

# << Develosil Column >>

## TEST REPORT

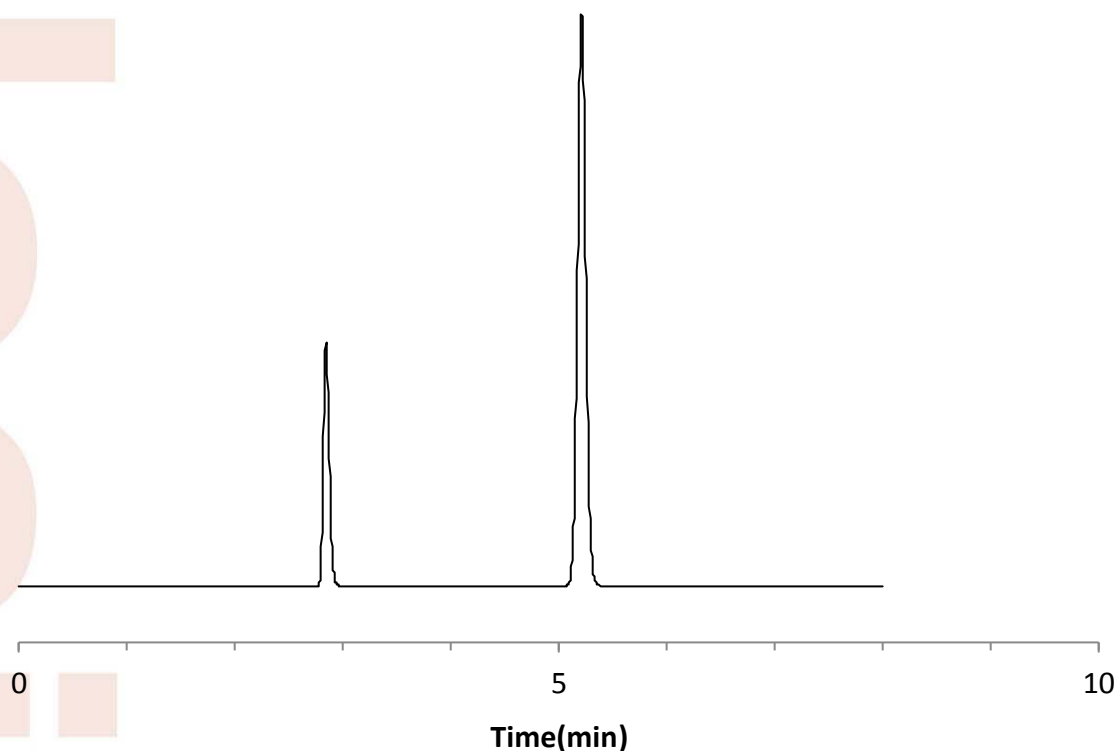
Packings	Develosil	TMS-UG, 5 μm	Batch No.	190318
Column size	Inner diameter	4.6 mm	Length	250 mm
End fitting type	NW			
Mfg. No.	25012174C-IO			

### Operating conditions

Mobile phase	:	Acetonitrile:water=70:30
Flow rate	:	1.0 mL/min
Column temp.	:	30 °C
Pressure	:	5.0 MPa
Detection	:	UV 254 nm

### Sample (Order of elution)

1	Uracil
2	Naphthalene



Theoretical plate	(Last peak)	$5.54 \times (t_R/W_{0.5})^2 = 21117$
Asymmetry factor	(10% Height of Last peak)	= 1.03
Mobile phase at shipment:	Acetonitrile:water=70:30	

# Certificate of Analysis

Develosil TMS-UG, 5um

Batch # 190318

## Analytical Results for Develosil TMS-UG, 5um

Analysis of Unbonded Silica Gel	Result
Median Particle Size [ $\mu\text{m}$ ]	<b>5.13</b>
Surface Area [ $\text{m}^2/\text{g}$ ]	<b>306</b>
Pore Volume [ $\text{ml}/\text{g}$ ]	<b>1.14</b>
Median Pore Diameter [ $\text{nm}$ ]	<b>12.7</b>

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

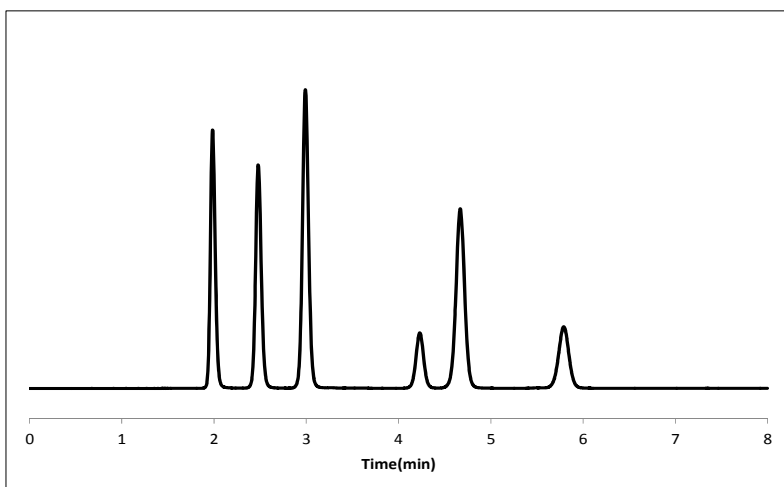
## Analysis of Develosil TMS-UG, 5um

Total carbon [%]	<b>4.36</b>
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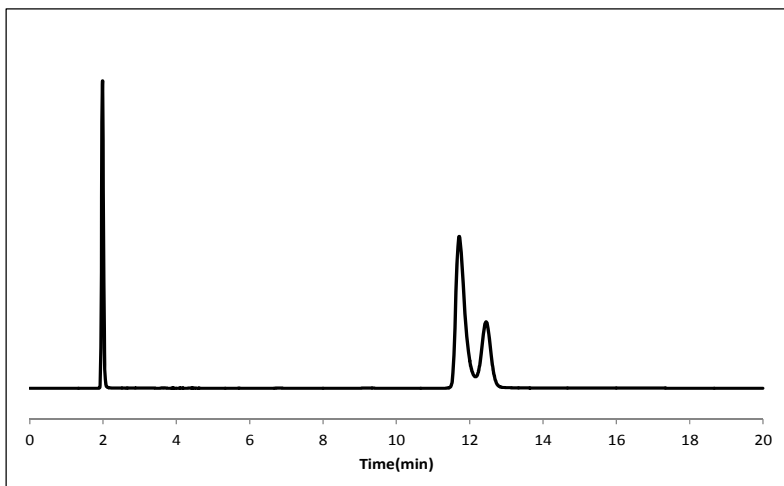
## Chromatographic Results for Develosil TMS-UG, 5um

### Separation Factor

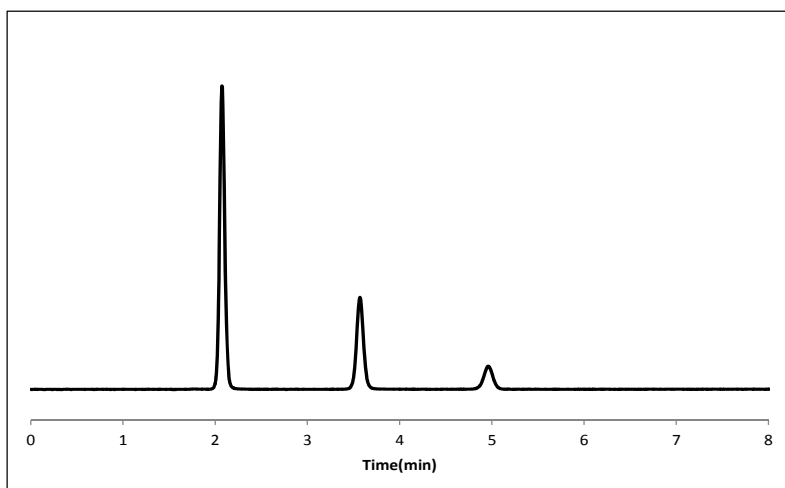
$\alpha$ (Caffeine/Phenol)	<b>0.50</b>
$\alpha$ (Toluene/Benzene)	<b>1.69</b>
$\alpha$ (Methyl benzoate/Toluene)	<b>0.71</b>
$\alpha$ (Triphenylene/ <i>o</i> -Terphenyl)	<b>0.93</b>
$\alpha$ (Pyridine/Phenol)	<b>0.52</b>
$\alpha$ (Oxine-Copper/Caffeine)	<b>0.12</b>



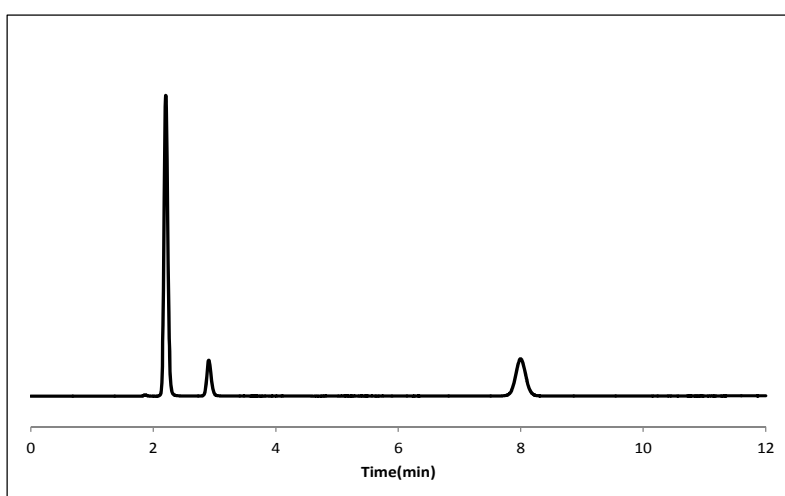
Column size :150x4.6mm I.D.  
 Mobile Phase :CH<sub>3</sub>OH/Water(50/50)  
 Flow rate :1.0ml/min  
 Detection :UV 254nm  
 Temperature :40°C  
 Sample 1:Uracil  
 2:Caffeine  
 3:Phenol  
 4:Benzene  
 5:Methyl benzoate  
 6:Toluene



Column size :150x4.6mm I.D.  
 Mobile Phase :CH<sub>3</sub>OH/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 :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)