

<< Develosil Column >>

TEST REPORT

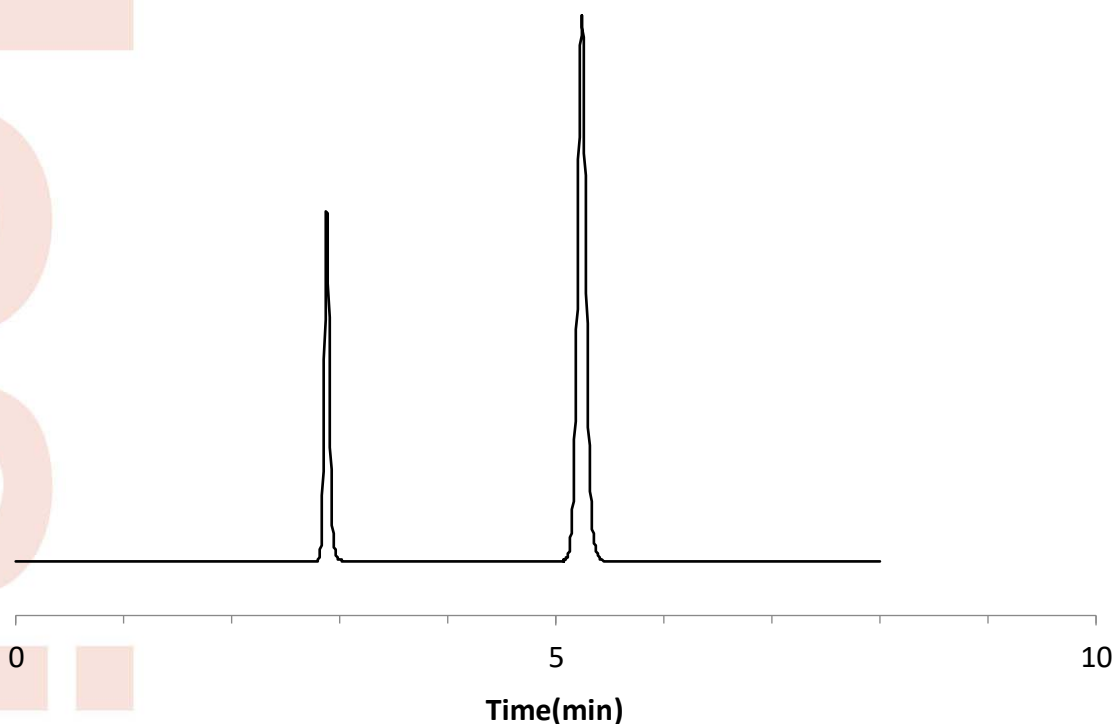
| | | | | |
|------------------|----------------|--------------|-----------|--------|
| Packings | Develosil | TMS-UG, 5 μm | Batch No. | 140915 |
| Column size | Inner diameter | 4.6 mm | Length | 250 mm |
| End fitting type | NW | | | |
| Mfg. No. | 27042083C-JG | | | |

Operating conditions

| | | |
|--------------|---|--------------------------|
| Mobile phase | : | Acetonitrile:water=70:30 |
| Flow rate | : | 1.0 mL/min |
| Column temp. | : | 30 °C |
| Pressure | : | 4.9 MPa |
| Detection | : | UV 254 nm |

Sample (Order of elution)

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



| | | |
|---------------------------|---------------------------|---------------------------------------|
| Theoretical plate | (Last peak) | $5.54 \times (t_R/W_{0.5})^2 = 20033$ |
| Asymmetry factor | (10% Height of Last peak) | = 1.02 |
| Mobile phase at shipment: | Acetonitrile:water=70:30 | |

Certificate of Analysis

Develosil TMS-UG-5

Batch # 140915

Analytical Results for Develosil TMS-UG-5

| Analysis of Unbonded Silica Gel | Result |
|--|--------|
| Median Particle Size [μm] | 5.17 |
| Surface Area [m^2/g] | 307 |
| Pore Volume [ml/g] | 1.11 |
| Median Pore Diameter [nm] | 13.58 |

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

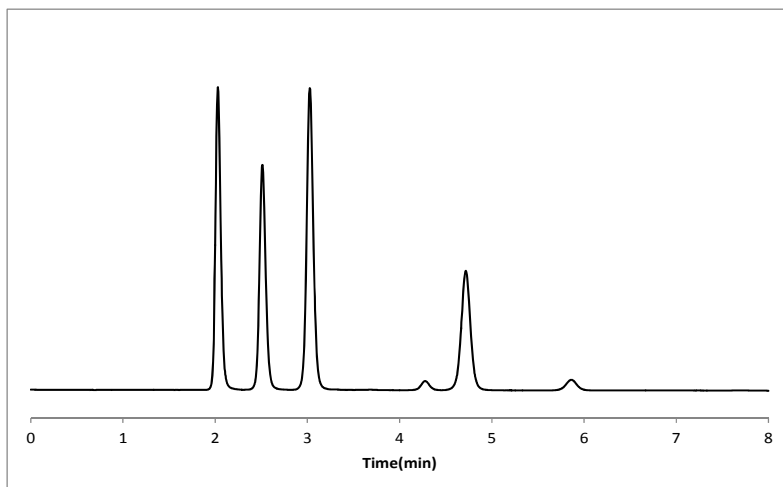
Analysis of Develosil TMS-UG-5

| | |
|------------------|------|
| Total carbon [%] | 4.45 |
|------------------|------|

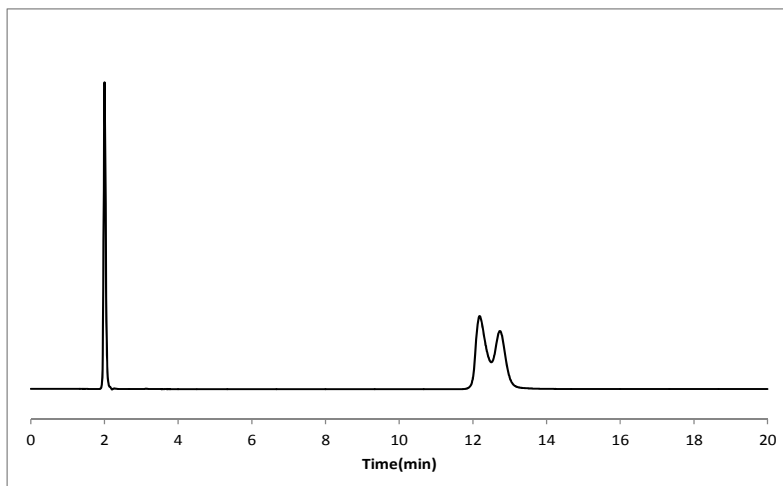
Chromatographic Results for Develosil TMS-UG-5

Separation Factor

| | |
|-------------------------------------|------|
| α (Caffeine/Phenol) | 0.48 |
| α (Toluene/Benzene) | 1.70 |
| α (Methyl benzoate/Toluene) | 0.70 |
| α (Triphenylene/o-Terphenyl) | 0.95 |
| α (Pyridine/Phenol) | 0.54 |
| α (Oxine-Copper/Caffeine) | 0.09 |
| α (Formic acid/Acetic acid) | 0.19 |



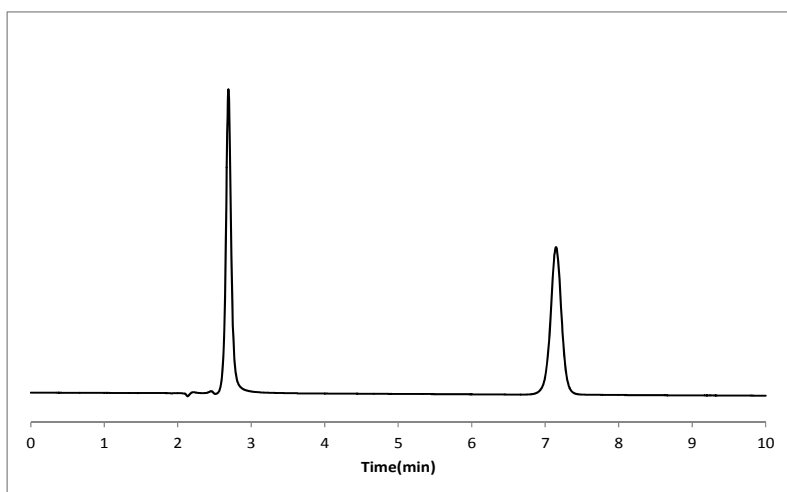
Column size :150x4.6mm I.D.
 Mobile Phase :CH₃OH/Water(50/50)
 Flow rate :1.0ml/min
 Detection :UV 254nm
 Temperature :40°C
 Sample 1:Uracil
 2:Caffeine
 3:Phenol
 4:Benzene
 5:Methyl benzoate
 6:Toluene



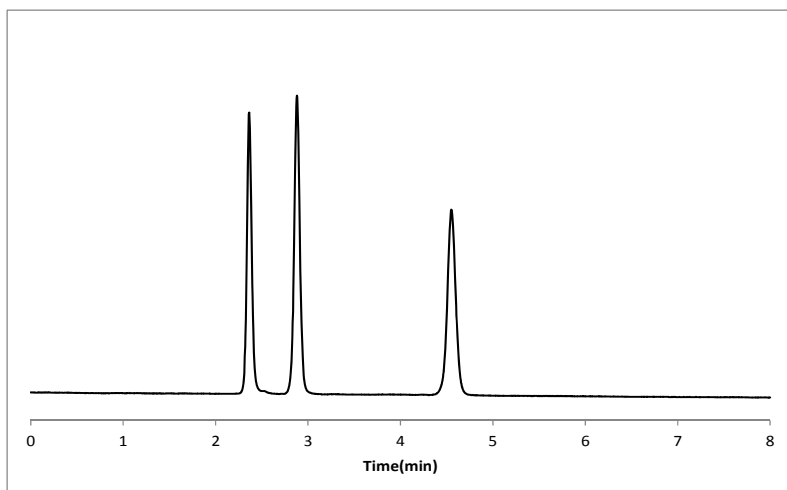
Column size :150x4.6mm I.D.
 Mobile Phase :CH₃OH/Water(60/40)
 Flow rate :1.0ml/min
 Detection :UV 254nm
 Temperature :40°C
 Sample 1:Uracil
 2:Triphenylene
 3:o-Terphenyl



Column size :150x4.6mm I.D.
 Mobile Phase :CH₃OH/Water(20/80)
 Flow rate :1.0ml/min
 Detection :UV 254nm
 Temperature :40°C
 Sample 1:Uracil
 2:Pyridine
 3:Phenol



Column size :150x4.6mm I.D.
 Mobile Phase :CH₃CN/0.2%H₃PO₄(10/90)
 Flow rate :1.0ml/min
 Detection :UV 254nm
 Temperature :40°C
 Sample 1:Oxine-Copper
 2:Caffeine



Column size :150x4.6mm I.D.
 Mobile Phase :CH₃CN/0.2%H₃PO₄(2/98)
 Flow rate :1.0ml/min
 Detection :UV 210nm
 Temperature :40°C
 Sample 1:Formic acid
 2:Acetic acid
 3:Propionic acid