

SHINWA EXPRESS

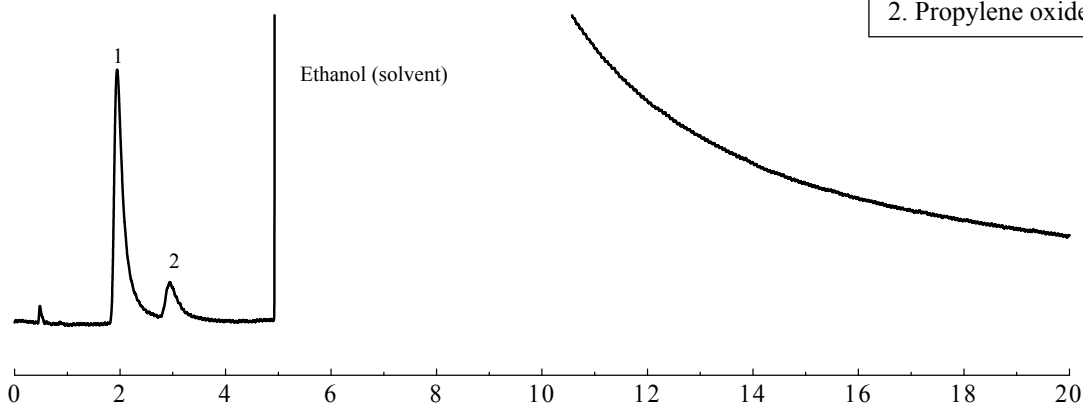
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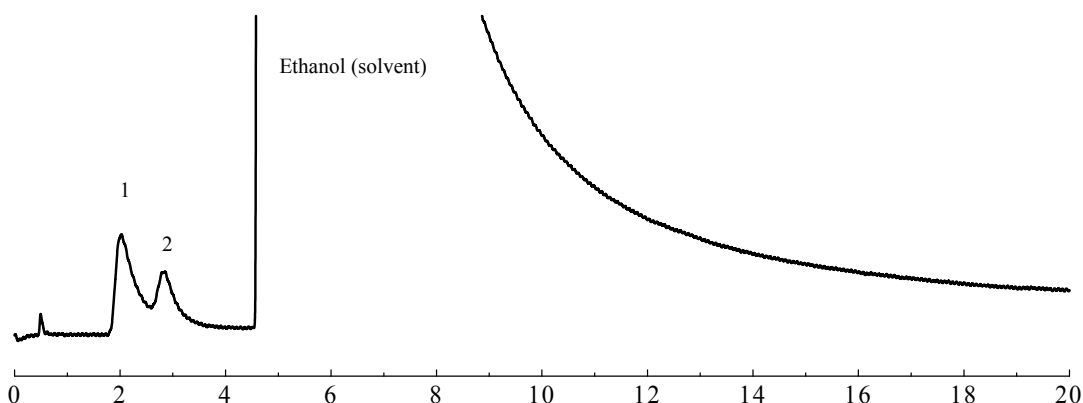
Measurement of ethylene oxide using Shinwasorb

Because ethylene oxide displays strong sterilizing effects at low temperatures, it is widely used for the sterilization of plastic and rubber products that are easily damaged by heat. However, due to the high toxicity and carcinogenicity of this compound, analyses are required to determine levels of residual ethylene oxide in sterilized products. Shown below is an example of an analysis of ethylene oxide and propylene oxide using a column packed with a Shinwasorb packing material, and performed in accordance with Japan's "Test methods relevant to biological safety of rubber products" (JIS-T9010).

12.5% Flexol8N8 Shinwasorb-U 60/80



25% Flexol8N8 Chromosorb W 60/80 AW-DMCS



Column: 2.1 m x 3.2 mm I.D. Glass
Sample: Ethylene oxide, propylene oxide*
Carrier gas: 40 mL/min N₂
Injection port temp.: 150°C

Sample volume: 100 µL
Column temp.: 50°C
Detector: FID 150°C

*See reverse for sample preparation method



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Sample preparation method

1. Add 20 mL of a solution of ethylene oxide (0.5 ppm) and propylene oxide (0.25 ppm) in ethanol to a 50 mL glass vial, and seal the vial.
2. Heat the vial with vibration at 70°C for 30 minutes in a thermostatic bath.
3. Remove 100 µL of headspace gas from the vial, and analyze this gas.

■ Packing material specifications and price ■

Product name	Weight	Price
12.5% Flexol 8N8 Shinwasorb-U 60/80	25 g	18,500 JPY

■ Packed column specifications and price ■

Product name	Column material	Dimensions	Price
12.5% Flexol 8N8 Shinwasorb-U 60/80 with data	Glass	2.1 m x 3.2 mm I.D.	58,100 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. Please contact us for pricing.
Feel free to contact us if you have particular analytical conditions you would like to use or if you have any questions related to analyses.



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