Agilent Technologies
Innovating the HP Way

PRAXAIR

Certificate of Analysis

Universal Gas Calibration Standard

Agilent Part No: 5183-4800, 5184-3541 **Sample Lot No:** 080901A

Concentrations:

Helium	0.101%	n-Hexane	0.0500%
Neon	0.0501%	n-Heptane	0.0500%
Hydrogen	0.101%	Water content (H_2O)	<5 ppm
Oxygen	0.0512%	Other impurities (HC's)	<1 ppm
Nitrogen	0.100%		
Methane	Balance		
Ethane	0.0479%		
Ethylene	0.0501%		
Carbon Dioxide	0.0495%		
Carbon Monoxide	0.100%		
Acetylene	0.0513%		
Propane	0.0506%		
Methyl Acetylene	0.0505%		
n-Butane	0.0502%		

Traceability:

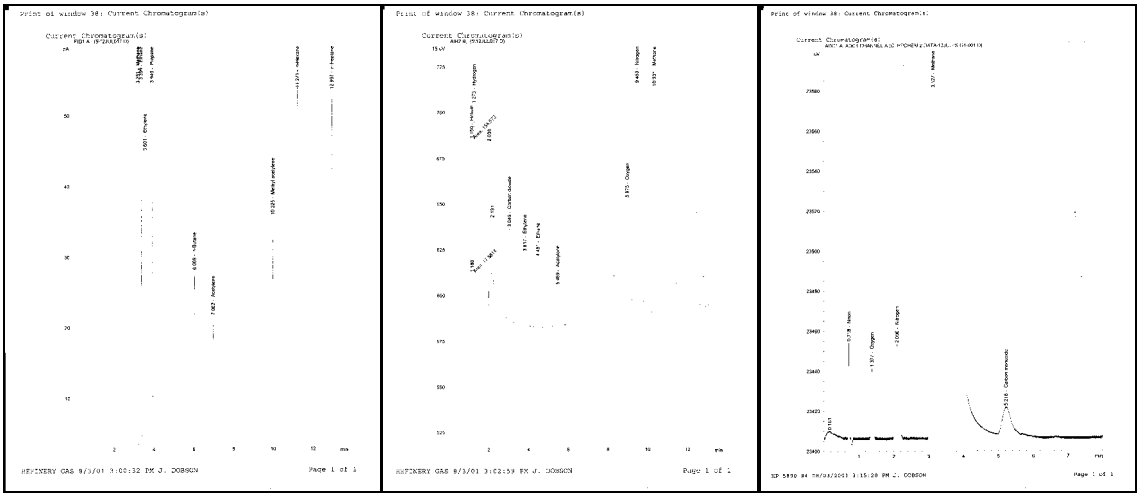
This standard was produced gravimetrically using vendor quality procedures. Balances used are calibrated regularly, traceable to NIST. Standard concentrations were verified on HP models 5890 and 6890 gas chromatographs, using a Wasson valve switch, Variable Pressure Control and multiple packed/capillary columns.

Standards Used:

Praxair UGS Primary Standards, serial #s: H177474, 167228, 529117, 12064AW

Analytical GC Chromatograms:

Analytical columns: MoleSieve 13X, HaySep DB, thick-film DB-1
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 3.75 min at 20degC/min



Date of Release: 9 August, 2001
Expiration Date: 9 August, 2003

Analyst: James Dobson
Lab Chemist, Praxair, Inc.