Application Highlights

- A Flame Ionization Detector (FID) is used to detect the C1 through C7 paraffins and olefins to a lower detection limit of 20 ppm, except for trace peaks eluting on the tail of a major component.
- A Thermal Conductivity Detector (TCD) is used to detect hydrogen in a nitrogen carrier to a lower detection limit of 100 ppm.
- A second TCD is used to detect carbon dioxide, ethane, ethylene, acetylene, hydrogen sulfide, oxygen/argon composite, nitrogen, methane, and carbon monoxide to a lower detection limit of 200 ppm except for carbon monoxide (400 ppm), and hydrogen sulfide (500 ppm).
- Analysis time is approximately 15 minutes.

Optional Configurations

- Refinery gas analysis with trace sulfurs by FPD or SCD
- Additional boiling point column for the analysis of heavy hydrocarbons (C1−C30)
- Standard analysis with the addition of trace CO by methanizer
- Custom analyzer for performing ASTM D2163, ASTM D2712, ISO 7941, and ASTM D1945
- High temperature injection for heavy fractions
- High temperature reactor effluent with percent level water
- TCD/TCD/MSD for the analysis of reactor effluent gases
- Liquid sample valves for the injection of pressurized liquid samples.

For More Information

For more information on our products and services, visit our Web site at www.agilent.com/chem.
Refinery gas analysis - FID
1 C7+ Backflush
2 Methane
3 Ethane
4 Ethylene
5 Propane
6 Cyclopropane
7 Propylene
8 Acetylene
9 Isobutane
10 Propadiene
11 n-Butane
12 t-2-Butene
13 1-Butane
14 Isobutene
15 cis-2-Butene
16 Neopentane
17 Isopentane
18 Methyl acetylene
19 n-Pentane
20 1,3-Butadiene
21 3-Methyl-1-Butene
22 t-2-Pentene
23 2-Methyl-2-Butene
24 1-Pentene
25 2-Methyl-1-Butene
26 c-2-Pentene
27 Neohexane
28 Hexane
29 Heptane
30 Benzene

Refinery gas analysis - Dual TCD
1 Valve switch
2 Hydrogen
3 Carbon dioxide
4 Ethylene
5 Ethane
6 Acetylene
7 Hydrogen sulfide
8 Argon/Oxygen
9 Nitrogen
10 Methane
11 Carbon monoxide

FID and TCD output from the Agilent Refinery Gas Analyzer.