Halogenated compounds and CO$_2$ in ethylene

Application Note

Materials Testing & Research

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Introduction
GC/MS analysis of impurities (halogenated and carbon dioxide) in ethylene is achieved in seven minutes with an Agilent CarboBOND column.
**Conditions**

Technique: GC

Column: Agilent CarboBOND, 0.53 mm x 25 m fused silica
(df = 10 µm) (Part no. CP7374) connected with 0.1 mm x 20 cm methyl deactivated fused silica at inlet

Temperature: 80 °C (1 min) → 300 °C, 25 °C/min

Carrier Gas: Helium, 20 kPa

Injector: Split, 10:1

Detector: MS

Sample Size: 0.5 mL

Concentration Range: standard with approx. 100 ppm impurities

Matrix: ethylene

**Peak identification**

1. air
2. carbon dioxide
3. ethylene
4. vinyl chloride
5. ethyl chloride