



SCOPE OF ACCREDITATION TO ISO 17034:2016

CALGAZ – CAMBRIDGE  
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REFERENCE MATERIALS PRODUCER

Valid To: July 31, 2026

Certificate Number: 3403.04

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this Reference Material Producer for the production of certified reference materials of the following categories:

<u>Category and Sub-Category of Certified Reference Material</u>	<u>Concentration Ranges and Uncertainty<sup>2</sup></u>	<u>Test, Analysis, Measurement, Methods</u>	<u>Measurement Technique(s)</u>
Category A5.2 Single- or Multiple-element Mixtures in Nitrogen of:			
Ethanol	Ethanol Concentration: 50 ppm to 600 ppm  Uncertainty: $\pm 1\%$	NDIR/RGM and NTRM	Non-Dispersive Infra-Red (NDIR)
Oxygen	Oxygen Concentration: (5-21)%  Uncertainty: $\pm 1\%$	RGM, PRM, GMIS and NTRM	Gas Chromatography
Methane	Methane Concentration: 5 ppm – 2.5%  Uncertainty: $\pm 1\%$	RGM, PRM, GMIS and NTRM	Gas Chromatography
Carbon Monoxide	Carbon Monoxide Concentration:  10 ppm – 1%  Uncertainty: $\pm 1\%$	FTIR, RGM, PRM, GMIS and NTRM	Gas Chromatography

<u>Category and Sub-Category of Certified Reference Material</u>	<u>Concentration Ranges and Uncertainty<sup>2</sup></u>	<u>Test, Analysis, Measurement, Methods</u>	<u>Measurement Technique(s)</u>
Hydrogen Sulfide	Hydrogen Sulfide Concentration: 5 ppm – 500 ppm Uncertainty: ± 1 %	RGM, PRM, GMIS and NTRM	NDUV
Pentane	Pentane Concentration: 25 ppm - 0.75% Uncertainty: ± 1 %	RGM, PRM, GMIS and NTRM	Gas Chromatography

<sup>1</sup> This reference material producer is approved to produce Certified Reference Materials (CRM) for all items listed on the scope of accreditation.

<sup>2</sup> The listed uncertainty represents expanded uncertainties expressed at approximately the 95 % level of confidence, using a coverage factor of  $k = 2$ .



# Accredited Reference Material Producer

A2LA has accredited

## CALGAZ - CAMBRIDGE

Cambridge, MD

This accreditation covers the specific materials listed on the agreed upon Scope of Accreditation.

This producer meets the requirements of ISO 17034:2016 General Requirements for the Competence of Reference Material Producers. This accreditation demonstrates technical competence for a defined scope and the operation of a quality management system, with the recognized



Presented this 26<sup>th</sup> day of June 2024.

A blue ink signature of Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3403.04  
Valid to July 31, 2026

*For reference materials to which this accreditation applies, please refer to the reference material producer's Scope of Accreditation.*