# Steroids as HFBA esters

## Determination of steroids in urine

Application Note

BioPharma


### Authors

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### Introduction

The selectivity of the Agilent VF-17ms allows a separation between the interference and the methylandrostandiol. Deconvolution via MS is not possible because of similar mass.

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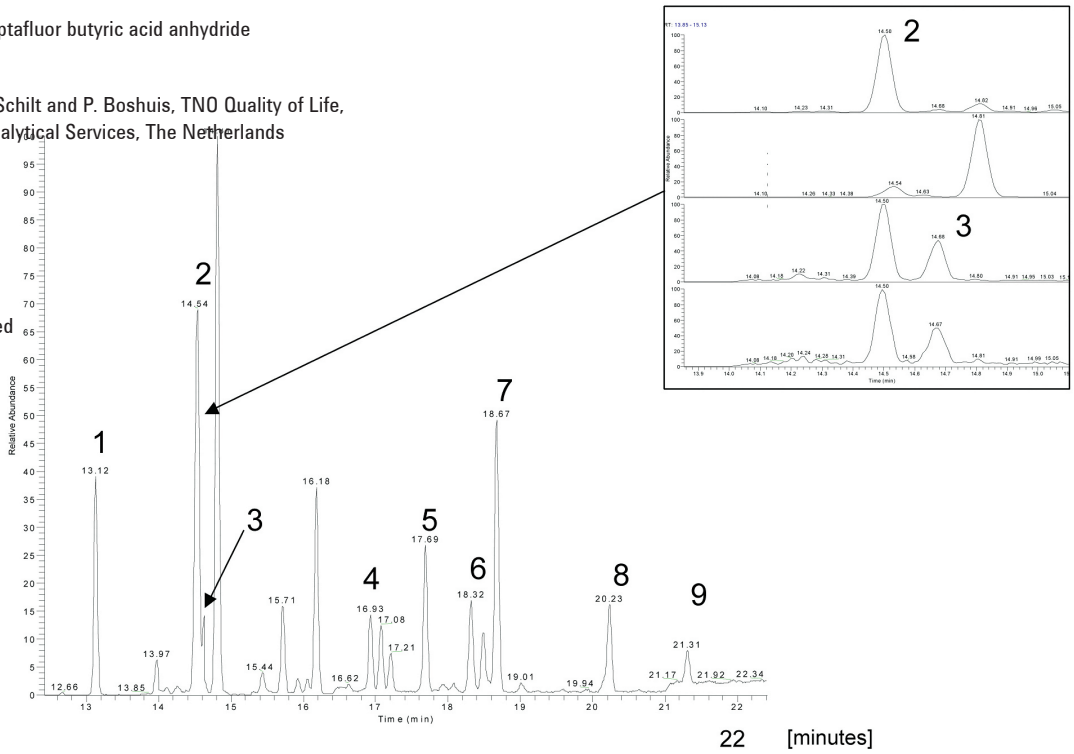
## Conditions

| | | |
|---|---|---|
| Technique | : | GC/MS |
| Column | : | Agilent VF-17ms, 0.25 mm x 30 m fused silica (film thickness = 0.25 µm) (Part no. CP8982) |
| Temperature | : | 100 °C, (1 min) ⟶ 175 °C, 15 °C/min ⟶ 250 °C, 2.5 °C/min, ⟶ 290 °C, 25 °C/min |
| Carrier Gas | : | He, 1.0 mL/min |
| Injection Technique | : | Splitless, Initial time : 1 min |
| Injection Temperature | | 250 °C |
| Injection Volume | : | 1 µL |
| Detector | : | MS Transferline: 300 °C Source: 250 °C SIM used on specific masses |
| Concentration | : | Standard, 1 µg/L |
| Sample Preparation | : | 2 mL Urine, decoupled; SPE (C18 and Amino); HPLC pre-purification via diol; |
| Derivatization | : | with heptafluor butyric acid anhydride |
| Courtesy | : | Drs. R. Schilt and P. Boshuis, TNO Quality of Life, Dep. Analytical Services, The Netherlands |

## Peak identification

1. fluoxymesterone
2. methylandrostandiol
3. interference = mass separated
4. α-nortestosterone
5. β-boldenone
6. β-nortestosterone
7. α-boldenone
8. β-estradiol
9. ethynylestradiol

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