Median Particle Size [ $\mu\text{m}$ ] | <b>5.32</b> |
| Surface Area [ $\text{m}^2/\text{g}$ ] | <b>296</b>  |
| Pore Volume [ $\text{ml/g}$ ]          | <b>1.11</b> |
| Median Pore Diameter [ $\text{nm}$ ]   | <b>13.0</b> |

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

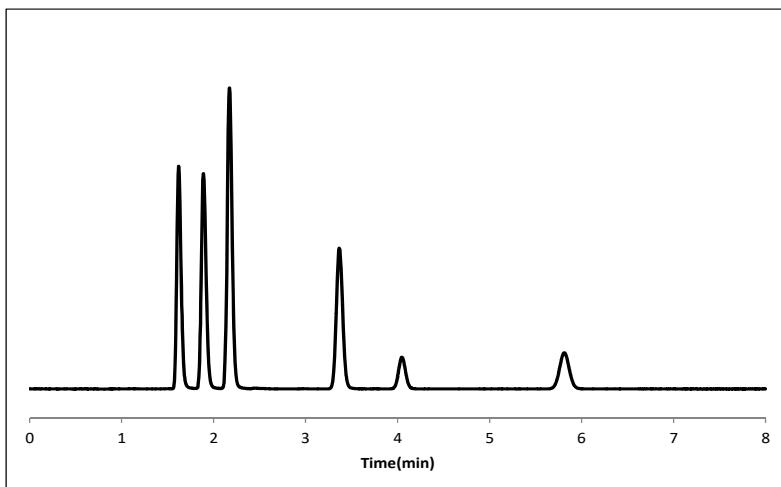
## Analysis of Develosil C30-UG-5

|                  |             |
|------------------|-------------|
| Total carbon [%] | <b>17.9</b> |
|------------------|-------------|

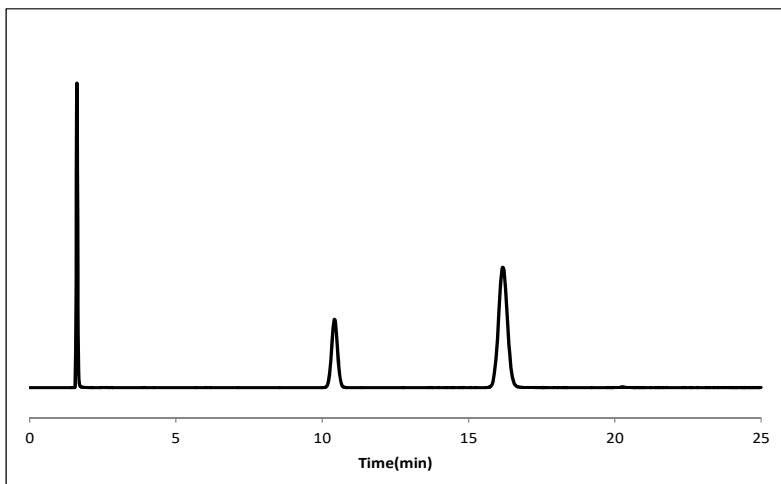
## Chromatographic Results for Develosil C30-UG-5

### Separation Factor

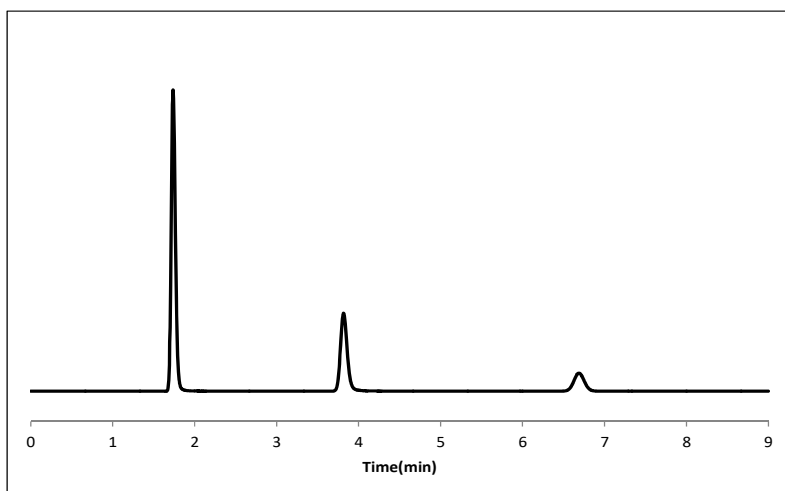
|                                     |             |
|-------------------------------------|-------------|
| $\alpha$ (Caffeine/Phenol)          | <b>0.49</b> |
| $\alpha$ (Toluene/Benzene)          | <b>1.73</b> |
| $\alpha$ (Methyl benzoate/Toluene)  | <b>0.42</b> |
| $\alpha$ (Triphenylene/o-Terphenyl) | <b>1.65</b> |
| $\alpha$ (Pyridine/Phenol)          | <b>0.42</b> |
| $\alpha$ (Oxine-Copper/Caffeine)    | <b>0.14</b> |



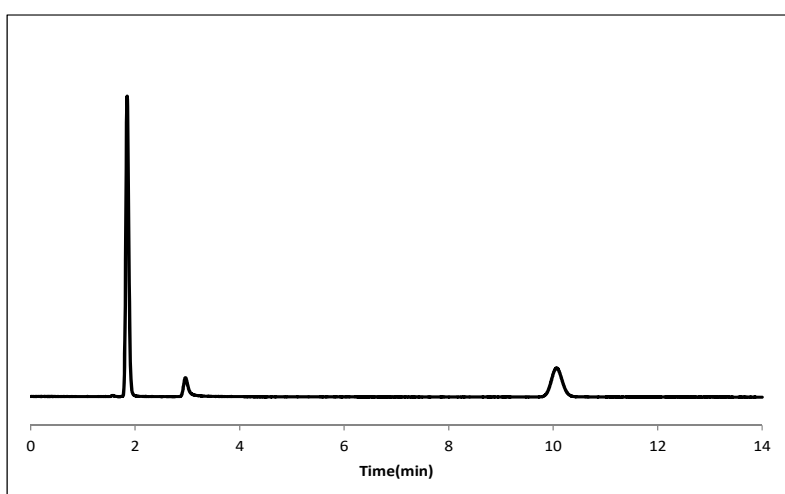
Column size :150x4.6mm I.D.  
 Mobile Phase :CH<sub>3</sub>OH/Water(70/30)  
 Flow rate :1.0ml/min  
 Detection :UV 254nm  
 Temperature :40°C  
 Sample 1:Uracil  
 2:Caffeine  
 3:Phenol  
 4:Methyl benzoate  
 5:Benzene  
 6:Toluene



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)