

Extended Refinery Gas Analysis

Configuration of an Agilent Technologies 7890N Series Gas Chromatograph with flame ionization and thermal conductivity detectors (FID/TCD/TCD) for the accelerated extended refinery gases analysis.

Components analyzed on the FID include: C1 through C7 paraffins and olefins.

Components identified during method development include:

Component	Min. conc. (ppm)	Max. conc. (%)
Methane	10	100
Ethane	10	20
Ethylene	10	20
Propane	10	100
Propylene	10	50
Acetylene	10	10
Isobutane	10	10
Propadiene	10	2
n-Butane	10	10
t-2-Butene	10	2
1-Butene	10	2
Isobutylene	10	5
c-2-Butene	10	5
Neopentane	10	2
Isopentane	10	5
Methyl acetylene	10	1
n-Pentane	10	5
1,3-Butadiene	10	3
Neohexane	10	10
n-Hexane	10	10
Heptane	10	10
Benzene	10	10
C8+ backflush	20	25

Extended Refinery Gas Analysis continued

Components analyzed on the TCDs include:

Component	Min. conc. (ppm)	Max. conc. (%)
Hydrogen	100	100
Carbon dioxide	200	100
Ethylene	200	10
Ethane	200	10
Acetylene	200	10
Hydrogen sulfide	500	10
Oxygen/argon composite	200	100
Nitrogen	200	100
Methane 200	100	100
Carbon monoxide	400	5