



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

ENTEGRIS, INC. ANALYTICAL SERVICES¹

10 Forge Park

Franklin, MA 02038

Mr. Tyler Moulton Phone: 508 839 9679

CHEMICAL

Valid To: August 31, 2017

Certificate Number: 2578.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following routine and non-routine tests and research, development and validation of test methods for industrial fuels and gases, air testing and gas-phase contamination:

Test Technology	Test Method	Analyte
Sampling ambient air and compressed gases in the field (customer sites and internal)	AS000060*	All analytes listed in this accreditation
Anions/Acids by ion chromatography	AS000061	<u>Inorganic Anions:</u> Bromide, Br ⁻ Chloride, Cl ⁻ Fluoride, F ⁻ Nitrate, NO ₃ ⁻ Nitrite, NO ₂ ⁻ Sulfate, SO ₄ ²⁻ Phosphate, PO ₄ ³⁻ <u>Anhydrides:</u> Nitric oxide, NO Nitrogen dioxide, NO ₂ Sulfur dioxide, SO ₂ Sulfur trioxide, SO ₃ <u>Organic Acid Anions:</u> Acetate, CH ₃ COO ⁻ Formate, CHOO ⁻ <u>Organic Acids:</u> Acetic acid, CH ₃ COOH Formic acid, CHOOH

Tyler Moulton

Test Technology	Test Method	Analyte
Cations / bases by ion chromatography	AS000062	<u>Cations:</u> Ammonium, NH ₄ ⁺ Calcium, Ca ²⁺ Lithium, Li ⁺ Magnesium, Mg ²⁺ Potassium, K ⁺ Sodium, Na ⁺ <u>Anhydrides:</u> Ammonia, NH ₃
Organic compounds by gas chromatography / mass spectrometry (GC / MS)	AS000063	Organic constituents in the approximate range of C ₂ -C ₃₀
Low-molecular weight (volatile) silicon-containing organic compounds by gas chromatography / mass spectrometry	AS000065	TMS HMDSO D3 Other Si-compounds with BP less than 140°C
Field sampling and measurement of moisture (water vapor) in inert, corrosive and reactive gases by cavity ring-down spectrometry and electrochemical analysis	AS000066*	Water Vapor, H ₂ O
Particle count and size by light scattering	AS000067*	Particles in the range of (0.1 to 10) μm
Sulfur containing gases by fluorescence	AS000069*	SO ₂ , H ₂ S, DMS, CH ₃ SH, DMDS, total sulfur
Organic compounds by gas chromatography / FID or PID	AS000080	Organic constituents in the approximate range of C ₂ -C ₃₀

* This laboratory meets A2LA R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories for these tests.

¹This accreditation covers testing performed at the main laboratory as well as the satellite laboratories listed below.



ENTEGRIS, INC. ANALYTICAL SERVICES
 Taiwan Science Park Branch
 No. 647-2, Sec. 3, Minfu Road, Yangmei City, Taoyuan County 32663, Taiwan (R.O.C.)
 Local coordinator: Jenny Wang +886 939 646 723

CHEMICAL

Test Technology	Test Method	Analyte
Sampling ambient air and compressed gases in the field (customer sites and internal)	AS000060*	All analytes listed in this accreditation
Anions/Acids by ion chromatography	AS000061	<u>Inorganic Anions:</u> Bromide, Br ⁻ Chloride, Cl ⁻ Fluoride, F ⁻ Nitrate, NO ₃ ⁻ Nitrite, NO ₂ ⁻ Phosphate, PO ₄ ³⁻ Sulfate, SO ₄ ²⁻ <u>Anhydrides:</u> Nitric oxide, NO Nitrogen dioxide, NO ₂ Sulfur dioxide, SO ₂ Sulfur trioxide, SO ₃ <u>Organic Acid Anions:</u> Acetate, CH ₃ COO ⁻ Formate, CHOO ⁻ <u>Organic Acids:</u> Acetic acid, CH ₃ COOH Formic acid, CHOOH
Cations / bases by ion chromatography	AS000062	<u>Cations:</u> Ammonium, NH ₄ ⁺ Calcium, Ca ²⁺ Lithium, Li ⁺ Magnesium, Mg ²⁺ Potassium, K ⁺ Sodium, Na ⁺ <u>Anhydrides:</u> Ammonia, NH ₃
Organic compounds by gas chromatography / mass spectrometry (GC / MS)	AS000063	Organic constituents in the approximate range of C ₂ -C ₃₀





Accredited Laboratory

A2LA has accredited

ENTEGRIS, INC.

Franklin, MA

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 12th day of January 2016.

A handwritten signature in blue ink, appearing to read "A. C. Bunt".

Senior Director of Quality and Communications
For the Accreditation Council
Certificate Number 2578.01
Valid to August 31, 2017

For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.