



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Micromatter Technologies Inc USA dba Calmetrics Inc.
1340-6 Lincoln Avenue
Holbrook, NY 11741
(and satellite site as shown on the scope)

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 31 May 2024
Certificate Number: L2319



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
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).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Micromatter Technologies Inc. USA dba Calmetrics Inc.

1340-6 Lincoln Avenue
Holbrook, NY 11741
Frank Ferrandino 631-580-2522

CALIBRATION

Valid to: **May 31, 2024**

Certificate Number: **L2319**

Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Metal Alloy Composition	(1 to 99) % wt	0.3 % (absolute wt %)	ISO 3497 & ASTM-B568 (XRF) and internal methods.
Coating Thickness	25 Å to 100 µm	4.9 % of measured value	ISO 3497 & ASTM-B568 (XRF) and internal methods. Thickness equivalent of coating mass per area using conventional handbook density.
Copper plating thickness on non-conductive substrates	(2.5 to 130) µm	5% of measured value	Internal method using sheet microresistance gauge- Thickness equivalent of mass per area using conventional handbook density and resistivity

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Non-conductive coating thickness on non-magnetic substrates	5 µm to 2 mm	5% of measured value	ASTM method B244 (eddy current) and Internal method
Non-magnetic coating thickness on ferromagnetic substrates	5 µm to 2 mm	5% of measured value	ASTM method B499 (magnetic induction) and Internal method

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Plastic foil (shim) thickness	5 µm to 2 mm	5% of measured value	Internal method – comparisons using Linear Encoder

**Services performed at satellite laboratory
Micromatter Technologies Inc.**

8333 130th Street Unit #1
Surrey, BC V3W 7X4 Canada
Vinder Jaggi 604-594-9720

Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Metal Alloy Composition	(1 to 99) % wt	0.3 % (absolute wt %)	ISO 3497 & ASTM-B568 (XRF) and internal methods.
Coating Thickness	25 Å to 100 µm	4.9 % of measured value	ISO 3497 & ASTM-B568 (XRF) and internal methods. Thickness equivalent of coating mass per area using conventional handbook density.

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. L2319.



R. Douglas Leonard Jr., VP, PILR SBU