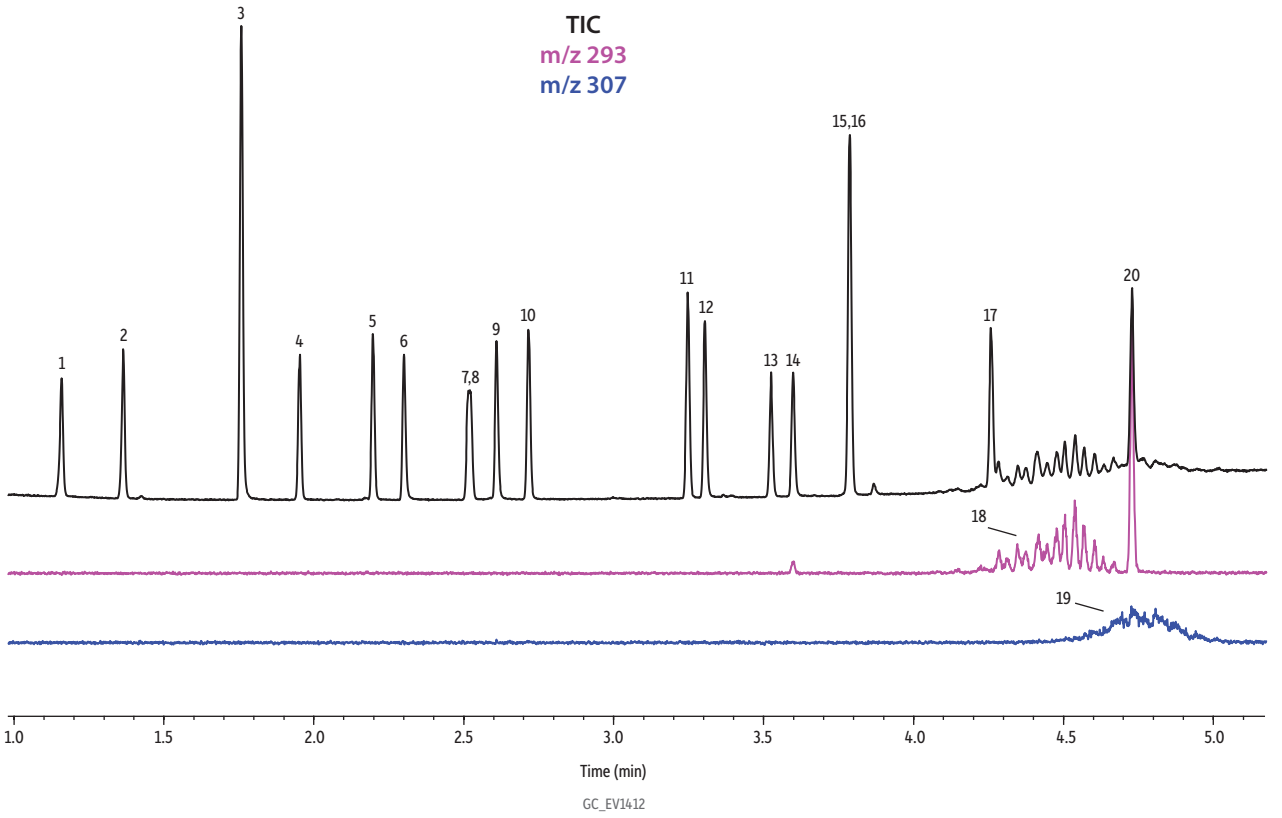
EPA and EU Phthalates on Rxi-5ms



Peaks

1. Dimethyl phthalate
2. Diethyl phthalate
3. Benzyl benzoate
4. Diisobutyl phthalate
5. Di-*n*-butyl phthalate
6. Bis(2-methoxyethyl) phthalate
7. Bis[4-methyl-2-pentyl] phthalate isomer 1
8. Bis[4-methyl-2-pentyl] phthalate isomer 2
9. Bis(2-ethoxyethyl) phthalate
10. Di-*n*-pentyl phthalate
11. Di-*n*-hexyl phthalate
12. Butyl benzyl phthalate
13. Hexyl-2-ethylhexyl phthalate
14. Bis(2-butoxyethyl) phthalate
15. Bis(2-ethylhexyl) phthalate
16. Dicyclohexyl phthalate
17. Di-*n*-octyl phthalate
18. Diisononyl phthalate
19. Diisodecyl phthalate
20. Dinonyl phthalate

Column	Rxi-5ms, 30 m, 0.25 mm ID, 0.25 µm (cat.# 13423)
Standard/Sample	Benzyl benzoate (cat.# 31847) EPA Method 8061A phthalate esters mixture (cat.# 33227) Diisononyl phthalate Diisodecyl phthalate Hexyl-2-ethylhexyl phthalate
Diluent:	Methylene chloride
Conc.:	50.0 µg/mL (80 µg/mL for internal standard benzyl benzoate)
Injection	
Inj. Vol.:	1 µL split (split ratio 20:1)
Liner:	Premium 3.5 mm Precision liner w/wool (cat.# 23320.1)
Inj. Temp.:	280 °C
Split Vent Flow Rate:	3 mL/min
Oven	
Oven Temp.:	200 °C (hold 0.5 min) to 330 °C at 30 °C/min (hold 1 min)
Carrier Gas	He, constant linear velocity
Linear Velocity:	66.7 cm/sec, 39.5 psi, 272.3 kPa @ 200 °C
Detector	MS
Mode:	Scan
Scan Program:	

Group	Start Time (min)	Scan Range (amu)	Scan Rate (scans/sec)
1	0.9	59-400	-

Transfer Line Temp.:	300 °C
Analyzer Type:	Quadrupole
Source Temp.:	280 °C
Electron Energy:	70 eV
Solvent Delay Time:	0.9 min
Tune Type:	PFTBA
Ionization Mode:	EI
Instrument	Shimadzu 2010 GC & QP2010+ MS
Notes	The flow rate is about 3 mL/min at 200 °C. The MS scan interval is 0.1 sec.
Acknowledgement	The authors would like to thank Shimadzu Corporation for their consultation with the operation of the QP2010 Plus GC-MS instrument.