

Non-volatile organic acids

Separation of non-volatile organic acids as their methyl esters on a wide-bore column

Application Note

Materials Testing & Research

Authors

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Introduction

Gas chromatography using an Agilent CP-Wax 57 CB column separates 16 non-volatile organic acids in eight minutes.



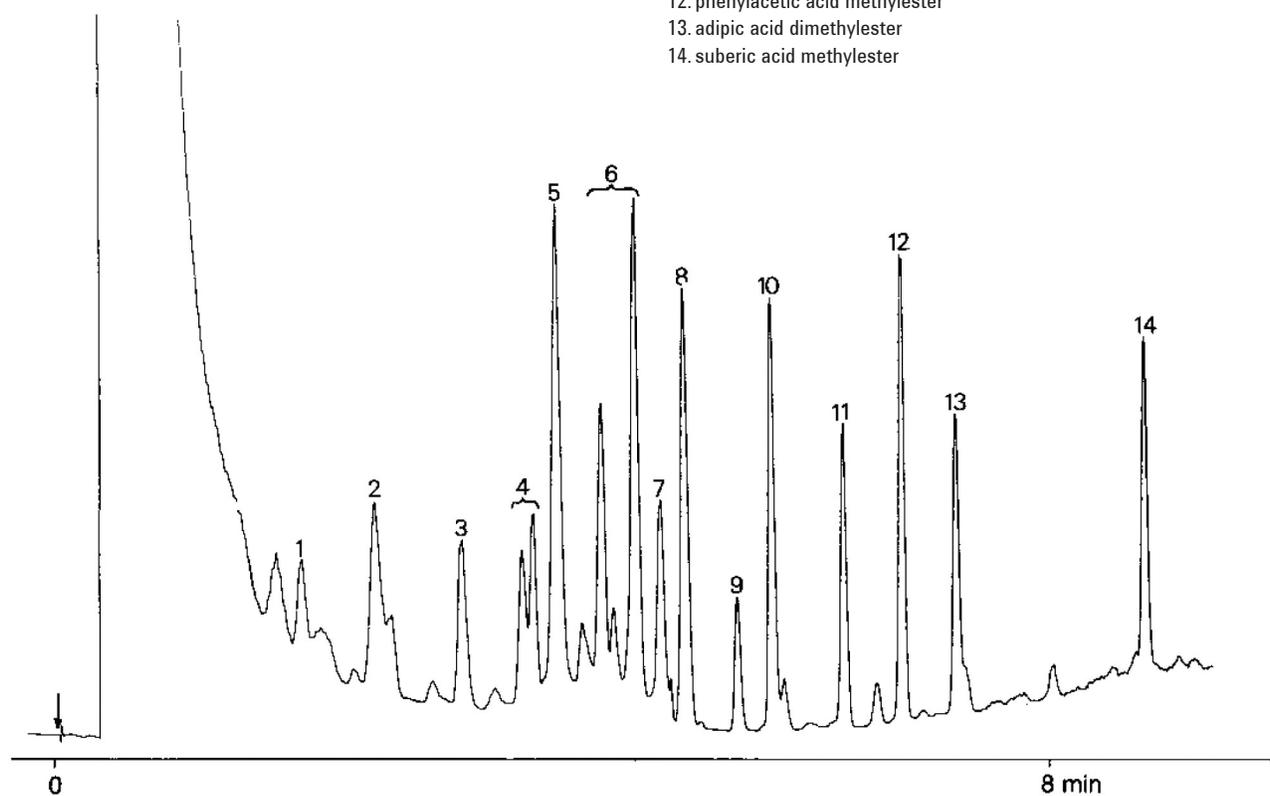
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Conditions

Technique : GC-capillary
Column : Agilent CP-Wax 57 CB, 0.53 mm x 10 m fused silica
WCOT CP-Wax 57 CB (2.0 µm) (Custom-made)
Temperature : 65 °C → 210 °C, 16 °C/min
Carrier Gas : H₂, 12 kPa (0.12 bar, 1.7 psi), 50 cm/s
Injector : Splitter, 10 mL/min
T = 240 °C
Detector : FID, 64 x 10⁻¹² Afs
T = 250 °C
Sample Size : 2 µL

Peak identification

1. 2-methoxy propionic acid methylester
2. ergenyl
3. lactic acid methylester
4. oxalic acid dimethylester
5. acetoacetic acid methylester
6. methylmalonic acid dimethylester
3-hydroxybutyric acid methylester
2-methyl-3-oxovaleric acid methylester
7. ethylmalonic acid dimethylester
8. isopropyl malonic acid dimethylester
9. succinic acid methylester
10. benzoic acid methylester
11. glutaric acid dimethylester
12. phenylacetic acid methylester
13. adipic acid dimethylester
14. suberic acid methylester



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