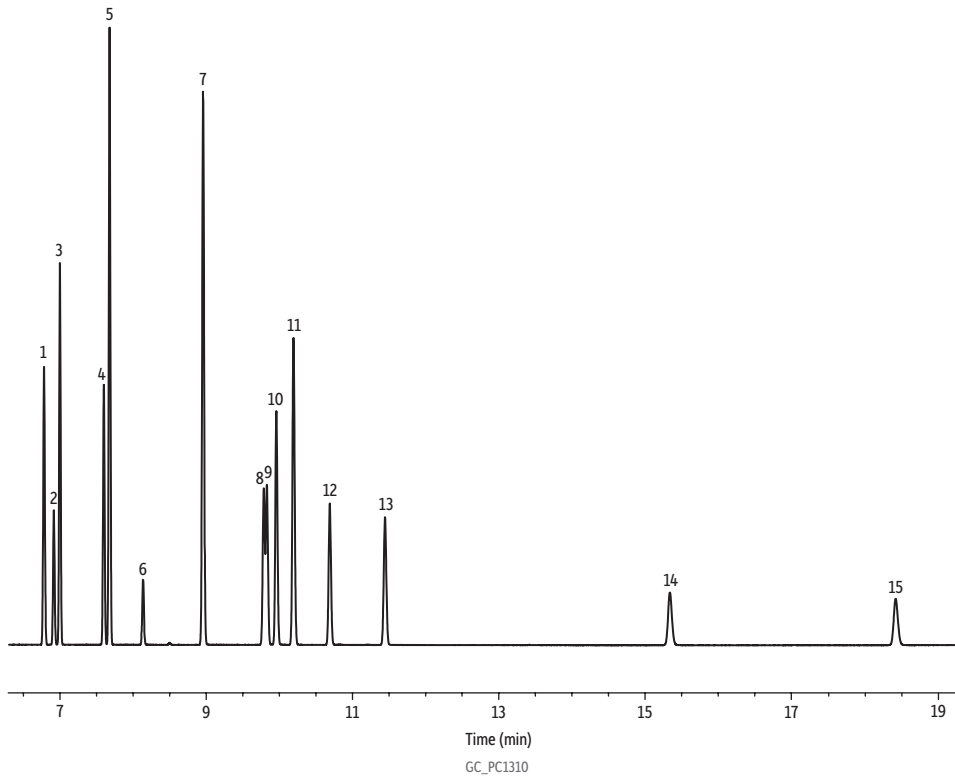


# Refinery Gas on Rtx-DHA-100 (ASTM D2163)



| Peaks                  | tr (min) | Conc. (vol.%) | Peaks                      | tr (min) | Conc. (vol.%) |
|------------------------|----------|---------------|----------------------------|----------|---------------|
| 1. Methane             | 6.88     | 8.50          | 8. Isobutene (isobutylene) | 9.77     | 2.00          |
| 2. Ethene (ethylene)   | 7.01     | 2.00          | 9. 1-Butene                | 9.81     | 2.00          |
| 3. Ethane              | 7.09     | 6.00          | 10. 1,3-Butadiene          | 9.94     | 3.00          |
| 4. Propene (propylene) | 7.66     | 3.00          | 11. <i>n</i> -Butane       | 10.17    | 4.00          |
| 5. Propane             | 7.74     | 7.00          | 12. <i>trans</i> -2-Butene | 10.64    | 2.00          |
| 6. 1,2-Propadiene      | 8.18     | 0.85          | 13. <i>cis</i> -2-Butene   | 11.37    | 2.00          |
| 7. Isobutane           | 8.97     | 6.00          | 14. Isopentane             | 15.13    | 1.00          |
|                        |          |               | 15. <i>n</i> -Pentane      | 18.11    | 1.00          |

**Column** Rtx-DHA-100, 100 m, 0.25 mm ID, 0.50  $\mu$ m (cat.# 10148)  
**Sample** Refinery gas standard #1 (cat.# 34441)  
**Injection**  
 Inj. Vol.: 30  $\mu$ L split (split ratio 250:1)  
 Liner: Premium 4.0 mm ID Precision inlet liner w/wool (cat.# 23305.1)  
 Inj. Temp.: 250 °C  
**Oven**  
 Oven Temp.: 0 °C (hold 15 min) to 50 °C at 1 °C/min  
**Carrier Gas** He, constant flow  
 Flow Rate: 1.95 mL/min  
**Detector** FID @ 300 °C  
 Make-up Gas  
 Flow Rate: 30 mL/min  
 Make-up Gas  
 Type: N<sub>2</sub>  
 Hydrogen flow: 40 mL/min  
 Air flow: 450 mL/min  
**Instrument** Agilent 7890B GC