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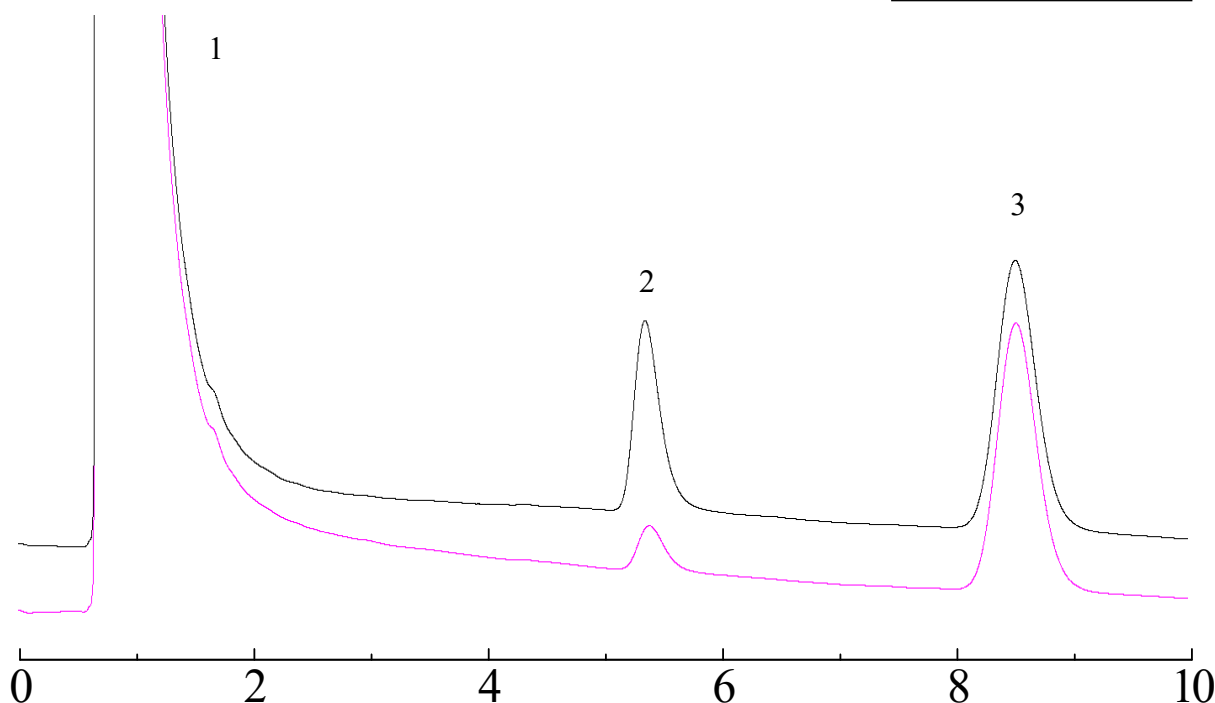
Analysis of ampicillin hydrate using Shinwasorb

Ampicillin hydrate is used as a penicillin antibiotic.

Shown below is an analysis of ampicillin hydrate using a column packed with a Shinwasorb packing material under Japanese Pharmacopoeia.

Silicone OV-17 1.5% Shinwasorb-S 60/80

1. Cyclohexane
2. N,N-dimethylaniline
3. Naphthalene



System suitability

Detectability: The ratio of peak area is 24%.

(The ratio of peak area of N,N-dimethylaniline to that of the internal standard is equivalent to 15 to 25% of the ratio of the peak area on N,N-dimethylaniline to that of the internal standard obtained from the standard solution.)

Column: 2.1 m x 2.6 mm I.D. Glass
Sample: N,N-dimethylaniline, Naphthalene in Cyclohexane
Column temp.: 105°C
Carrier gas: 20 mL/min He (adjust so that the retention time of N,N-dimethylaniline is about 5 minutes.)

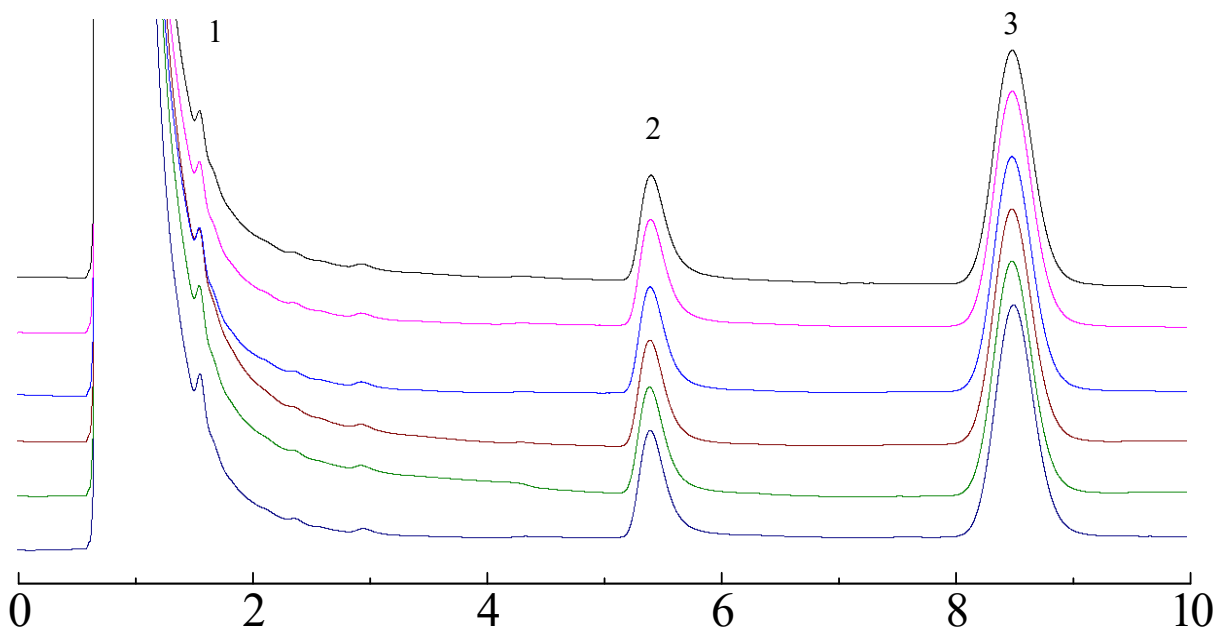
Sample volume: 1.0 µL
Detector: FID 200°C
Injection port temp.: 200°C

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Silicone OV-17 1.5% Shinwasorb-S 60/80

1. Cyclohexane
2. N,N-dimethylaniline
3. Naphthalene



System suitability

System performance: The resolution is 5.9.

(N,N-dimethylaniline and naphthalene are eluted in this order with the resolution between these peaks being not less than 3.)

System repeatability: The relative standard deviation is 0.55%

(When the test is repeated 6 times, the relative standard deviation of the ratio of the peak area of N,N-dimethylaniline to naphthalene is not more than 2.0%.)

Column: 2.1 m x 2.6 mm I.D. Glass

Sample: N,N-dimethylaniline, Naphthalene in Cyclohexane

Column temp.: 105°C

Carrier gas: 20 mL/min He (adjust so that the retention time of N,N-dimethylaniline is about 5 minutes.)

Sample volume: 1.0 µL

Detector: FID 200°C

Injection port temp.: 200°C

■ Packing material specifications and price ■

Product name	Weight	Price
Silicone OV-17 1.5% Shinwasorb-S 60/80	25 g	19,000 JPY

■ Packed column specifications and price ■

Product name	Column material	Dimensions	Price
Silicone OV-17 1.5% Shinwasorb-S 60/80	Glass (For GC-2014 systems)	2.1 m x 2.6 mm I.D.	62,900 JPY

Prices for glass columns for Shimadzu systems other than the GC-2014, and systems manufactured by other manufacturers will differ from that shown above. The prices shown above are applicable as of December 22nd, 2017. Please contact us for pricing.

Please feel free to contact us with questions related to analyses.

Please be aware that specifications and prices are subject to change without prior notification.