

ITEX Application Note # 01

Author: Natascha Meggiolaro, Labor Veritas, Engimattstrasse 11, CH-8027 Zuerich, Switzerland

Keyword: **VOC, BTEX, EPA Method 502.2, ITEX**

Pages: 1

BTEX and VOC Compounds according to EPA Method 502.2 are analysed using ITEX sample preparation technique. Total sample preparation time of less than 15 minutes allows a high sample throughput.

Sample Preparation:

10ml water are filled in 20ml Headspace sample vials. 3g Sodium chloride and 1µl of the internal standard IS VOC (50ppb Fluorobenzene in Ethanol) is added. After sample conditioning at 60°C during 10 minutes 20 strokes of the headspace are pumped through the ITEX-trap with a velocity of 100µl/sec. The resulting sensitivity is sufficient to obtain the requested detection limit for drinking water of 0.05µg/l.

ITEX Conditions:

Sample Conditioning @ 60°C, 10 min.

Extraction Strokes: 20 x 1ml

Desorption @ 230°C with 1.3ml Headspace 20µl/sec.

Trap material: Tenax TA 80/100mesh

Chromatography:

Column: Rtx-502.2, 60m x 0.32mm, 1.8µm film

Carrier Gas: Helium 20psi

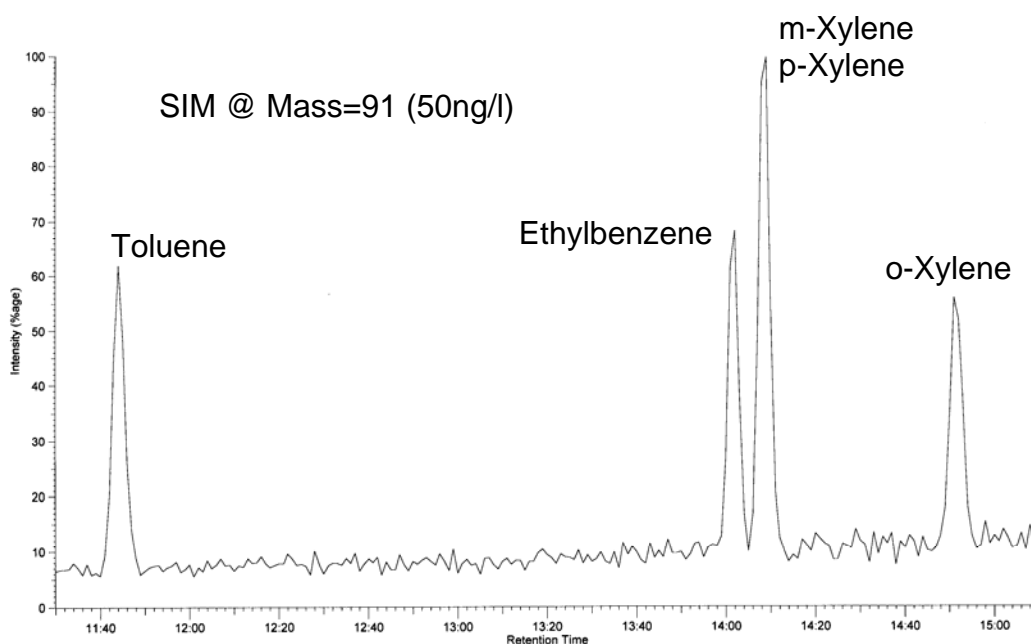
Temperature Program: 40°C (2 min.) to 240°C (2 min.) at 10°C/min.

Precolumn: 1m x 0.32mm deactivated with DPTMDS

Injector: Gerstel KAS3 with septa @ 150°C isothermal

GC: Varian 3300

Detector: Varian Saturn 4D GC/MS/MS



Chromatogram1 shows BTEX Compounds at a concentration of 50ng/l using 20 Extraction strokes