Application Report 22

US EPA Method 8082 Polychlorinated Biphenyls on Equity-5

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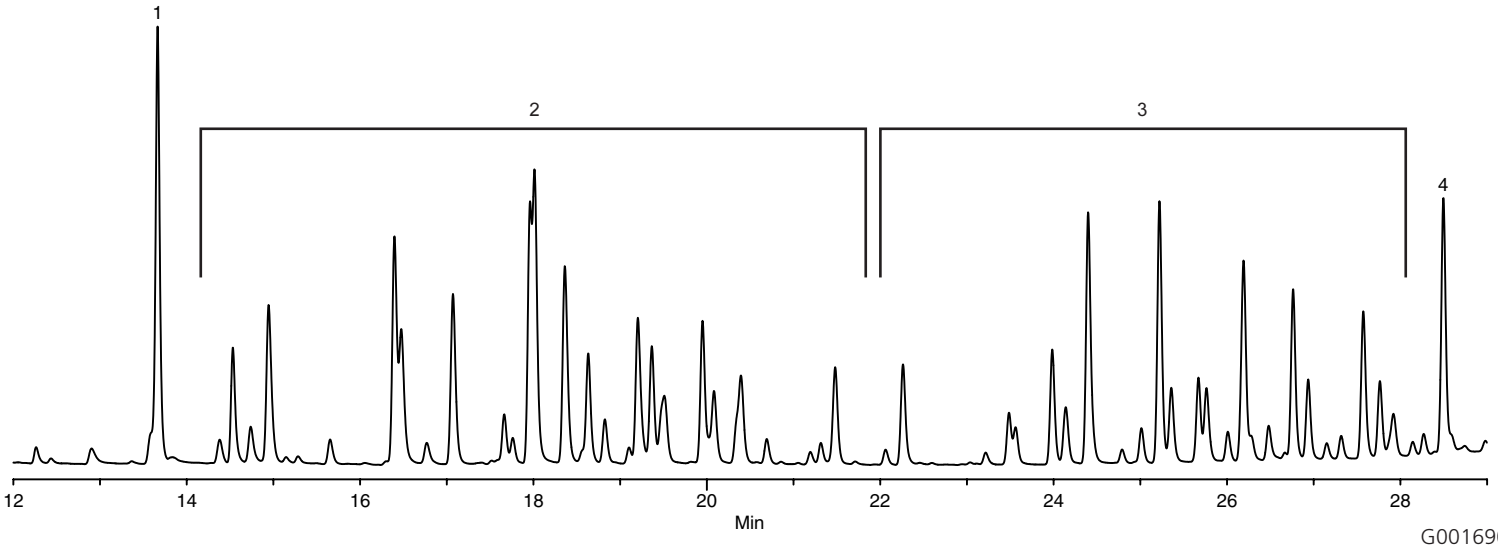
Polychlorinated biphenyls (PCBs) or Aroclors ® were once used in a variety of commercial applications. Their lipophilic nature has led to their bioaccumulation in both animals and humans. As a result, they are now considered an environmental contaminant. US EPA method 8082 describes the GC/ECD analysis of PCBs. In this application, two different Aroclor® mixtures were run on the Equity-5 column. The column provided excellent peak shape and resolution, which will aid in identifying characteristic patterns for each mixture. The stable baseline and low bleed of the column made it suitable for use with an ECD.

Key Words

PCBs, Aroclor®, Equity, 28089-U, 46846-U



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Conditions

Column:	Equity-5, 30m x 0.25mm ID, 0.25µm
Cat. No.:	28089-U
Oven:	100°C (2 min) to 160°C @ 15°C/min to 300°C @ 5°C/min (10 min)
Inj.:	225°C
Det.:	ECD, 310°C
Flow:	Helium, constant flow, 30cm/sec @ 100°C
Injection:	2.0µL, splitless (0.5 min)
Liner:	4mm ID double taper
Sample:	Aroclor Mix 1 standard at 75ppb with surrogates at 7.5ppb (Cat. No. 46846-U)

Peak IDs

1. 2,4,5,6-Tetrachloro-m-xylene (surr.), 7.5ppb
2. Aroclor 1016, 75ppb
3. Aroclor 1260, 75ppb
4. Decachlorobiphenyl (surr.), 7.5ppb