



# Methyl esters of non-volatile organic acids

## Separation of non-volatile organic acid esters on a wide-bore fused silica column

### Application Note

Materials Testing & Research

#### Authors

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#### Introduction

Gas chromatography using an Agilent CP-Sil 19 CB column separates 22 non-volatile organic acids in eight minutes.



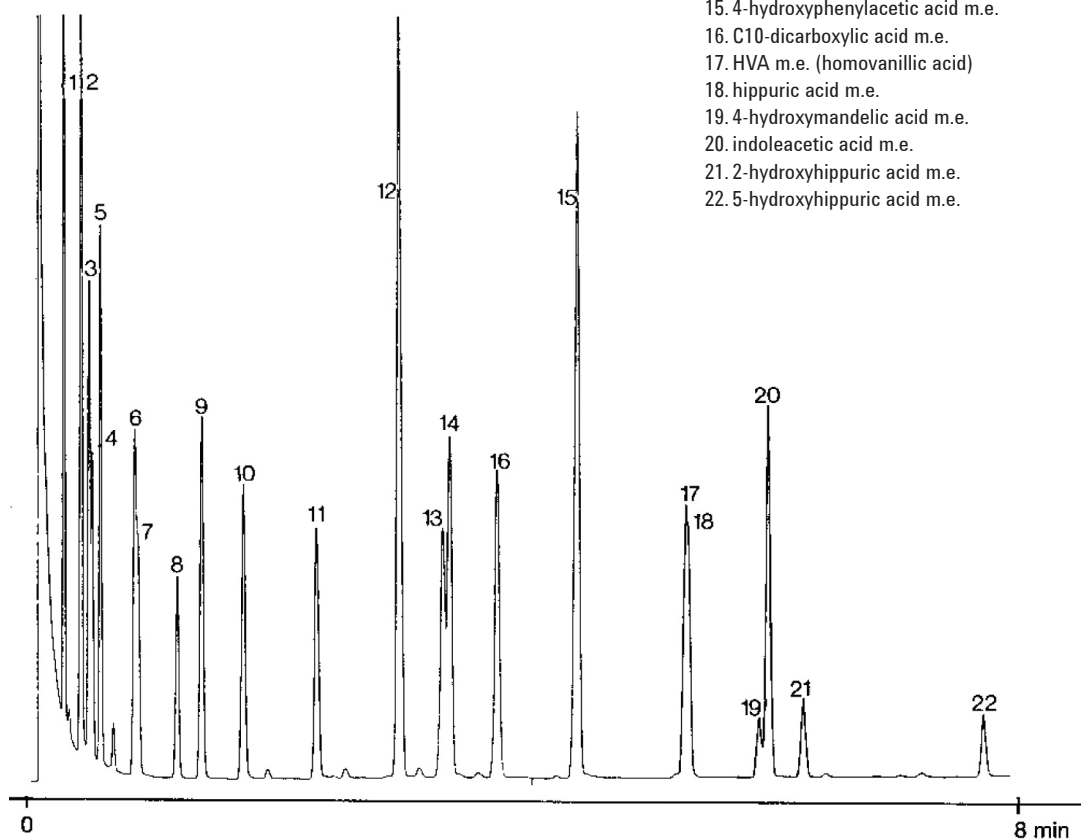
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## Conditions

Technique : GC-capillary  
Column : Agilent CP-Sil 19 CB, 0.53 mm x 10 m fused silica  
WCOT CP-Sil 19 CB (2.0  $\mu$ m) (Part no. CP7647)  
Temperature : 80 °C  $\rightarrow$  280 °C, 25 °C/min  
Carrier Gas : H<sub>2</sub>, 40 kPa (0.4 bar), 170 cm/s  
Injector : direct  
T = 275 °C  
Detector : FID, 512 x 10<sup>-12</sup> Afs  
T = 300 °C  
Sample Size : 0.1  $\mu$ L

## Peak identification

1. lactic acid m.e.
2. propylene glycol
3. butane diol
4.  $\beta$ -hydroxybutyric acid m.e.
5. methyl malonic acid
6. pyruvic acid ethoxime
7. succinic acid m.e.
8. benzoic acid m.e.
9. glutaric acid m.e.
10. adipic acid m.e.
11. 2-hydroxyphenylacetic acid m.e.
12. 4-phenylbutyric acid m.e.
13.  $\alpha$ -ketoglutaric acid ethoxime
14.  $\alpha$ -keto adipic acid ethoxime
15. 4-hydroxyphenylacetic acid m.e.
16. C10-dicarboxylic acid m.e.
17. HVA m.e. (homovanillic acid)
18. hippuric acid m.e.
19. 4-hydroxymandelic acid m.e.
20. indoleacetic acid m.e.
21. 2-hydroxyhippuric acid m.e.
22. 5-hydroxyhippuric acid m.e.



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