SHISEIDO

CAPCELL PAK UG

Certificate of Analysis

CAPCELL PAK C18 UG80 S-5

Lot. 80V-12

Analysis of Silica gel		Specification	Result
Mean Particle Diameter	[μm]	4.80 - 5.20	4.80
Multi-point Nitrogen Sorption			
Median Pore Diameter	[nm]	7.50 - 9.50	8.68
Surface Area	[m^2/g]	320 - 370	357
Pore Volume	[mL/g]	0.85 - 1.00	0.95
Metal Contents[*1]	[ppm]		
Fe		< 5.0	0.4
Zn		< 5.0	n.d.
Mg		< 5.0	0.1
Ti		< 5.0	0.2
Al		< 5.0	0.4
Na		< 5.0	0.9

[*1] ICP/AES

n.d. · · · not detected

Analysis of CAPCELL PAK C18 UG80 S-5			
Carbon Content	[%]	17.5 - 19.0	18.8

Chromatographic Results		
α (Toluene/Benzene)[*2]	2.14 - 2.18	2.14
α (Caffeine/Phenol)[*2]	0.27 - 0.31	0.29
α (Methyl Benzoate/Toluene)[*2]	0.34 - 0.38	0.38
α (2-Ethylpyridine/Benzene)[*2]	0.27 - 0.31	0.31
α (Dimethylaniline/Toluene)[*2]	0.58 - 0.62	0.62
PA(Phenylacetylacetone/Naphthalene)[*2 *3]	> 0.50	0.56
α (Triphenylene/o-Terphenyl)[*4]	1.31 - 1.39	1.39

[*2] See Fig.1 on reverse

[*3] Peak area ratio

[*4] Chromatographic conditions: Column; 4.6 mm I.D. x 150 mm, Flow rate; 1 mL/min, Mobile phase; Methanol/Water = 80/20, Injection volume; 7 μL, Detector; UV (254nm), Temperature; 35 ℃

Acid Resistance[*5 *6]	[%]	> 80.0	94.4
Alkali Resistance[*5 *7]	[%]	> 80.0	89.2

Chromatographic conditions: Column; 4.6 mm I.D. x 150 mm, Flow rate; 1 mL/min, Sample; 1000 ppm Benzylalcohol Injection volume; 7 μL, Detector; UV (254nm)

[*5] Percentage of k at 20 hr over the initial k

[*6] Mobile phase; Methanol/Water/TFA = 10/89/1 (pH 1.0), Temperature; 60 ℃

[*7] Mobile phase; 4 mmol/L Borate buffer/Methanol = 90/10 (pH 10), Temperature; 50 ℃

Continued on reverse for further information

SHISEIDO CO., LTD.
7-5-5 GINZA, CHUO-KU, TOKYO 104-0061, JAPAN

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Lot. 80V-12

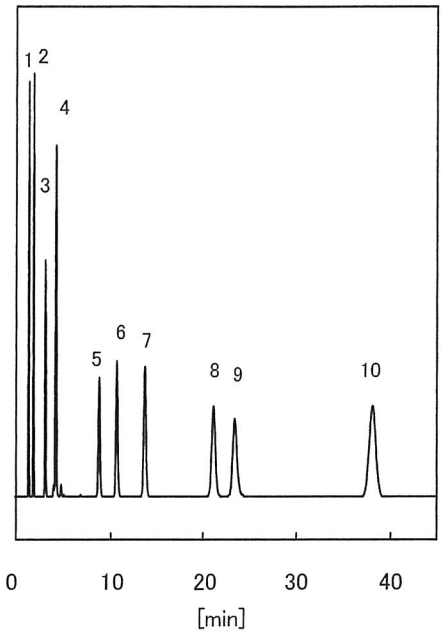

Fig.1 Standard Mixture

Chromatographic conditions
Column; 4.6 mm I.D. x 150 mm
Mobile phase; Methanol / Water = 50 / 50 (v/v)
Flow rate; 1.0 mL/min
Temperature; 40 ℃
Detector; UV (254 nm)
Injection volume; 7.0 μL
Sample;

1. Uracil
2. Caffeine
3. Phenol
4. 2-Ethylpyridine
5. Methyl Benzoate
6. Benzene
7. N,N-Dimethylaniline
8. Toluene
9. Phenylacetylacetone
10. Naphthalene

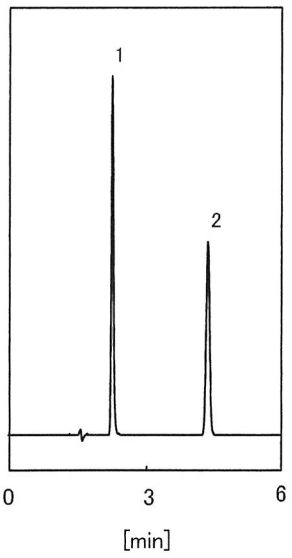

Fig.2 Pyridine / Phenol

Chromatographic conditions
Column; 4.6 mm I.D. x 150 mm
Mobile phase; Acetonitrile / Water = 30 / 70 (v/v)
Flow rate; 1.0 mL/min
Temperature; 40 ℃
Detector; UV (254 nm)
Injection volume; 7.0 μL
Sample; 1. Pyridine
2. Phenol

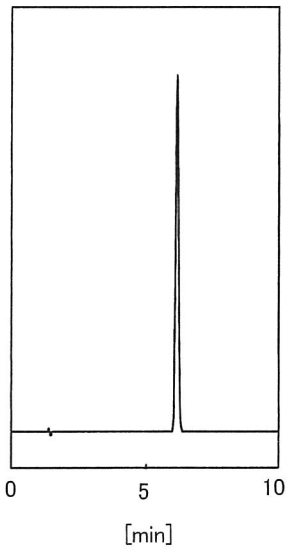

Fig.3 Coordination Compound

Chromatographic conditions
Column; 4.6 mm I.D. x 150 mm
Mobile phase;
20 mmol/L KH_2PO_4,1 mmol/L EDTA-2Na, Water / Acetonitrile = 60 / 40 (v/v)
Flow rate; 1.0 mL/min
Temperature; 40 ℃
Detector; UV (320 nm)
Injection volume; 7.0 μL
Sample; Hinokitiol (100 ppm)