# Application Report 403

## Aroclors on the 20m x 0.18 mm I.D., 0.36 µm SLB-5ms

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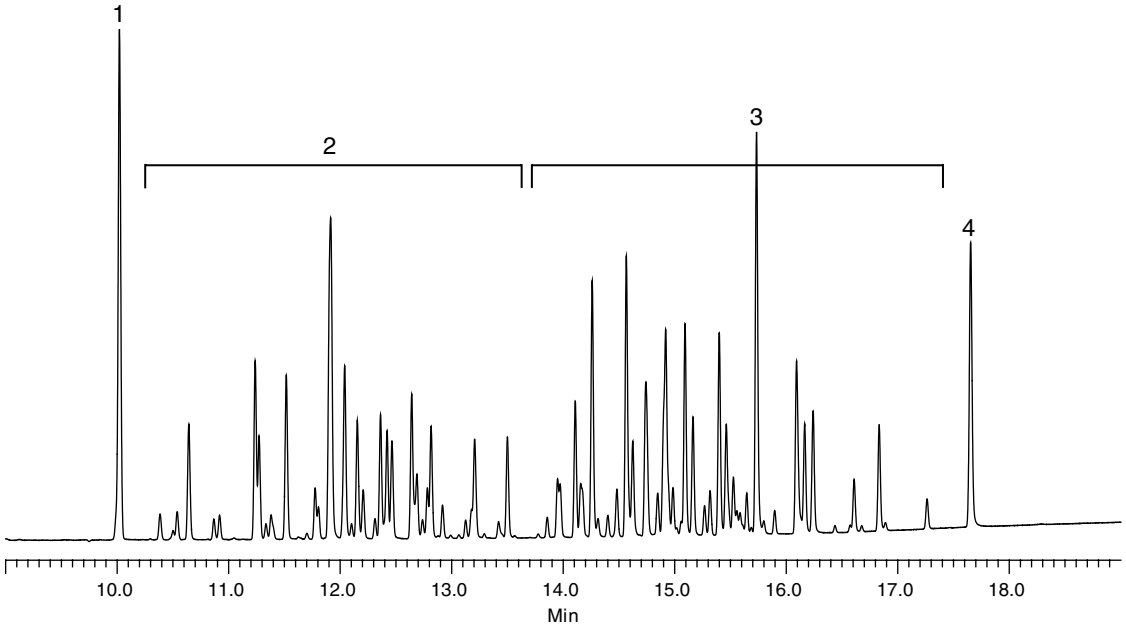
**Acquisition System:** 9499
**Notebook Reference:** 1569-040

Aroclors are commercial mixtures of PCB congeners. Due to their stability, they have been used in many different industrial and commercial applications. Because of their toxicity and ability to bioaccumulate, production of these materials ceased in 1977. This application demonstrates the separation of two common Aroclor mixtures, Aroclor 1016 and Aroclor 1260 on a 20 m x 0.18 mm I.D., 0.36 µm SLB-5ms. The higher efficiency of the 0.18 mm I.D. allowed for good resolution of the PCB congeners, and subsequent pattern recognition of the Aroclor mixtures, while maintaining an analysis time of < 20 minutes.

### Key Words

Aroclor, PCB, SLB-5ms, US EPA Method 608, US EPA Method 8082, 28576-U, 46846-U

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### Conditions

| | |
|---|---|
| column: | SLB-5ms, 20 m x 0.18 mm I.D., 0.36 µm (28576-U) |
| oven: | 100 °C (2 min.), 15 °C/min. to 325 °C (3 min.) |
| inj.: | 250 °C |
| det.: | micro-ECD, 325 °C |
| carrier gas: | helium, 0.5 mL/min., constant flow |
| injection: | 1.0 µL, splitless (0.75 min.) |
| liner: | 4 mm I.D., single taper |
| sample: | Aroclor standard mix 1 (46846-U) diluted to 500 ppb/50 ppb (Aroclors/surrogates) in n-hexane |

### Peak IDs

1. Tetrachloro-m-xylene (surr.)
2. Aroclor 1016
3. Aroclor 1260
4. Decachlorobiphenyl (surr.)