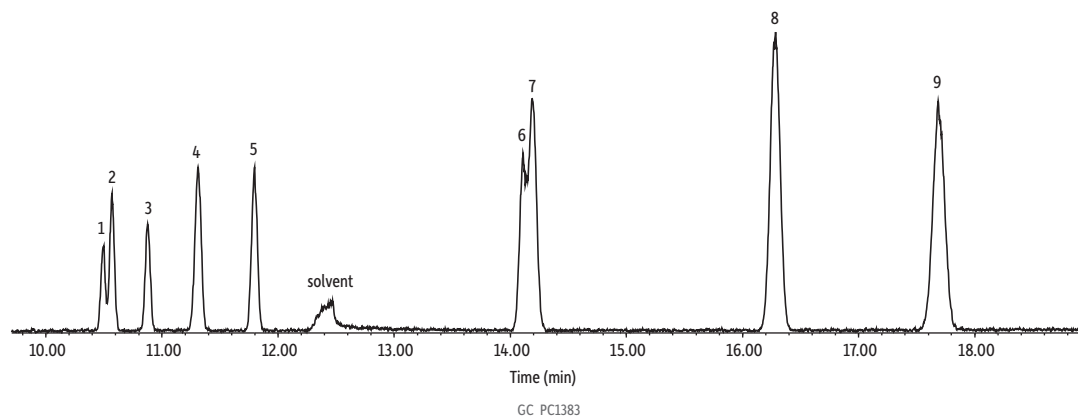


## Fluorocarbons on Rtx-200

- 20-minute isothermal method providing separation of nine common fluorocarbons.



|                                       | t <sub>R</sub> (min) |
|---------------------------------------|----------------------|
| 1. Dichlorodifluoromethane            | 10.489               |
| 2. Chlorodifluoromethane              | 10.578               |
| 3. Ethane, 1,1-difluoro-              | 10.879               |
| 4. Dichlorotetrafluoroethane          | 11.309               |
| 5. Ethane, 1-chloro-1,1-difluoro-     | 11.797               |
| 6. Vinyl bromide                      | 14.114               |
| 7. Trichloromonofluoromethane         | 14.196               |
| 8. 2,2-Dichloro-1,1,1-trifluoroethane | 16.282               |
| 9. 1,1,2-Trichlorotrifluoroethane     | 17.693               |

**Column** Rtx-200, 105 m, 0.25 mm ID, 1.00 µm (cat.# 15059)  
**Standard/Sample** Dichlorodifluoromethane (cat.# 30275)  
 Fluorocarbons, custom standard  
 Trichlorofluoromethane (cat.# 30421)

**Diluent:** Methanol  
**Conc.:** 500 ppm

**Injection**  
**Inj. Vol.:** 1 µL split (split ratio 400:1)  
**Liner:** Topaz 4.0 mm ID Precision inlet liner w/ wool (cat.# 23305)  
**Inj. Temp.:** 250 °C  
**Split Vent Flow Rate:** 400 mL/min  
**Gas Saver Time:** 2 min  
**Gas Saver Flow Rate:** 20 mL/min

**Oven**  
**Oven Temp.:** 32 °C (hold 20 min)  
**Carrier Gas** He, constant flow  
**Flow Rate:** 1 mL/min  
**Linear Velocity:** 19.303 cm/sec @ 32 °C  
**Dead Time:** 9.553 min @ 40 °C

**Detector** MS  
**Mode:** Scan  
**Scan Program:**

| Group | Start Time (min) | Scan Range (amu) | Scan Rate (scans/sec) |
|-------|------------------|------------------|-----------------------|
| 1     | 10               | 50-500           | 10.8                  |

**Transfer Line Temp.:** 250 °C  
**Analyzer Type:** Quadrupole  
**Source Type:** Extractor  
**Source Temp.:** 230 °C  
**Quad Temp.:** 150 °C  
**Electron Energy:** 1708 eV  
**Tune Type:** PFTBA  
**Ionization Mode:** EI  
**Instrument** Agilent 7890B GC & 5977B MSD  
**Sample Preparation** Standards were combined and diluted to 500 ppm, then transferred to a 2 mL vial (cat.# 21142) and capped with a short screw cap (cat.# 24498).