

## Organic acids

Enantiomeric separation of underivatized carboxylic acids

### Application Note

BioPharma

#### Authors

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#### Introduction

Separation of the enantiomeric isomers of carboxylic acids is possible on the Agilent CP-Chirasil-Dex CB column without derivitization. These carboxylic acids are used in the stereo-specific synthesis of molecules, aiming at therapeutic applications.



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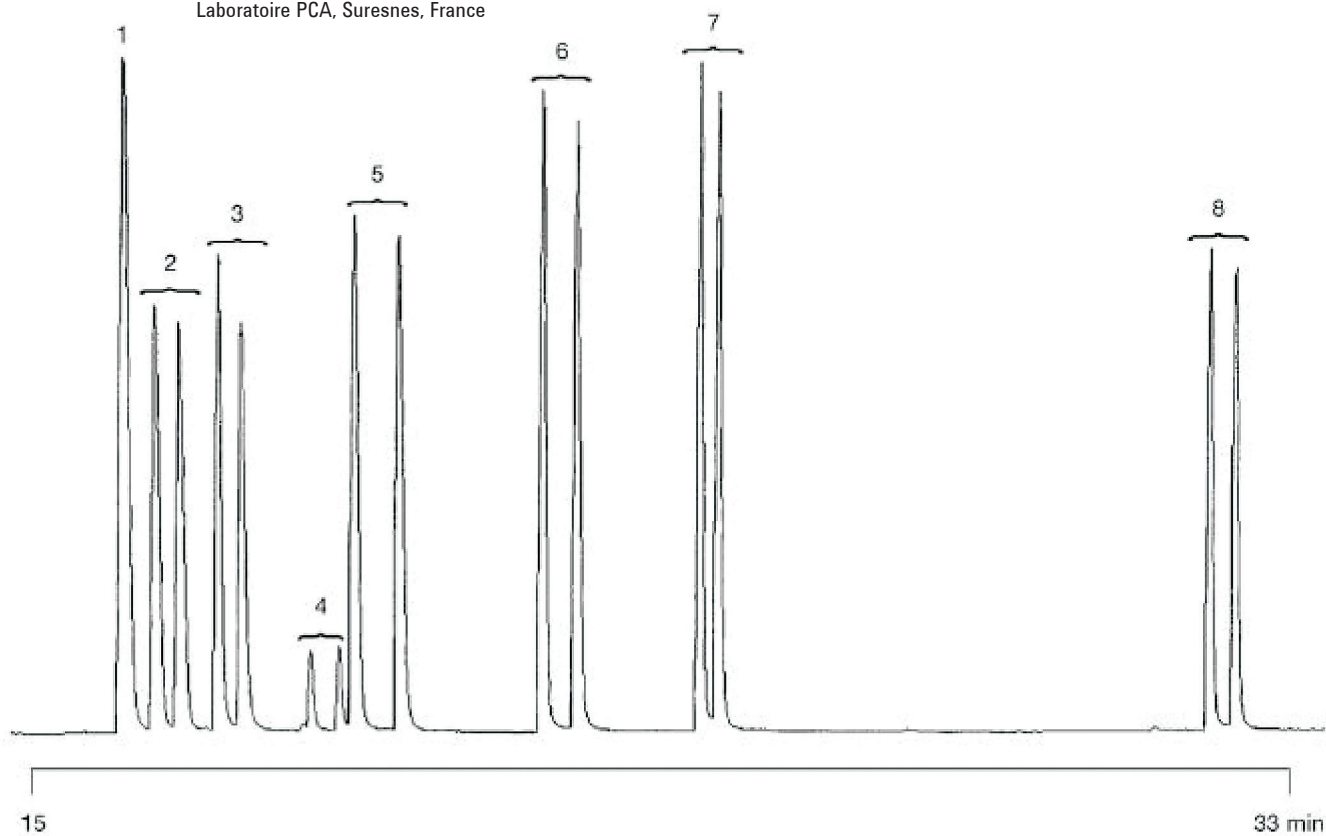
## Conditions

Technique : GC-capillary  
Column : Agilent CP-Chirasil-Dex CB, 0.25 mm x 25 m fused silica WCOT (df = 0.25  $\mu$ m) (Part no. CP7502)  
Temperature : 40 °C (1 min)  $\rightarrow$  210 °C, 4 °C/min  
Carrier Gas : H<sub>2</sub>, 60 kPa (0.6 bar, 9 psi)  
Injector : On-column  
Detector : FID  
T = 225 °C  
Sample Size : 0.6  $\mu$ L  
Solvent Sample : dichloromethane

Courtesy : M. Volland, M. Serkiz and M. Bertlin,  
Institut de Recherches Servier,  
Laboratoire PCA, Suresnes, France

## Peak identification

1. isovaleric acid
2. DL-2-methylbutyric acid
3. DL-trans-2-methylcyclopropanecarboxylic acid
4. DL-cis-2-methylcyclopropanecarboxylic acid
5. DL-2-methylvaleric acid
6. DL-2-methylhexanoic acid
7. DL-2-ethylhexanoic acid
8. DL-2-phenylpropionic acid



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