

## &lt;&lt; Develosil Column &gt;&gt;

## TEST REPORT

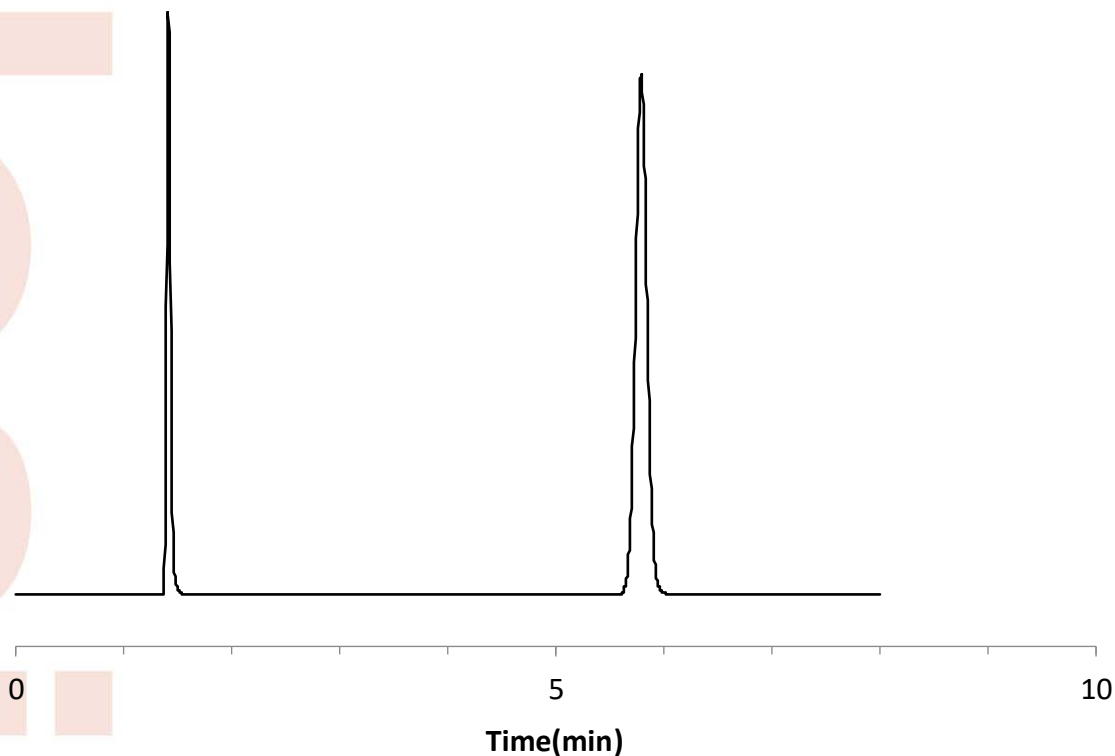
|                  |                |              |           |        |
|------------------|----------------|--------------|-----------|--------|
| Packings         | Develosil      | ODS-MG, 5 μm | Batch No. | 190219 |
| Column size      | Inner diameter | 4.6 mm       | Length    | 150 mm |
| End fitting type | NW             |              |           |        |
| Mfg. No.         | 24062080C-RL   |              |           |        |

## Operating conditions

|              |   |                          |
|--------------|---|--------------------------|
| Mobile phase | : | Acetonitrile:water=70:30 |
| Flow rate    | : | 1.0 mL/min               |
| Column temp. | : | 30 °C                    |
| Pressure     | : | 4.2 MPa                  |
| Detection    | : | UV 254 nm                |

## Sample (Order of elution)

|   |             |
|---|-------------|
| 1 | Uracil      |
| 2 | Naphthalene |



|                           |                           |                                       |
|---------------------------|---------------------------|---------------------------------------|
| Theoretical plate         | (Last peak)               | $5.54 \times (t_R/W_{0.5})^2 = 13457$ |
| Asymmetry factor          | (10% Height of Last peak) | = 1.01                                |
| Mobile phase at shipment: |                           | Acetonitrile:water=70:30              |

# Certificate of Analysis



Develosil<sup>®</sup> ODS-MG, 5 $\mu$ m Batch# 190219

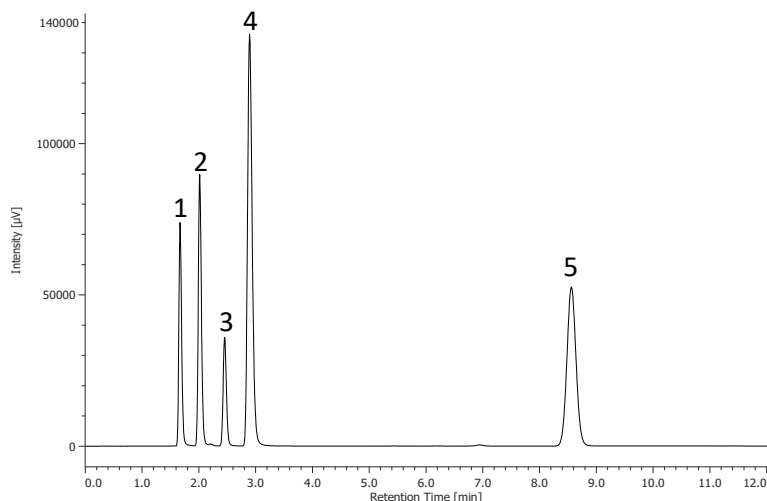
## Analytical Results for Develosil<sup>®</sup> ODS-MG, 5 $\mu$ m

| Analysis of Unbonded Silica Gel |                     | Result |
|---------------------------------|---------------------|--------|
| Median Particle Size            | [ $\mu$ m]          | 5.11   |
| Surface Area                    | [m <sup>2</sup> /g] | 461    |
| Pore Volume                     | [mL/g]              | 1.15   |
| Average Pore Diameter           | [nm]                | 9.67   |

| Analysis of Bonded Silica Gel |     | Result |
|-------------------------------|-----|--------|
| Total Carbon Content          | [%] | 16.0   |

## Chromatographic Results for Develosil<sup>®</sup> ODS-MG, 5 $\mu$ m



### Sample:

1. Uracil
2. Caffeine
3. Phenol
4. Amitriptyline
5. Naphthalene

### Analytical Conditions;

Column: Develosil ODS-MG, 5 $\mu$ m (4.6x150mm)  
Mobile phase: Methanol/25mM Ammonium Phosphate, pH3.0=70/30  
Flow rate: 1.0mL/min  
Temperature: 40 $^{\circ}$ C  
Detection: UV254nm  
Sample: 1.Uracil 2.Caffeine 3.Phenol 4.Amitriptyline 5.Naphthalene  
Injection volume: 1.0 $\mu$ L

|                                      |        |
|--------------------------------------|--------|
| <i>k</i> Naphthalene                 | Result |
| Relative retention                   | 6.89   |
| <i>k</i> (Caffeine/Naphthalene)      | 0.05   |
| <i>k</i> (Phenol/Naphthalene)        | 0.11   |
| <i>k</i> (Amitriptyline/naphthalene) | 0.18   |
| <i>k</i> (Caffeine/Phenole)          | 0.45   |
| Tailing Factor                       |        |
| Amitriptyline                        | 1.27   |

Approved Ikuo Yamamoto

Date: 2019.03.13