Antioxidants
Analysis of additives in polyethylene

Application Note

Energy & Fuels

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Introduction
High temperature gas chromatography with an Agilent CP-SimDist UltiMetal column separates four additives in polyethylene glycol in 22 minutes.
Conditions

Technique: GC-wide-bore

Column: Agilent CP-SimDist CB UltiMetal, 0.53 mm x 5 m
WCOT CP-SimDist CB UltiMetal (df = 0.15μm)
(Part no. CP7532)

Temperature: 100 °C (2 min) → 380 °C, 15 °C/min; 380 °C (5 min)

Carrier Gas: He, 18 kPa (0.18 bar, 2.6 psi)

Injector: On-column

Detector: FID
T = 380 °C

Sample Size: 1 μL

Solvent sample: toluene

Courtesy: Dow Chemical Canada, Western Canada Division, R & D Lab, Jim Luong

Peak identification

1. Ericamide
2. Irgafos* - 168
3. Irganox* - 1076
4. Irganox* - 1010

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