



Adipate and phthalate esters

Analysis of plasticizers

Application Note

Materials Testing & Research

Authors

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Introduction

Gas chromatography with an Agilent CP-Sil 13 CB column separates 12 adipate and phthalate esters used as plasticizers in 24 minutes.



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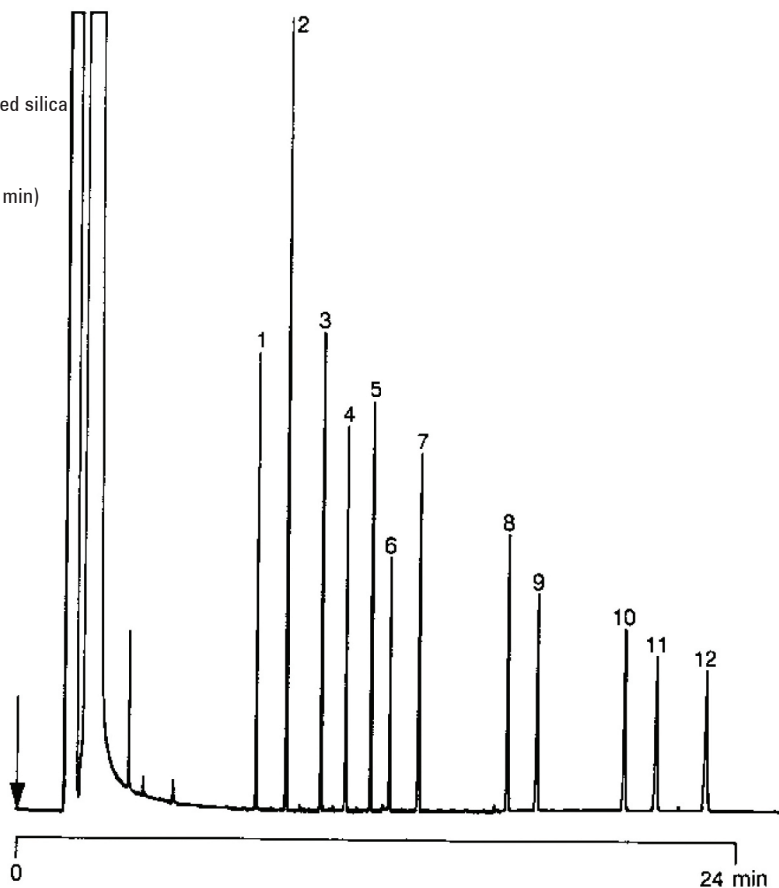
Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 13 CB, 0.32 mm x 50 m fused silica
WCOT CP-Sil 13 CB (df = 0.4 µm)
(Part no. CP7937)
Temperature : 80 °C → 270 °C, 20 °C/min; 270 °C (14.5 min)
Carrier Gas : H₂, 100 kPa (1.0 bar, 14 psi)
Injector : On-column
Detector : FID
T = 300 °C
Sample Size : 1 µL
Concentration Range : 25 ng/µL

Courtesy : Mr Lembacher,
Hipp K. G., Pfaffenhofen,
Germany

Peak identification

1. dimethyl phthalate
2. diethyl phthalate + ethyl phthalate
3. diallyl phthalate
4. diisobutyl phthalate
5. dibutyl phthalate
6. dimethylglycol phthalate
7. dibutyl adipate
8. bis(2-ethylhexyl) phthalate
9. butylbenzyl phthalate
10. bis(2-ethylhexyl) phthalate
11. cyclohexyl phthalate
12. phenyl phthalate



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