

Calgaz, Division of Air Liquide Advanced Business and Technologies
Quality Assurance Plan for
Dry Gas Calibration Standards

This QAP is applicable for the following mixtures in the designated cylinders provided by CALGAZ:

CONCENTRATION	6D/105L	6DM/58L	2AL/34L	10AL/116L	5E/552L
78PPM C2H5OH/N2					X
103.5PPM C2H5OH/N2	X				
104.2PPM C2H5OH/N2	X	X			
115 PPM C2H5OH/N2	X		X		
130PPM C2H5OH/N2	X				
191PPM C2H5OH/N2	X				
199PPM C2H5OH/N2					X
208.4PPM C2H5OH/N2	X	X	X		X
221.4PPM C2H5OH/N2			X		
223PPM C2H5OH/N2	X				
230 PPM C2H5OH/N2	X		X		
260.5PPM C2H5OH/N2	X	X	X	X	X
273.5PPM C2H5OH/N2	X		X		

Updated 10/03/2013

Under the U. S. Department of Transportation workplace testing program (see 49 CFR, Part 40), transportation employers are required to test employees working in certain safety sensitive positions for alcohol under certain conditions. Breath testers must be properly calibrated to produce accurate test results. The DOT workplace testing program requires that calibrator manufacturers provide employers with this Quality Assurance Plan which, together with the operating instructions that are provided with the Instrument will assist in assuring that breath testers are calibrated to the required degree of accuracy.

ALL DRY GAS CALIBRATION STANDARDS IN NON REFILLABLE CYLINDERS MANUFACTURED BY CALGAZ MEET THE REQUIREMENTS SET FORTH BY THE ORIGINAL EQUIPMENT MANUFACTURER. ALWAYS REFER TO THE OEM'S INSTRUCTIONS FOR RECOMMENDED CYLINDER SIZES, REGULATORS, DELIVERY PRESSURE / FLOWS, NUMBER OF TESTS PER CYLINDER, CYLINDER USE PARAMETERS AND TROUBLESHOOTING. FOR COMPLETE CALIBRATION AND USE INSTRUCTIONS PLEASE REFER TO THE OEM'S OWNERS MANUAL OR CONTACT THE OEM DIRECTLY.

Safety Precautions:

The following are recommended guidelines for safety, use and storage of Calgaz Dry Gas Calibration Standards in non refillable cylinders.

- Do not be lulled into complacency because of the convenient small size of CALGAZ cylinders. The cylinders are high pressure containers and may injure you if not handled with care.
- Always hold the gauge and regulator away from your face during engagement with the cylinder.
- Never attempt to refill CALGAZ cylinders.
- Always use safety glasses when working with high pressure gases and regulators.
- Familiarize yourself with the Material Safety Data Sheets (MSDS) before use.

Storage:

- Protect CALGAZ cylinders from exposure to weather. Moisture can cause surface rust and enter the valve stem resulting in contamination of the gas mixture during engagement of the regulator.
- Do not use or store near heat or open flame. Exposure to temperatures above 125 F (51.6 C) may cause contents to vent or cause bursting.
- If the stored cylinders are exposed to temperatures below 35F (1.66C) it is recommended that they be brought up to room temperature before use (Above 65F, 18.3C).
- Calgaz Ethanol Dry Gas Standards are filled under stringent Quality Controlled procedures and do not need to be "rolled" prior to use.

CALGAZ, a Division of Air Liquide Advanced Business and Technologies:
821 Chesapeake Drive, Cambridge MD 21613

Tel: 1-800-638-1197 Ext #1 for Customer Service Fax: 1-410-228-4251 WWW.Calgaz.com

Use:

- Always hold the gauge and regulator away from your face during engagement with the cylinder.
- Before attaching a regulator to the cylinder, ensure that the regulator is in the **on** position. Once the regulator is fully engaged in the cylinder, turn the regulator on/off knob to the off position until ready to calibrate. This procedure will help prevent air from being introduced into the cylinder and possibly contaminating the gas mixture.

Quality Control:

- All Calgaz Dry Gas Ethanol Standards if used according to the Original Equipment Manufacturers instructions are warranted to be accurate within the stated tolerances on the label for three years.
- Ethanol content is equivalent to the labeled concentration at sea level +/- 0.002 BrAC or +/-2% whichever is greater.
- Each Calgaz cylinder has a Lot and Cylinder number traceable to Calgaz manufacturing records. The lot number provides traceability back to the raw materials used.
- Calgaz verifies lot quality by using a Normal Single Sampling Plan based upon MIL-STD-105E, General Inspection Level II at a 1.0 %AQL.
- In the unusual event of a reading that does not match the stated cylinder concentration and tolerance or you are experiencing a mechanical problem with the cylinder or regulator, remove the cylinder and/or regulator from service and contact your cylinder supplier.
- A single cylinder from each lot filled is retained for future reference and stability tests.
- Calgaz tracks all complaints verified and unverified as part of its continuing Quality Improvement.

Warranty:

Calgaz Ethanol mixtures have a warranty / shelf life of three years from date of manufacture. The manufacture date may be found on the cylinder label.

In the unusual event of a reading that does not match the stated cylinder concentration and tolerance or you are experiencing a mechanical problem with the cylinder or regulator, remove the cylinder and/or regulator from service and contact your cylinder supplier. Have the following information ready:

- The cylinder concentration as stated on the label.
 - The actual reading on the instrument being calibrated
 - The cylinder and lot number (This can be found on the cylinder label or/and at the bottom of the cylinder)
 - A description of the problem you are experiencing
- Your cylinder supplier will instruct you in the proper process for returning or replacing the suspect cylinder or regulator.