Flavors and aromas
Analysis of Japanese Shiitake mushrooms

Application Note

Food Testing & Agriculture

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Introduction
Gas chromatography with an Agilent CP-Sil 5 CB column separates seven components in a sample of Japanese Shiitake mushrooms in 40 minutes.
Conditions

Technique: GC-PTI

Column: Methyl silicone bonded liquid phase, 0.25 mm x 60 m fused silica WCOT (df = 0.25 μm)

Agilent equivalent: CP-Sil 5 CB; (Part no. CP8743)

Temperature: 40 °C (5 min) → 210 °C, 5 °C/min

Injector: TCT

- Cold trap: CP-Sil 8 CB, 0.53 mm; df = 5 μm
- Precool temp.: -130 °C
- Precool time: 3 min
- Purge time: 10 min
- Purge flow: 11.4 mL/min
- Condenser temp.: -15 °C
- Injection temp.: 250 °C
- Injection time: 1 min
- Backflush flow: 50 mL/min

Detector: MS

Sample Size: 1/4 mushroom

Sample Temperature: ambient

Concentration Range: ppb/ppm

Courtesy: GL Sciences, Japan

Peak identification

1. isovaleraldehyde
2. isopentanol
3. 1-pentanol
4. cis-3-hexenol
5. 5-methylcyclo-2-hexen-1-one
6. ocimene
7. methyl benzoate