



Mineral oil in water

Application Note

Environmental

Authors

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Introduction

The analysis of mineral oil can be done highly efficient using GC and the Agilent Select Mineral Oil column. This column was optimized for mineral oil analysis to generate the shortest analysis time. For water analysis the mineral oil is extracted from water matrix using heptane. A large volume injection method was developed allowing C_{10} to C_{40} to be determined in less than 15 minutes at ppb levels. A large volume guard column was used to be able to introduce up to 100 μ L of extract. The Select Mineral Oil stationary phase was tuned for separation and stabilized for high temperature operation. Upper temperature limit of this column is 400 °C.



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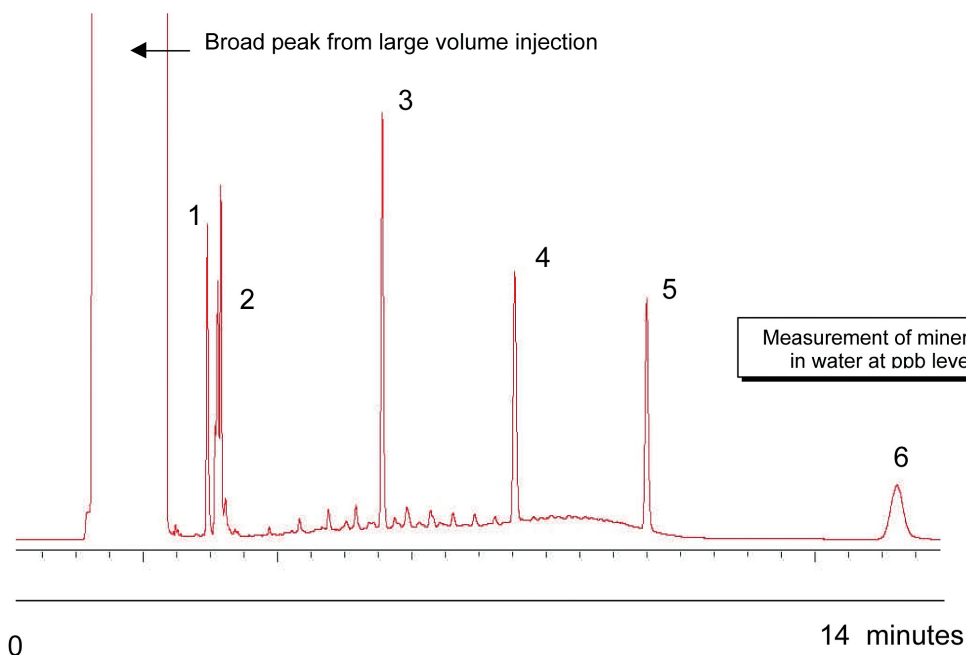
Conditions

Technique : GC
Column : Agilent Select Mineral Oil, 0.32 mm x 15 m fused silica (optimized filmthickness) (Part no. CP7491)
0.53 mm x 12 m large volume guard column, methyl deactivated
Agilent CP-Sil 5 CB, 0.53 mm x 3 m retaining precolumn, coating
Temperature : 65 °C → 300 °C, ballistic temperature program
Carrier Gas : Helium, 70 kPa
Injector : Large Volume Injection, 100 µL
Detector : FID
Sample Size : 200 µL
Concentration Range : 10 ppb in heptane, C₁₀, C₁₆, C₂₂, C₃₀ and C₄₀ are added as markers

Courtesy : J. Volkers and J. de Smit, Analytico, Barneveld, The Netherlands

Peak identification

1. decane (int.standard)
2. impurity from heptane
3. C₁₆
4. C₂₂
5. C₃₀
6. C₄₀



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This information is subject to change without notice.

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