The Problem:
- 209 Possible PCB Congeners
- 120-150 commonly found in environmental samples
- Fast accurate analysis needed for environmental monitoring

The Solution:
- SGE's HT8-PCB column: Designed for PCB separation.
- SGE's HT8-PCB column: Analysis time: 61 min, Resolution: 122 peaks for 144 congeners,
  Detection limits: <100 fg, Quantitation limits: 1 pg

Three columns compared for speed and accuracy using GC-ECD

HT8-PCB METHOD: 61min, Shorter Run Times, No Loss Of Resolution

COMPETITOR COLUMN A
- FRAME METHOD: 110min

COMPETITOR COLUMN A
- CLARKSON METHOD: 120min

COMPETITOR COLUMN B
- IADN METHOD: 175min

Figure 1: Chromatograms of a mixture of 144 congeners of PCB's.

Data kindly provided by: David M. Schwope, William Mills, An Li, Caleb Nienow, Chrissy Bloomgren, University of Illinois at Chicago, USA

Experimental details:
Column: SGE HT8-PCB, 60m x 0.25mm.
Carrier gas: Helium (UHP), with a flow of 1.0 ml/min.
Injection volume: 1.0 ul. splitless.
Temperature Program: Held at 120°C for 5 min, ramp 20°C /min to 180°C, ramp 2°C/min to 260°C, ramp 5°C/min to 300°C, and held for 5 min.
Makeup gas: Nitrogen (UHP), with a flow of 10 ml/min.
Injection temp: The inlet and detector had constant temperatures of 250 °C and 350 °C, respectively.