

# Application Report 17

## Phthalate Esters on Equity-1701

Phthalate esters are frequently listed as suspected endocrine disruptors, and the US EPA has included several on their list of priority pollutants. In this application, all 17 of the phthalate esters listed in US EPA Methods 8061A, 506 and 606 have been separated on an Equity-1701 column. These methods require confirmation either by a second column or GC/MS. The Equity-1701 is a good choice as a confirmation column for this application. Also, low bleed at its upper temperature limit makes it suitable for use with more sensitive detectors such as an ECD.

### Key Words

phthalate, endocrine disruptors, Equity, Method 8061, 28372-U

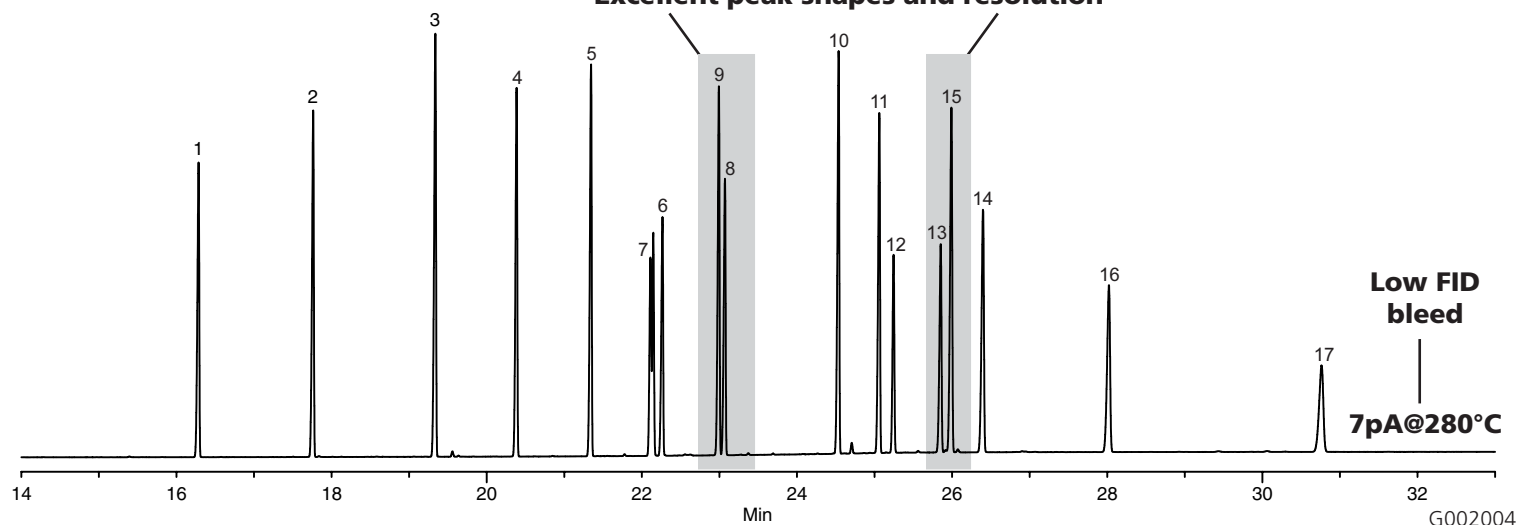
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Raw Data File Name:

C:\data\1\back0224.D (HPCS44)

Acquisition System: GC 6248

### Excellent peak shapes and resolution



### Conditions

Column: Equity-1701, 30m x 0.25mm ID, 0.25 $\mu$ m  
Cat. No.: 28372-U  
Oven: 40°C (1 min) to 280°C @ 10°C/min  
Inj.: 250°C  
Det.: FID, 325°C  
Flow: Helium, Constant flow, 1.3mL/sec @ 40°C  
Injection: 1.0 $\mu$ L, splitless (0.75 min)  
Liner: Splitless, 4mm ID single taper  
Sample: 50ng on-column of a custom phthalate ester mix

### Peak IDs

1. Dimethyl phthalate
2. Diethyl phthalate
3. Benzyl benzoate
4. Diisobutyl phthalate
5. Dibutyl phthalate
6. Bis(2-methoxyethyl)phthalate
7. Bis(4-methyl-2-pentyl)phthalate isomers
8. Bis(2-ethoxyethyl)phthalate
9. Diamyl phthalate
10. Di-n-hexyl phthalate
11. Butyl benzyl phthalate
12. Hexyl-2-ethylhexyl phthalate
13. Bis(2-butoxyethyl)phthalate
14. Dicyclohexyl phthalate
15. Bis(2-ethylhexyl)phthalate
16. Di-n-octyl phthalate
17. Di-n-nonyl phthalate