CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

AnalytiChem Canada Inc
21800 Clark Graham
Baie d'Urfé, Quebec, Canada H9X 4B6

Fulfills the requirements of

ISO 17034:2016

In the field of

REFERENCE MATERIAL PRODUCER

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.

Jason Stine, Vice President

Expiry Date: 15 June 2027

Certificate Number: AR-3219

This reference material producer is accredited in accordance with the recognized International Standard ISO 17034:2016. This accreditation demonstrates technical competence for a defined scope and the operation of a reference material producer quality management system.

SCOPE OF ACCREDITATION TO ISO 17034:2016

AnalytiChem Canada, Inc.
21800 Clark Graham
Baie d'Urfé, Quebec, Canada H9X 4B6

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REFERENCE MATERIAL PRODUCER

Valid to: **June 15, 2027** Certificate Number: **AR-3219**

Chemical Properties

Type of Reference Material	Description of the Reference Material Matrix or Artifact including the Property-Properties Characterized	Method or Techniques Used by the RMP Laboratory to Determine the Assigned Value (if Appropriate)
Reference Materials and Certified Reference Materials	Concentration of aqueous solution single-element or multi-element solutions	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. ICP-AES ICP-MS Balance (gravimetric preparation)
Reference Materials and Certified Reference Materials	Purity of neat elements	Characterization based on mass or volume of ingredients used in the preparation of the RM. ICP-AES ICP-MS
Reference Materials and Certified Reference Materials	Concentration of single or multiple anions and cations in aqueous solutions	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. IC ICP-AES ICP-MS Titration Balance (gravimetric preparation)

Chemical Properties

Type of Reference Material	Description of the Reference Material Matrix or Artifact including the Property-Properties Characterized	Method or Techniques Used by the RMP Laboratory to Determine the Assigned Value (if Appropriate)
Reference Materials and Certified Reference Materials	pH value of aqueous buffer solutions	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. pH measurement with glass electrode
Reference Materials and Certified Reference Materials	Conductivity of aqueous solutions	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. Conductivity meter
Reference Materials and Certified Reference Materials	Density of liquids	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. Digital density meter
Reference Materials and Certified Reference Materials	Total Alkalinity	Characterization based on mass or volume of ingredients used in the preparation of the RM. Titration
Reference Materials and Certified Reference Materials	Hardness	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. ICP-AES/ Calculation
Reference Materials and Certified Reference Materials	Chemical Oxygen Demand Standards (COD)	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. Spectrophotometry
Reference Materials, Certified Reference Materials and Volumetric Solutions	Acid Base Reagents	Characterization based on mass or volume of ingredients used in the preparation of the RM. Titration

Chemical Properties

Type of Reference Material	Description of the Reference Material Matrix or Artifact including the Property-Properties Characterized	Method or Techniques Used by the RMP Laboratory to Determine the Assigned Value (if Appropriate)
Reference Materials, Certified Reference Materials and Volumetric Solutions	Boric Acid	Characterization based on mass or volume of ingredients used in the preparation of the RM. ICP-AES Balance (gravimetric preparation)
Reference Materials, Certified Reference Materials and Volumetric Solutions	Silver Nitrate	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. Potentiometric Titration
Reference Materials and Certified Reference Materials	Potassium Permanganate	Characterization based on mass or volume of ingredients used in the preparation of the RM. Redox Titration
Reference Materials and Certified Reference Materials[3]	Concentration of halides in organic solutions	Characterization based on mass or volume of ingredients used in the preparation of the RM. ICP-AES Balance (gravimetric preparation)
Reference Materials and Certified Reference Materials[3]	Concentration of single or multi-components of Metallo-Organic Compounds and Wear Metals in oil[2]	Characterization based on mass or volume of ingredients used in the preparation of the RM. ICP-AES Balance (gravimetric preparation)
Reference Materials and Certified Reference Materials[3]	Concentration of Metallo-Organic Compounds: Sulfur in Mineral Oil, Diesel, Residual oil, Isooctane, Biodiesel, Xylene, Ethanol, Crude Oil and Premisolv[2]	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. Fluorescence Spectroscopy (UV)
Reference Materials and Certified Reference Materials[3]	Particles in organic solutions	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. Particle Counter

Chemical Properties

Type of Reference Material	Description of the Reference Material Matrix or Artifact including the Property-Properties Characterized	Method or Techniques Used by the RMP Laboratory to Determine the Assigned Value (if Appropriate)
Reference Materials and Certified Reference Materials[3]	Viscosity Standards[2]	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. Master Viscometer
Reference Materials and Certified Reference Materials[3]	Total Acid Number Standards (TAN)[2]	Characterization based on mass or volume of ingredients used in the preparation of the RM. Potentiometric Titration
Reference Materials and Certified Reference Materials[3]	Total Base Number Standards (TBN)[2]	Characterization based on mass or volume of ingredients used in the preparation of the RM. Potentiometric Titration
Reference Materials and Certified Reference Materials[3]	Flash Point Standards[2]	Value transfer from an RM to a closely matched candidate RM performed using a single measurement procedure performed by one laboratory. Pensky-Martens Closed Cup
Matrix Reference Materials	EnviroMAT – Contaminated Soil	Interlaboratory Study
Matrix Reference Materials	EnviroMAT – Sewage Sludge	Interlaboratory Study
Matrix Reference Materials	EnviroMAT – Compost	Interlaboratory Study
Matrix Reference Material[3]	EnviroMAT – Drinking Water	Interlaboratory Study
Matrix Reference Materials	EnviroMAT – Ground Water	Interlaboratory Study
Matrix Reference Materials	EnviroMAT – Wastewater	Interlaboratory Study

Chemical Properties

Type of Reference Material	Description of the Reference Material Matrix or Artifact including the Property-Properties Characterized	Method or Techniques Used by the RMP Laboratory to Determine the Assigned Value (if Appropriate)
Matrix Reference Materials	EnviroMAT – Used Oil	Interlaboratory Study
Matrix Reference Materials	AgroMAT – Clay Soil	Interlaboratory Study
Matrix Reference Materials	AgroMAT – Sandy Soil	Interlaboratory Study
Matrix Reference Materials	Lead in Paint	Interlaboratory Study
Matrix Reference Materials	Cadmium and Lead in Paint	Interlaboratory Study
Matrix Reference Materials	pE Check – Nutrients	Interlaboratory Study
Matrix Reference Materials	pE Check – Minerals	Interlaboratory Study
Matrix Reference Materials	pE Check – Solids	Interlaboratory Study
Matrix Reference Materials	pE Check – COD (Chemical Oxygen Demand)	Interlaboratory Study

Notes:

1. Please contact the RMP organization for more information on CRM uncertainty values, Ucrm values, and other specific lot values. Some of this information may also be available on the RMP's website.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AR-3219.
3. Sold under the brand name Conostan, which is owned by AnalytiChem. These reference materials are intended for use as quality control materials, or other purposed that do not require metrological traceability of property values (such as calibration or value transfer)

Jason Stine, Vice President