SHIMADZU
Excellence in Science

CoreFocus Report

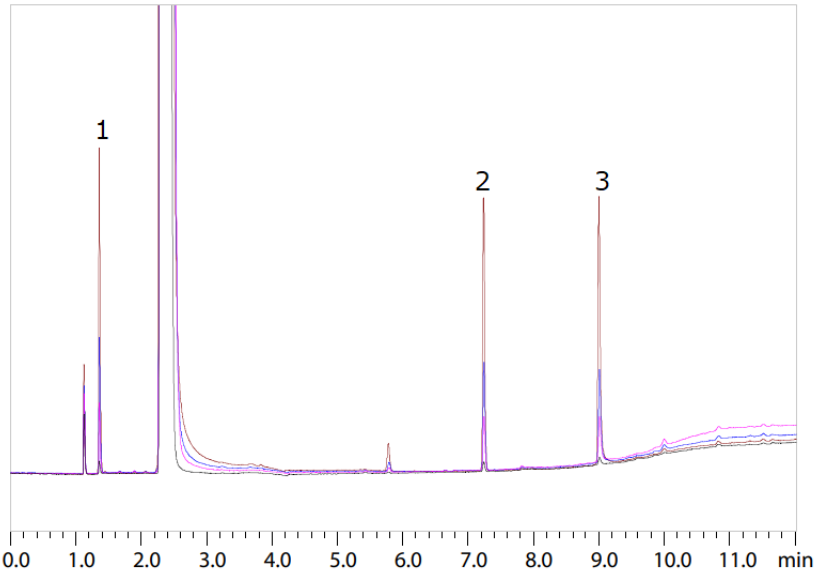
No.362

GC | FID | AOC | SH Series

SH-PolarWax

Analysis of Residual Ethylene Oxide in Medical Devices

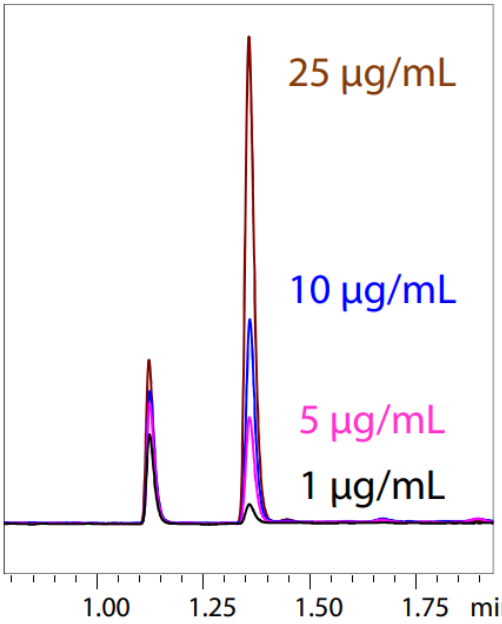
Keywords: EOG sterilization



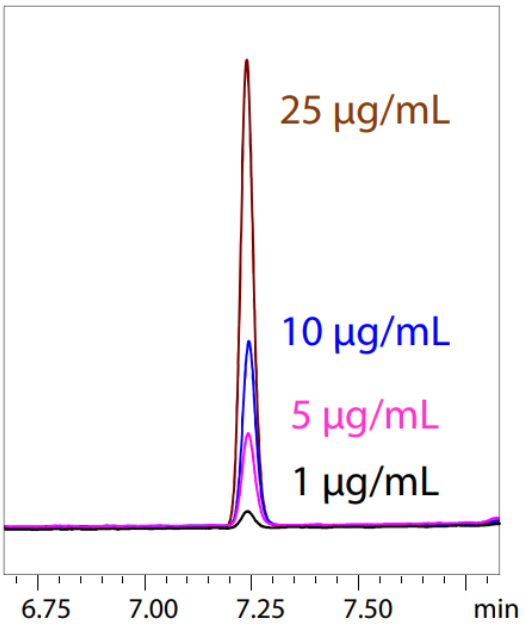
1. Ethylene oxide (EO)
2. Ethylene chlorohydrin (ECH)
3. Ethylene glycol (EG)

Model	:	Nexis™ GC-2030 / AOC-20i Plus
Detector	:	FID-2030 Flame Ionization Detector
Column	:	SH-PolarWax (30 m x 0.53 mm I.D. df = 1.00 µm), P/N: 221-75979-30
Column Temp.	:	60 ˚C (3 min) - 20 ˚C/min - 200 ˚C (10 min) Total 20 min
Injection Temp.	:	250 ˚C
Injection Mode	:	Split
Split Ratio	:	1:3
Carrier Gas	:	N_2
Carrier Gas Controller	:	Constant Linear Velocity
Linear Velocity	:	40 cm/s
Detector Temp.	:	250 ˚C
Detector Gas	:	H_2 32 mL/min, Air 200 mL/min
Makeup Gas	:	N_2 24 mL/min
Injection Volume	:	0.5 µL
Syringe	:	Elastic Syringe, AOC, P/N: 221-49548*

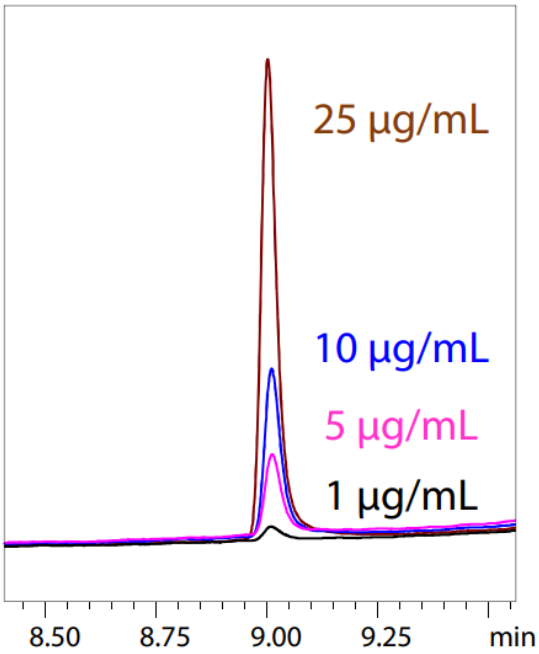
* Using an elastic syringe for AOC (P/N: 221-49548) equipped with a plunger made of titanium enables stable sample introduction.



Chromatogram of EO



Chromatogram of ECHx



Chromatogram of EG

Source : Application News 01-00139 (JP, ENG)

Shimadzu Corporation

www.shimadzu.com/an/