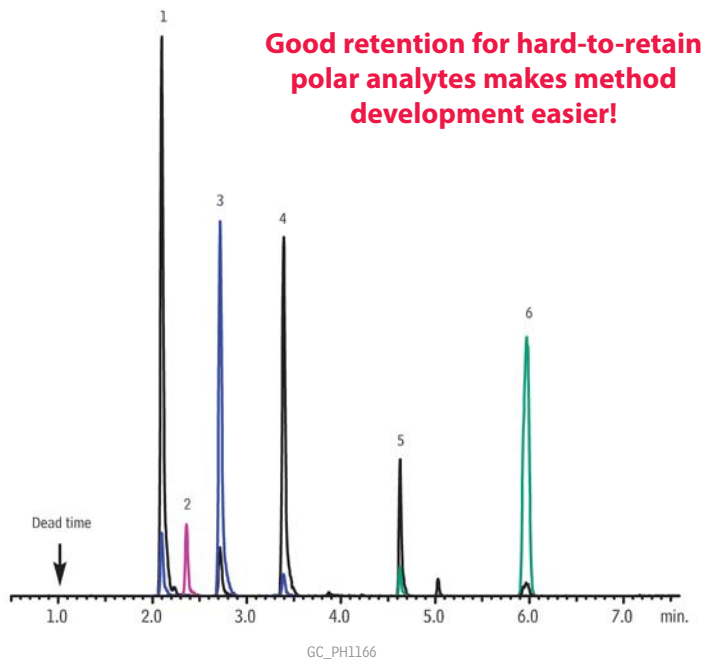




Alkyl Halide Genotoxic Impurities
Rxi®-624Sil MS (High Concentration Injection)



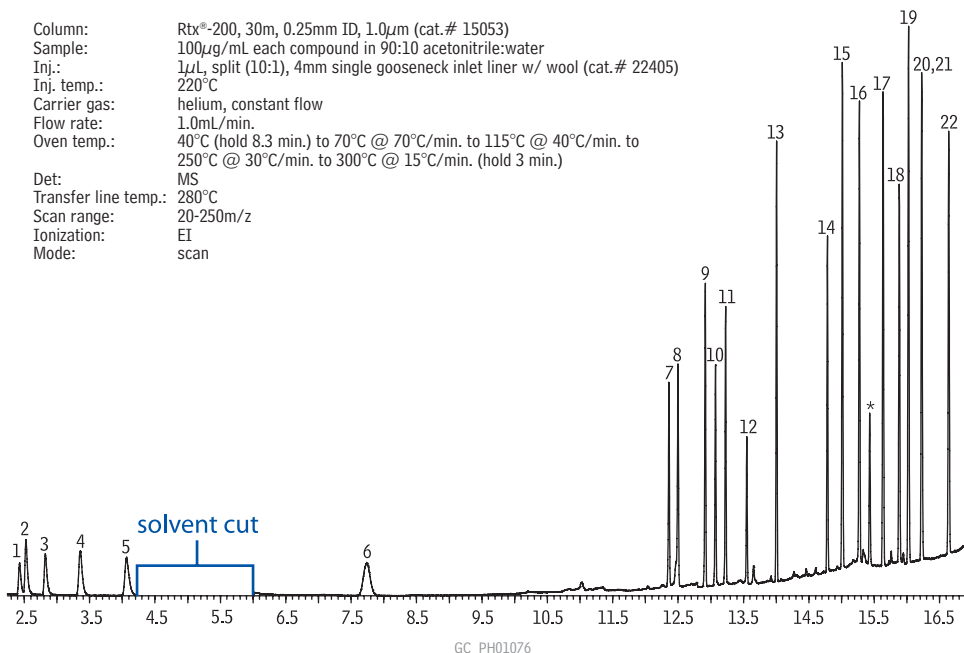
Peaks	RT (min.)	Conc. (µg/mL)
1. 2-Chloropropane	2.10	1
2. Bromoethane	2.36	1
3. 1-Chloropropane	2.72	1
4. 2-Bromopropane	3.393	1
5. Butyl chloride	4.627	1
6. 1-Bromobutane	5.973	1

Column Rxi®-624Sil MS, 20 m, 0.18 mm ID, 1.00 µm (cat.# 13865)
Sample
Diluent: DMSO
Conc.: 1 µg/mL
Injection
Inj. Vol.: 1 µL splitless (hold 0.5 min.)
Liner: 3.5mm Single Gooseneck Liner with wool placed 3cm from top (middle) (cat.# 22286)
Inj. Temp.: 220 °C
Purge Flow: 3 mL/min.
Oven
Oven Temp: 40 °C (hold 3 min.) to 200 °C at 20 °C/min.
Carrier Gas He, constant flow
Linear Velocity: 40 cm/sec.
Detector MS
Mode: Scan
Transfer Line Temp.: 200 °C
Analyzer Type: Quadrupole
Source Temp.: 280 °C
Solvent Delay Time: 0.5 min.
Ionization Mode: EI
Scan Range: 30-300 amu
Scan Rate: 5 scans/sec.
Instrument Shimadzu 2010 GC & QP2010+ MS
Notes: Ions monitored 42, 43, 57, 108 m/z



Potential Genotoxic Impurities (PGIs)
Rtx®-200

Column: Rtx®-200, 30m, 0.25mm ID, 1.0µm (cat.# 15053)
Sample: 100µg/mL each compound in 90:10 acetonitrile:water
Inj.: 1µL, split (10:1), 4mm single gooseneck inlet liner w/ wool (cat.# 22405)
Inj. temp.: 220°C
Carrier gas: helium, constant flow
Flow rate: 1.0mL/min.
Oven temp.: 40°C (hold 8.3 min.) to 70°C @ 70°C/min. to 115°C @ 40°C/min. to 250°C @ 30°C/min. to 300°C @ 15°C/min. (hold 3 min.)
Det: MS
Transfer line temp.: 280°C
Scan range: 20-250m/z
Ionization: EI
Mode: scan



1. 1-chloropropane
2. bromoethane
3. 2-chloropropane
4. 1-bromopropane
5. 2-bromopropane
6. 1-bromobutane
7. dimethyl sulfate
8. methyl methanesulfonate
9. ethyl methanesulfonate
10. isopropyl methanesulfonate
11. diethyl sulfate
12. di-isopropyl sulfate
13. di-*n*-propyl sulfate
14. dibutyl sulfate
15. methylbenzene sulfonate
16. ethylbenzene sulfonate
17. methyl toluenesulfonate
18. ethyl toluenesulfonate
19. *n*-butyl benzenesulfonate
20. *n*-propyl toluenesulfonate
21. isopropyl toluenesulfonate
22. *n*-butyl toluenesulfonate

*ortho isomer of ethyl toluenesulfonate