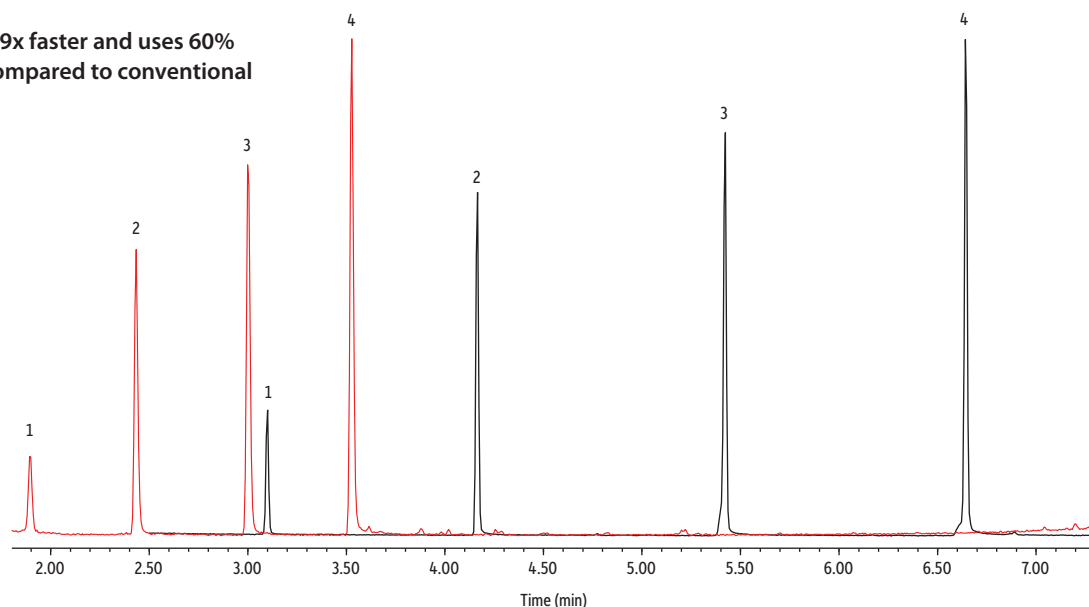


## Comparison of Conventional and LPGC-MS Analysis of Fluorotelomer Alcohols

LPGC-MS is 1.9x faster and uses 60% less helium compared to conventional GC-MS.



GC\_EV1519

Peaks	Conc.		
	( $\mu\text{g/mL}$ )	tr (30 m)	tr (LPGC)
1. 4:2 FTOH (2-perfluorobutyl alcohol)	2	3.10	1.90
2. 6:2 FTOH (2-perfluorohexyl alcohol)	2	4.17	2.43
3. 8:2 FTOH (2-perfluorooctyl alcohol)	2	5.44	3.01
4. 10:2 FTOH (2-perfluorodecyl alcohol)	2	6.65	3.53

**Column** See notes  
**Standard/Sample** 2-(Perfluorobutyl)ethanol  
 2-(Perfluorohexyl)ethanol  
 2-(Perfluorooctyl)ethanol  
 2-(Perfluorodecyl)ethanol  
**Diluent:** Methanol  
**Conc.:** 2  $\mu\text{g/mL}$   
**Injection**  
**Inj. Vol.:** 1  $\mu\text{L}$  split (split ratio 5:1)  
**Liner:** Topaz, precision inlet liner, 4.0 mm x 6.3 x 78.5 (cat.# 23305)  
**Inj. Temp.:** 280 °C  
**Carrier Gas** He  
**Detector** MS  
**Mode:** SIM  
**SIM Program:** 131 m/z, 300 ms dwell  
**Transfer Line Temp.:** 280 °C  
**Analyzer Type:** Quadrupole  
**Source Temp.:** 250 °C  
**Quad Temp.:** 180 °C  
**Tune Type:** PFTBA  
**Ionization Mode:** EI  
**Instrument** Agilent 7890B GC & 5977A MSD  
**Sample Preparation** All standards (original concentration of 100  $\mu\text{g/mL}$ ) were combined into one solution at a concentration 1 ppm in polypropylene vial (cat. #23242) with a polypropylene cap (cat. #23244). A 50  $\mu\text{L}$  aliquot was analyzed by GC-MS using a 100  $\mu\text{L}$  insert (cat. #24512).

### Notes

#### Conventional (30 m) Analysis:

Column: Rtx-200ms, 30 m, 0.25 mm ID, 0.25  $\mu\text{m}$  (cat.# 15623)  
 Temp. program: 35 °C (hold 1 min) to 280 °C at 15 °C/min (hold 5 min)  
 Flow: 1.2 mL/min  
 SIM start: 2.5 min  
 SIM: 131 m/z, 300 ms

#### LPGC-MS Analysis:

Column: LPGC Rtx-200 column kit, includes 10 m x 0.32 mm ID x 1.00  $\mu\text{m}$  Rtx-200 analytical column and 5 m x 0.15 mm ID Rxi restrictor factory connected via SiTite connector (cat.# 11807)  
 Temp. program: 35 °C (hold 0.5 min) to 280 °C at 35 °C/min (hold 5 min)  
 Flow: 0.9 mL/min  
 SIM start: 1.5 min  
 SIM: 131 m/z, 300 ms

Pulsed split injection was used; 30 psi until 0.15 min.

The injections were performed on different instruments under different head pressures, resulting in different analyte responses.