Separation of hydroxylated bile acids and cholesterol

Application Note

Clinical Research

Authors
Agilent Technologies, Inc.

Introduction
Gas chromatography using an Agilent CP-Sil 19 CB column separates 12 hydroxylated bile acids and cholesterol in 20 minutes.
Conditions

Technique: GC-capillary
Column: Agilent CP-Sil 19 CB, 0.32 mm x 25 m fused silica
       WCOT CP-Sil 19 CB (0.2 µm) (Part no. CP7742)
Temperature: 140 °C
Carrier Gas: H₂, 70 kPa (0.7 bar, 10 psi)
Injector: on-column
       T = 140 °C
Detector: FID
Courtesy: Dr. F. Stellard, Ludwig-Maximilians-Universität
         München, Klinikum Großhadern, Munich (GFR)

Peak identification
1. cholesterol
2. iso-lithocholic acid
3. lithocholic acid
4. iso-chenodeoxycholic acid
5. iso-deoxycholic acid
6. deoxycholic acid
7. cholic acid
8. chenodeoxycholic acid
9. 3β-OH-5-cholenoic acid
10. hyodeoxycholic acid
11. ursodeoxycholic acid
12. hyocholic acid