

# << Develosil Column >>

## TEST REPORT

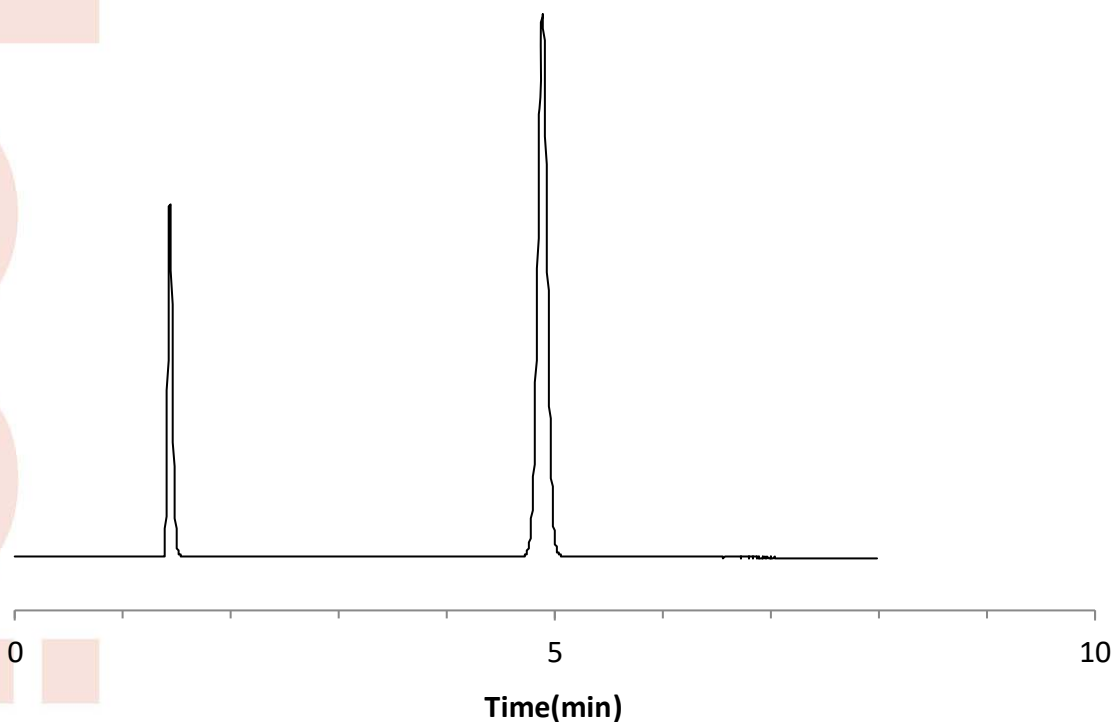
|                  |                |           |           |          |
|------------------|----------------|-----------|-----------|----------|
| Packings         | Develosil      | RPAQUEOUS | Batch No. | 1Y111119 |
| Column size      | Inner diameter | 4.6 mm    | Length    | 150 mm   |
| End fitting type | NW             |           |           |          |
| Mfg. No.         | 27032067C-BE   |           |           |          |

### Operating conditions

|              |   |                          |
|--------------|---|--------------------------|
| Mobile phase | : | Acetonitrile:water=70:30 |
| Flow rate    | : | 1.0 mL/min               |
| Column temp. | : | 30 °C                    |
| Pressure     | : | 4.5 MPa                  |
| Detection    | : | UV 254 nm                |

### Sample (Order of elution)

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



|                           |                           |                                       |
|---------------------------|---------------------------|---------------------------------------|
| Theoretical plate         | (Last peak)               | $5.54 \times (t_R/W_{0.5})^2 = 13615$ |
| Asymmetry factor          | (10% Height of Last peak) | = 0.99                                |
| Mobile phase at shipment: | Acetonitrile:water=70:30  |                                       |

# Certificate of Analysis



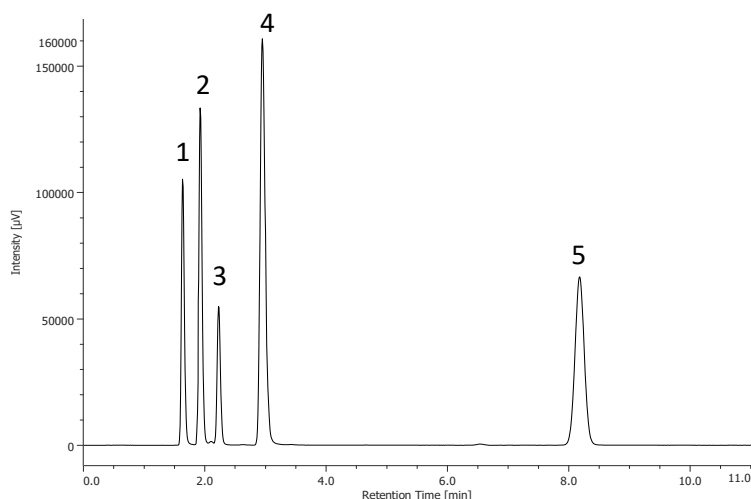
Develosil<sup>®</sup> RPAQUEOUS Batch# 1Y111119

## Analytical Results for Develosil<sup>®</sup> RPAQUEOUS

| Analysis of Unbonded Silica Gel |                           | Result |
|---------------------------------|---------------------------|--------|
| Median Particle Size            | [ $\mu\text{m}$ ]         | 5.07   |
| Surface Area                    | [ $\text{m}^2/\text{g}$ ] | 296    |
| Pore Volume                     | [ $\text{mL}/\text{g}$ ]  | 1.06   |
| Average Pore Diameter           | [ $\text{nm}$ ]           | 12.3   |

|                               |     |      |
|-------------------------------|-----|------|
| Analysis of Bonded Silica Gel |     |      |
| Total Carbon Content          | [%] | 17.4 |

## Chromatographic Results for Develosil<sup>®</sup> RPAQUEOUS



### Sample:

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

### Analytical Conditions;

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

|                                      |        |
|--------------------------------------|--------|
| <i>k</i> Naphthalene                 | Result |
| Relative retention                   | 6.55   |
| <i>k</i> (Caffeine/Naphthalene)      | 0.05   |
| <i>k</i> (Phenol/Naphthalene)        | 0.09   |
| <i>k</i> (Amitriptyline/Naphthalene) | 0.20   |
| <i>k</i> (Caffeine/Phenol)           | 0.50   |
| Tailing Factor                       |        |
| Amitriptyline                        | 1.22   |

Approved Ikuo Yamamoto

Date: 2019.11.27