

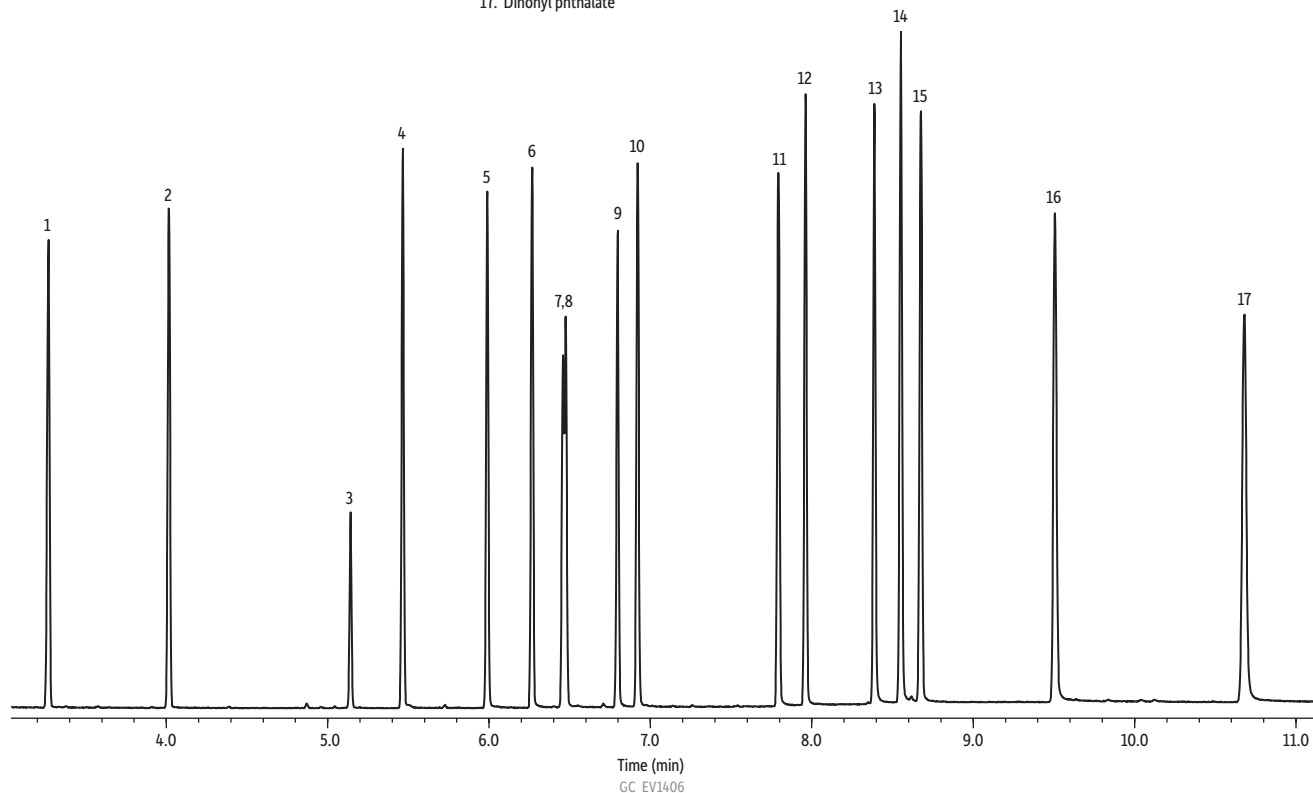
# EPA Method 8061A Phthalates on Rtx®-440

## Peaks

1. Dimethyl phthalate
2. Diethyl phthalate
3. Benzyl benzoate (IS)
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

## Peaks

9. Bis(2-ethoxyethyl) phthalate
10. Dipentyl phthalate
11. Di-*n*-hexyl phthalate
12. Benzyl butyl phthalate
13. Bis(2-*n*-butoxyethyl) phthalate
14. Bis(2-ethylhexyl) phthalate
15. Dicyclohexyl phthalate
16. Di-*n*-octyl phthalate
17. Dinonyl phthalate



**Column** Rtx®-440, 30 m, 0.25 mm ID, 0.25 µm (cat.# 12923)  
**Sample** EPA Method 8061A phthalate esters mixture (cat.# 33227)  
 Benzyl benzoate (cat.# 31847)  
**Diluent:** Methylene chloride  
**Conc.:** 80 µg/mL EPA 8061A phthalates (20 µg/mL internal standard)  
**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  
**Oven**  
**Oven Temp.:** 150 °C (hold 1 min) to 300 °C at 20 °C/min (hold 5 min)  
**Carrier Gas**  
**Linear Velocity:** 50 cm/sec, 22.9 psi, 157.9 kPa @ 150 °C  
**Detector** MS  
**Mode:** Scan

| Group | Start Time (min) | Scan Range (amu) | Scan Rate (scans/sec) |
|-------|------------------|------------------|-----------------------|
| 1     | 2                | 50-500           | —                     |

**Transfer Line**  
**Temp.:** 300 °C  
**Analyzer Type:** Quadrupole  
**Source Temp.:** 280 °C  
**Electron Energy:** 70 eV  
**Solvent Delay**  
**Time:** 2 min  
**Tune Type:** PFTBA  
**Ionization Mode:** EI  
**Instrument** Shimadzu 2010 GC & QP2010+ MS  
**Notes** The linear velocity is 50 cm/sec, which is approximately 1.75 mL/min at 150 °C. The MS scan interval is 0.1 sec.