Agilent Technologies
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PRAXAIR

Certificate of Analysis

RGA Gas Calibration Standard

Agilent Part No: 5184-3538, 5184-3543 **Sample Lot No:** BP022702A

Concentrations (±mole%):

Hydrogen	12.2% (±5%)	iso-Butylene	0.298%(±5%)
Nitrogen	64.06% (±5%)	trans-2-Butene	0.299% (±5%)
Carbon Monoxide	1.03% (±5%)	cis-2-Butene	0.298% (±5%)
Carbon Dioxide	3.00% (±5%)	1,3-Butadiene	0.298% (±5%)
Methane	5.01% (±5%)	iso-Pentane	0.0999% (±5%)
Ethane	4.00% (±5%)	n-Pentane	0.0996% (±5%)
Ethylene	2.00% (±5%)	1-Pentene	0.0994% (±5%)
Acetylene	1.00% (±5%)	cis-2-Pentene	0.0957% (±5%)
Propane	2.00% (±5%)	trans-2-Pentene	0.0994% (±5%)
Propylene	1.00% (±5%)	2-Methyl-2-Butene	0.0498% (±5%)
1,2 Propadiene	0.996% (±5%)	n-Hexane	0.0499% (±5%)
Methyl Acetylene	1.02% (±5%)	BTU Value	219 BTU/mol
iso-Butane	0.298% (±5%)	Water content	<5 ppm
n-Butane	0.298% (±5%)	Other impurities	<1 ppm
1-Butene	0.298% (±5%)		

Traceability:

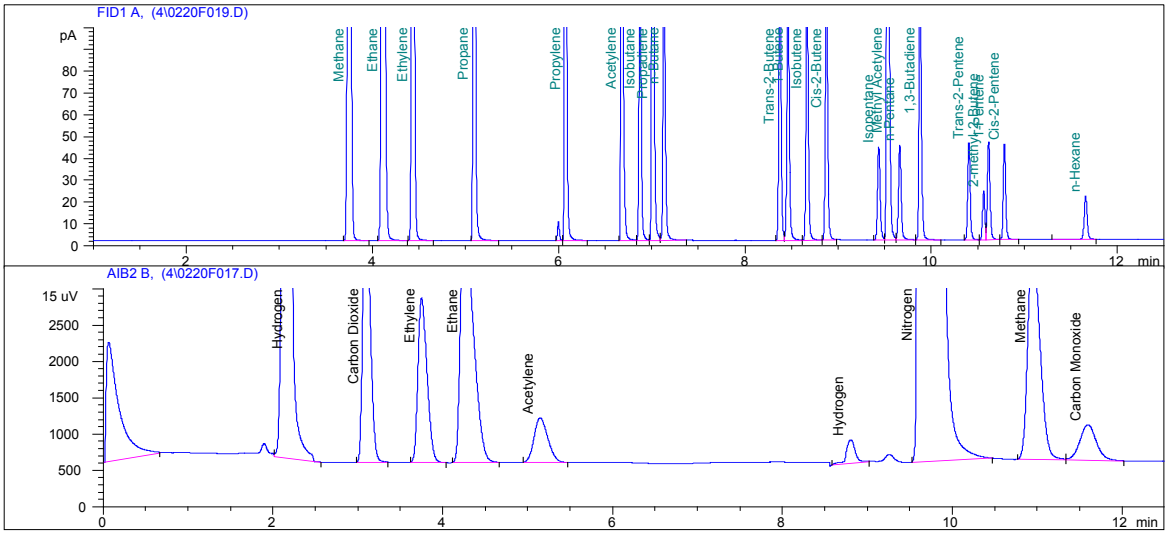
This standard was produced gravimetrically following Specialty Gas Work Instruction #15. Balances used are calibrated per POIS 2.140, traceable to NIST. Concentrations were verified on an Agilent model 6890 gas chromatograph, using a Wasson valve switch, Variable Pressure Control and multiple packed/capillary columns.

Standards Used:

Praxair RGA Primary Standard, serial #12064AW; source # ND15704.

Analytical GC Chromatogram:

Analytical columns: Agilent MS-5A PLOT, U-PLOT
TCD: 1.0 ml loop; He carrier at 35 ml/min; oven temp = 90degC
FID: 0.1 ml loop; He carrier at 30 ml/min; split ratio=25:1; Ramp 75degC for 6 min to 180degC for 1.25 min at 20degC/min



Date of Release: 12 March, 2002
Expiration Date: 12 March, 2004

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