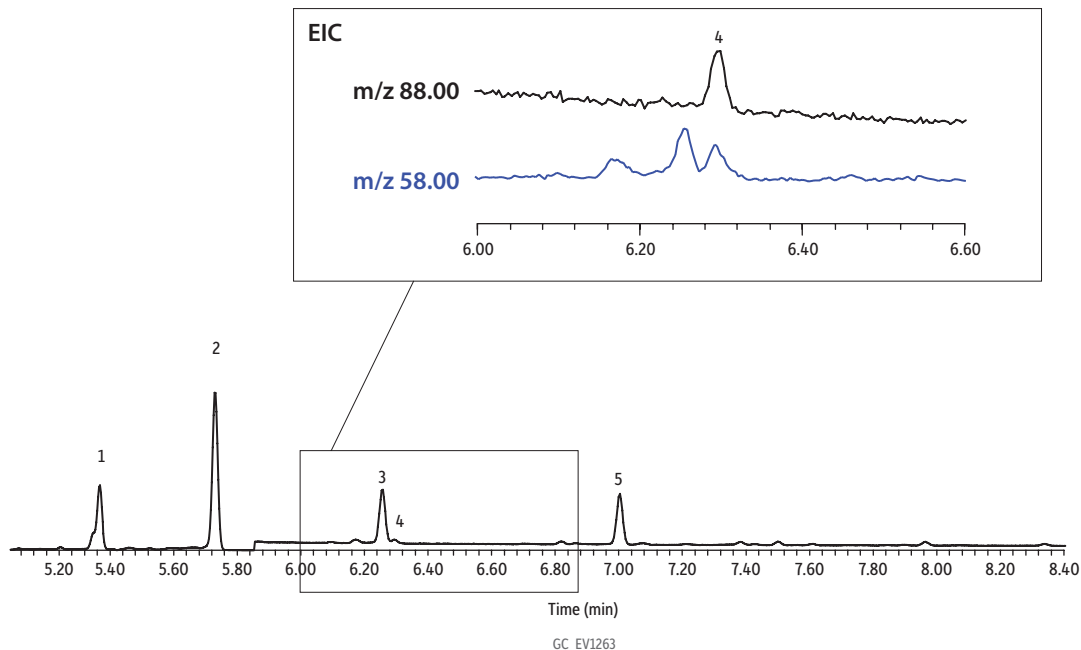


1,4-Dioxane in Drinking Water (5 pg On-Column) on Rxi-624Sil MS (extracted ion chromatogram)



- Peaks**
1. Tetrahydrofuran-d8 (IS)
 2. Co-extracted material
 3. 1,4-Dioxane-d8 (SS)
 4. 1,4-Dioxane
 5. Co-extracted material

Column Rxi-624Sil MS, 30 m, 0.25 mm ID, 1.40 μ m (cat.# 13868)
using Rxi guard column 5 m, 0.25 mm ID (cat.# 10029)
with Universal Press-Tight connectors (cat.# 20429)

Standard/Sample Tetrahydrofuran-d8 (cat.# 30112)
1,4-Dioxane-d8 (cat.# 30614)
1,4-Dioxane (cat.# 30287)

Diluent: Dichloromethane
Conc.: 0.5 pg/ μ L (IS/SS 10 pg/ μ L) in extract

Injection
Inj. Vol.: 10 μ L splitless (hold 1 min.)
Liner: Premium 4 mm single taper w/wool (cat.# 23303)
Inj. Temp.: 120 $^{\circ}$ C
Purge Flow: 80 mL/min.

Oven
Oven Temp: 35 $^{\circ}$ C (hold 1 min.) to 120 $^{\circ}$ C at 12 $^{\circ}$ C/min. (hold 1 min.)

Carrier Gas He, constant flow
Flow Rate: 1.4 mL/min.
Linear Velocity: 30.556 cm/sec. @ 35 $^{\circ}$ C

Detector MS
Mode: SIM

SIM Program:

Group	Start Time (min.)	Ion(s)	Dwell (ms)
1	5.0	46,78,80 m/z	50
2	5.85	96,88,64,62,58 m/z	40

Transfer Line Temp.: 280 $^{\circ}$ C
Analyzer Type: Quadrupole
Source Temp.: 230 $^{\circ}$ C
Quad Temp.: 150 $^{\circ}$ C
Solvent Delay Time: 5.0 min.
Tune Type: BFB
Ionization Mode: EI

Instrument Agilent 7890A GC & 5975C MSD
Sample Preparation A drinking water sample fortified with 1,4-dioxane and surrogate standard was extracted using a Resprep activated coconut charcoal SPE cartridge (cat.# 26032) following EPA Method 522 protocol. Immediately after solvent elution, the extract was spiked with internal standard and brought up to final volume. The extract was then dried with anhydrous magnesium sulfate (this was a deviation from the method, which calls for sodium sulfate).