Solvents
Fast analysis of solvents used in pharmaceutical applications

Application Note

BioPharma

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Introduction
Analysis of solvents is done widely in pharmaceutical applications. Analysis time is important, especially when solvent analysis is done on a routine basis. Usually, the 0.25/0.32 mm columns are used. With the introduction of 0.15 mm id fused silica columns, analysis time can be reduced significantly. A new method for solvent analysis was developed using a 0.15 mm capillary, which reduced the analysis time from 25 minutes to less the 7 minutes. The same stationary phase was used which resulted in the same peak elution order.

Using a 1-2 µm film on 0.15 mm fused silica combines a high separation efficiency with a high loadability, allowing a reduced analysis time for many applications.
**Conditions**

Technique: GC-capillary

Column: Agilent CP-Sil 5 CB, 0.15 mm x 25 m fused silica WCOT (df = 2 μm) (Part no. CP7692)

Temperature: 65 °C (4 min) → 200 °C, 50 °C/min

Carrier Gas: He, 400 kPa (4 bar, 56 psi)

Injector: Split, T = 250 °C

Detector: FID, T = 250 °C

Sample Size: 0.5 μL

Concentration Range: 1%

Solvent Sample: toluene

**Peak identification**

1. methanol
2. methyl formate
3. ethanol
4. acetonitrile
5. acetone
6. methylacetate
7. dichloromethane
8. methyl ethyl ketone
9. tetrahydrofuran
10. toluene
11. hexane-isomer

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