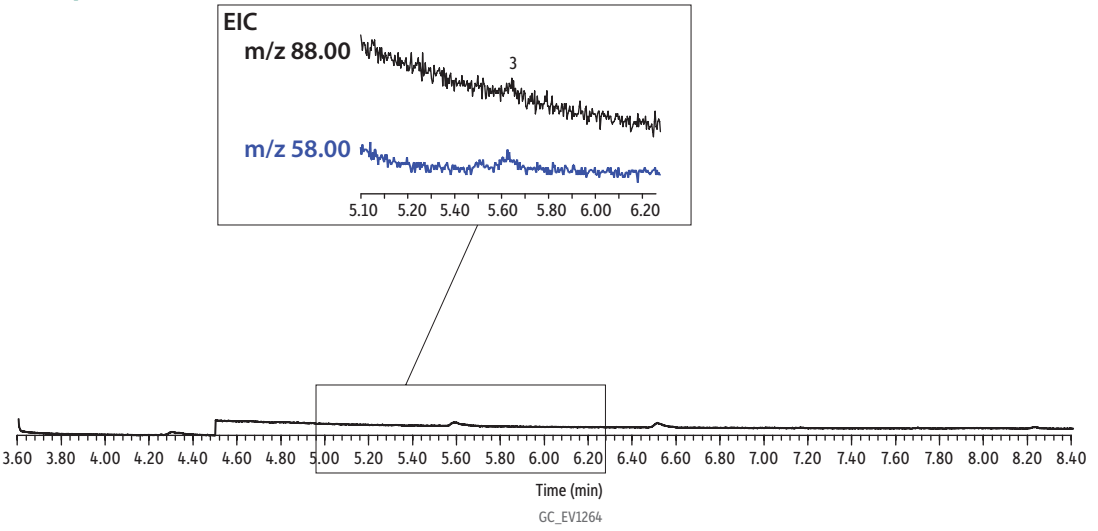
## 1,4-Dioxane in Drinking Water Extract (0.5 pg On-Column) on Rxi-624Sil MS (extracted ion chromatogram)

**Standard splitless injection produces poor response.**




**Peaks**

1. Tetrahydrofuran-d8 (IS)
2. 1,4-Dioxane-d8 (SS)
3. 1,4-Dioxane

Tetrahydrofuran-d8 (IS) and 1,4-dioxane-d8 (SS) were not detected.

| | |
|---|---|
| **Column** | Rxi-624Sil MS, 30 m, 0.25 mm ID, 1.40 µm (cat.# 13868)<br>using Rxi guard column 5 m, 0.25 mm ID (cat.# 10029)<br>with Universal Press-Tight connectors (cat.# 20429) |
| **Standard/Sample** | Tetrahydrofuran-d8 (cat.# 30112)<br>1,4-Dioxane-d8 (cat.# 30614)<br>1,4-Dioxane (cat.# 30287) |
| Diluent: | Dichloromethane |
| Conc.: | 0.5 pg/µL (IS/SS 10 pg/µL) in extract |
| **Injection** | |
| Inj. Vol.: | 1 µL splitless (hold 1 min.) |
| Liner: | Premium 4 mm single taper w/wool (cat.# 23303) |
| Inj. Temp.: | 120 °C |
| Purge Flow: | 80 mL/min. |
| **Oven** | |
| Oven Temp: | 35 °C (hold 1 min.) to 120 °C at 12 °C/min. (hold 1 min.) |
| **Carrier Gas** | He, constant flow |
| Flow Rate: | 1.4 mL/min. |
| Linear Velocity: | 30.556 cm/sec. @ 35 °C |
| **Detector** | MS |
| Mode: | SIM |
| SIM Program: | |

| Group | Start Time (min.) | Ion(s) | Dwell (ms) |
|---|---|---|---|
| 1 | 3.6 | 46,78,80 m/z | 50 |
| 2 | 4.5 | 96,88,64,62,58 m/z | 40 |

| | |
|---|---|
| Transfer Line Temp.: | 280 °C |
| Analyzer Type: | Quadrupole |
| Source Temp.: | 230 °C |
| Quad Temp.: | 150 °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). |