SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ARCONIC TECHNOLOGIES LLC
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CALIBRATION

Valid To: July 31, 2024 Certificate Number: 1019.03

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1, 5]:

I. Chemical

Parameter/Equipment	Range[4]	CMC[2] (±)	Comments
Spark Optical Emission Spectrometers[3]	(0 to 0.0005) $^{w}/_{o}$ (0.0005 to 0.001) $^{w}/_{o}$ (0.001 to 0.005) $^{w}/_{o}$ (0.005 to 0.01) $^{w}/_{o}$ (0.01 to 0.05) $^{w}/_{o}$ (0.05 to 0.1) $^{w}/_{o}$ (0.1 to 0.5) $^{w}/_{o}$ (0.5 to 1) $^{w}/_{o}$ (1 to 10) $^{w}/_{o}$ (10 to 50) $^{w}/_{o}$	0.0002 % Absolute 0.0003 % Absolute 0.0005 % Absolute 9.8 % Relative 7.9 % Relative 5.1 % Relative 4.0 % Relative 3.0 % Relative 2.2 % Relative 2.2 % Relative	Calibration verification using SRMs. See Table 1 Estimated from (1.0 to 10) %

[1] This laboratory is not normally available for commercial calibration service. This laboratory performs calibration service and field calibration services.

[2] Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

[3] This laboratory performs field calibration activities for these parameters.

[4] The notation $^{w}/_{o}$ is defined as weight percent.

[5] This scope meets A2LA's P112 Flexible Scope Policy.

Table 1: Typical Maximum Calibrated Concentrations in Weight Percent

Element	Concentration[4] ($^{w}/_{o}$)
Antimony (Sb), Arsenic (As)	0.1 %
Beryllium (Be)	0.3 %
Bismuth (Bi), Lead (Pb)	1.0 %
Boron (B), Cadmium (Cd)	0.05 %
Calcium (Ca)	0.05 %
Chromium (Cr)	0.4 %
Cobalt (Co)	0.02 %
Copper (Cu)	20 %
Gallium (Ga), Phosphorous (P)	0.05 %
Iron (Fe)	3.5 %
Lithium (Li)	4.0 %
Magnesium (Mg)	12 %
Manganese (Mn), Silver (Ag)	1.5 %
Nickel (Ni)	3.0 %
Scandium (Sc), Titanium (Ti)	0.5 %
Silicon (Si)	18 %
Sodium (Na)	0.04 %
Strontium (Sr)	0.1 %
Tin (Sn)	6.0 %
Vanadium (V)	0.2 %
Zinc (Zn)	11 %
Zirconium (Zr)	0.02 %

Accredited Laboratory

A2LA has accredited

ARCONIC TECHNOLOGIES LLC

New Kensington, PA

for technical competence in the field of

Calibration

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 R205 – Specific Requirements: Calibration Laboratory Accreditation Program. 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 27th day of June 2022.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1019.03
Valid to July 31, 2024

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