

# << Develosil Column >>

## TEST REPORT

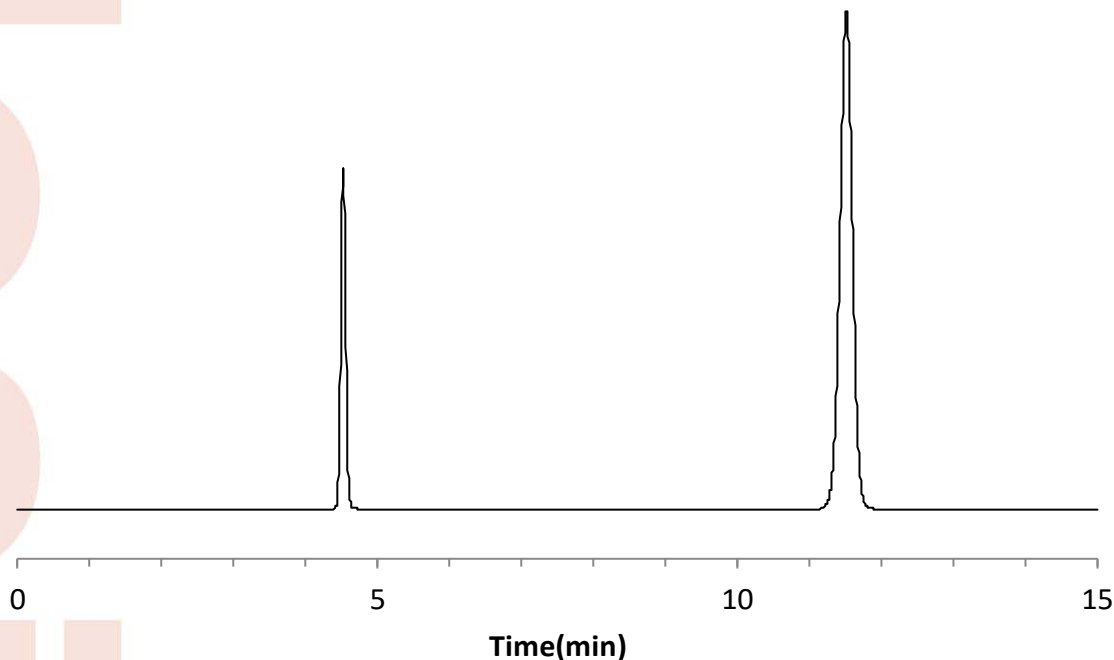
Packings	Develosil	TMS-UG, 5um	Batch No.	140915
Column size	Inner diameter	4.6 mm	Length	250 mm
End fitting type	NW			
Mfg. No.	16021865-RO			

### 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	Benzene
2	1,3,5 Triphenyl benzene



Theoretical plate	(Last peak)	$5.54 \times (t_R/W_{0.5})^2 = 20681$
Asymmetry factor	(10% Height of Last peak)	= 0.98

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 [ $\mu\text{m}$ ]	5.17
Surface Area [ $\text{m}^2/\text{g}$ ]	307
Pore Volume [ $\text{ml}/\text{g}$ ]	1.11
Median Pore Diameter [ $\text{nm}$ ]	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.

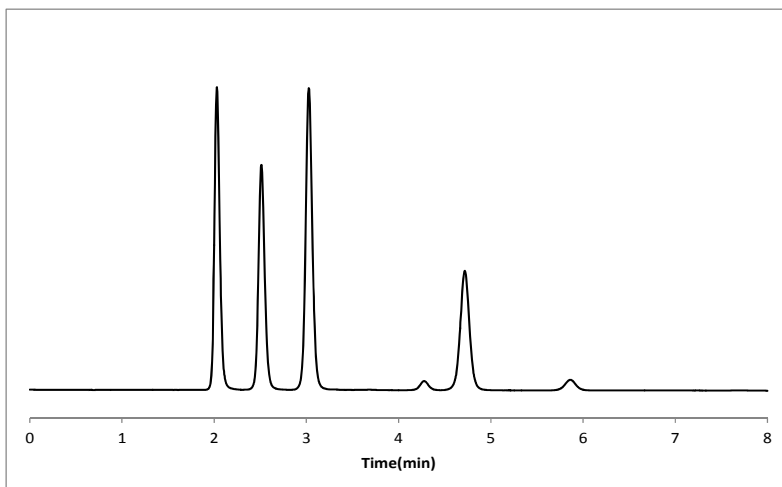
## Analysis of Develosil TMS-UG-5

Total carbon [%]	4.45
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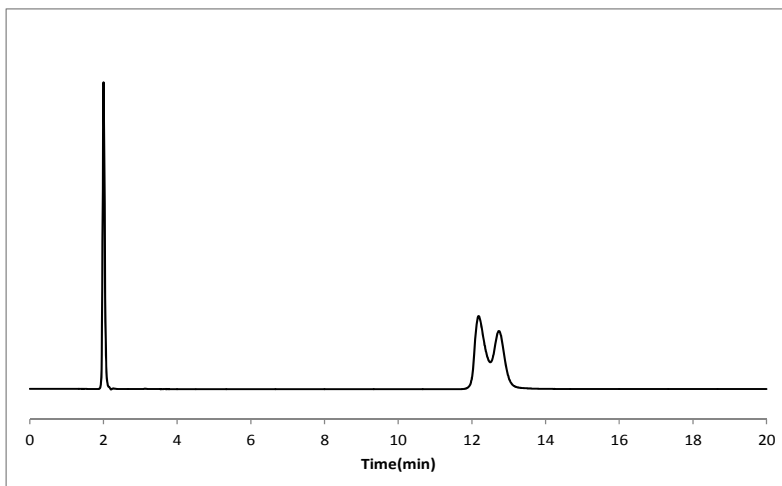
## Chromatographic Results for Develosil TMS-UG-5

### Separation Factor

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



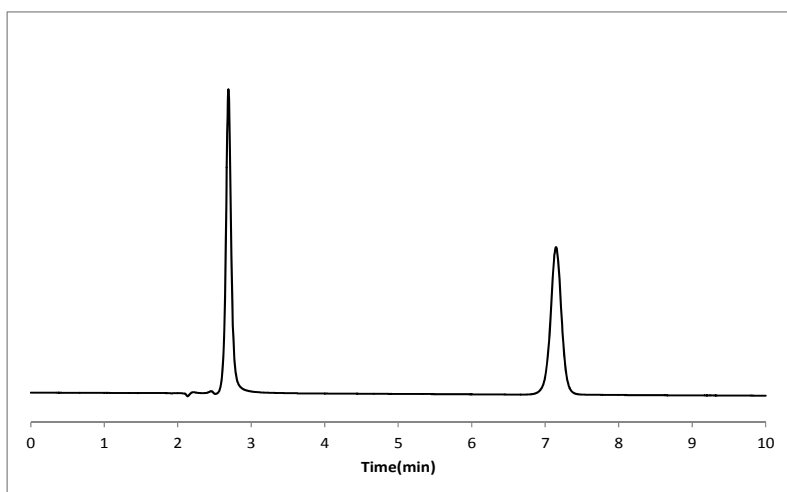
Column size :150x4.6mm I.D.  
 Mobile Phase :CH<sub>3</sub>OH/Water(50/50)  
 Flow rate :1.0ml/min  
 Detection :UV 254nm  
 Temperature :40°C  
 Sample 1:Uracil  
 2:Caffeine  
 3:Phenol  
 4:Benzene  
 5:Methyl benzoate  
 6:Toluene



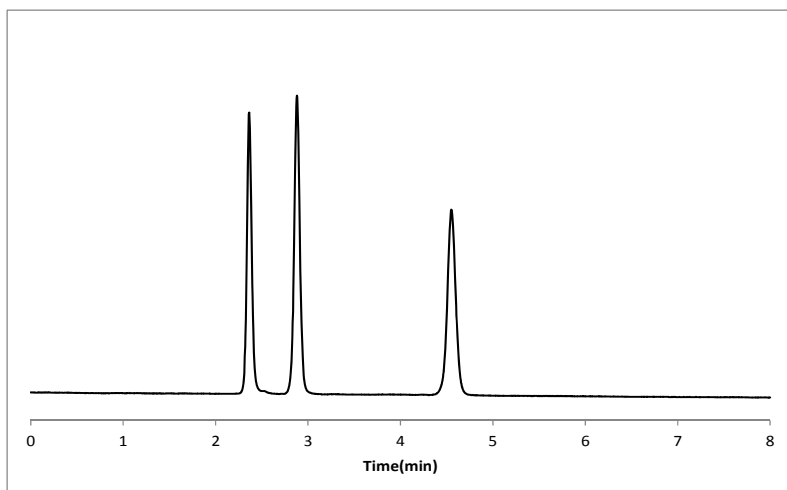
Column size :150x4.6mm I.D.  
 Mobile Phase :CH<sub>3</sub>OH/Water(60/40)  
 Flow rate :1.0ml/min  
 Detection :UV 254nm  
 Temperature :40°C  
 Sample 1:Uracil  
 2:Triphenylene  
 3:o-Terphenyl



Column size :150x4.6mm I.D.  
 Mobile Phase :CH<sub>3</sub>OH/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 :CH<sub>3</sub>CN/0.2%H<sub>3</sub>PO<sub>4</sub>(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 :CH<sub>3</sub>CN/0.2%H<sub>3</sub>PO<sub>4</sub>(2/98)  
 Flow rate :1.0ml/min  
 Detection :UV 210nm  
 Temperature :40°C  
 Sample 1:Formic acid  
 2:Acetic acid  
 3:Propionic acid