

## Sterols in rapeseed oil

# Analysis of sterols in rapeseed oil as silyl derivatives

## Application Note

Food Testing & Agriculture

### Authors

Agilent Technologies, Inc.

### Introduction

Analysis of sterols in rapeseed oil as silyl derivatives by gas chromatography with Agilent VF-5ht columns in 11 minutes.



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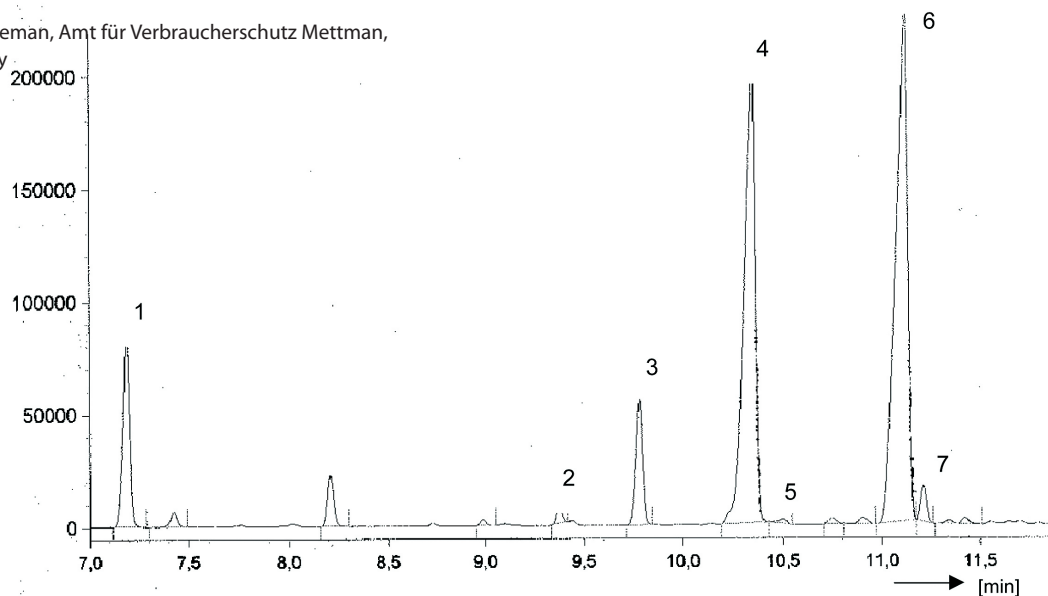
## Conditions

Technique : GC-capillary  
Column : Agilent VF-5ht, 0.25 mm x 30 m fused silica (df = 0.1 µm) (Part no. CP9046)  
Temperature : 240 °C to 260 °C, 4 °C/min to 300 °C, 8 °C/min (8 min)  
Carrier Gas : He, 137.7 kPa, constant flow  
Injector : Split, 1:20, 320 °C  
Sample Size : 1 µL  
Detector : FID  
Solvent : 1-butanol  
Sample Prep. : 1 g sample + 2 mL H<sub>2</sub>O, 1 mL 15 M NaOH + 2 mL IS (cholestan in 1-butanol); heat at 120 °C, cool, centrifuge. Transfer 1.5 mL of the organic layer to an aluminium oxide column (10 g, neutral, conditioned with ethanol); elute with 5 mL ethanol and 30 mL diethylether, evaporate till dryness, derivatize.  
Derivatization : Silylation with MSTFA in MTBE and TCTFE (trichlorotrifluoroethane)

Courtesy : Frau Hilleman, Amt für Verbraucherschutz Mettmann, Germany

## Peak identification

1. cholestane
2. cholesterol
3. brassicasterol
4. campesterol
5. stigmasterol
6. sitosterol
7. avenasterol-D5



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