



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ENTEGRIS, INC. ANALYTICAL SERVICES¹
10 Forge Park
Franklin, MA 02038
Mr. Charles Miller Phone: 508 553 8358

CHEMICAL

Valid To: August 31, 2021

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:

<u>Test Technology(ies)</u>	<u>Test Method</u>	<u>Analyte(s)</u>
Ammonia by Cavity Ring Down	AS000122	Ammonia, NH ₃
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

<u>Test Technology(ies)</u>	<u>Test Method</u>	<u>Analyte(s)</u>
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 <u>Organic amines:</u> Methylamine Ethanolamine Ethylamine Dimethylamine Diethylamine Diethanolamine Morpholine
Low-Molecular Weight (Volatile) Silicon-Containing Organic Compounds by GC / MS	AS000065	TMS HMDSO D3 Other Si-compounds with BP less than 40°C
Organic Compounds by GC / PID	AS000080	Toluene
Organic Compounds by GC / MS	AS000063	Organic constituents in the approximate range of C ₂ -C ₃₀
Particle Count and Size by Light Scattering ²	AS000067	Particles in the range of (0.1) μm
Sampling Ambient Air and Compressed Gases in the Field (Customer Sites and Internal) ²	AS000060	All analytes listed throughout the scope
Sulfur Containing Gases by Fluorescence ²	AS000069	SO ₂ , H ₂ S, DMS, CH ₃ SH, DMDS, total sulfur

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



ENTEGRIS, INC. ANALYTICAL SERVICES
 Taiwan Science Park Branch
 1F., No. 6-7, Duxing Road, East Dist. Hsinchu City 30078, Taiwan (R.O.C.)
 Local coordinator: Jenny Wang +886 939 646 723

CHEMICAL

<u>Test Technology(ies)</u>	<u>Test Method</u>	<u>Analyte(s)</u>
Anions/Acids by Ion Chromatography	AS000061	<p><u>Inorganic Anions:</u> Bromide, Br⁻ Chloride, Cl⁻ Fluoride, F⁻ Nitrate, NO₃⁻ Nitrite, NO₂⁻ Phosphate, PO₄³⁻ Sulfate, SO₄²⁻</p> <p><u>Anhydrides:</u> Nitric oxide, NO Nitrogen dioxide, NO₂ Sulfur dioxide, SO₂ Sulfur trioxide, SO₃</p> <p><u>Organic Acid Anions:</u> Acetate, CH₃COO⁻ Formate, CHOO⁻</p> <p><u>Organic Acids:</u> Acetic acid, CH₃COOH Formic acid, CHOOH</p>
Cations / Bases by Ion Chromatography	AS000062	<p><u>Cations:</u> Ammonium, NH₄⁺ Calcium, Ca²⁺ Lithium, Li⁺ Magnesium, Mg²⁺ Potassium, K⁺ Sodium, Na⁺</p> <p><u>Anhydrides:</u> Ammonia, NH₃</p> <p><u>Organic amines:</u> Methylamine Ethanolamine Ethylamine Dimethylamine Diethylamine Diethanolamine Morpholine</p>



<u>Test Technology(ies)</u>	<u>Test Method</u>	<u>Analyte(s)</u>
Organic Compounds by GC / MS	AS000063	<u>Organic constituents in the approximate range of C2-C30</u>
Sampling Ambient Air and Compressed Gases in the Field (Customer Sites and Internal) ²	AS000060	All analytes listed throughout the scope

² This laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests.





Accredited Laboratory

A2LA has accredited

ENTEGRIS, INC. ANALYTICAL SERVICES

Franklin, MA

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of A2LA R104 – *General Requirements: Accreditation of Field Testing and Field 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 April 2017*).



Presented this 4th day of September 2019.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2578.01
Valid to August 31, 2021

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