



SCOPE OF ACCREDITATION TO ISO 17034:2016

SPEX CERTIPREP GROUP, LLC.
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REFERENCE MATERIAL PRODUCER

Valid To: January 31, 2025

Certificate Number: 2495.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this Reference Material Producer for the production of the following Certified Reference Materials:

Certified Reference Material/ Artifact or Matrix	Concentration Ranges and Uncertainty	Approach Used to Assign Property Values
Inorganic Reference Materials – Stock Single Standards, Stock Multi Standards, Custom Single Standards, Custom Multi Standards, Speciation Standards Trace Metal Standards Cations Standards Stoichiometry Standards	Concentration Range: (0.0001 to 100 000) µg/ml (0.0001 to 100 000) µg/g Uncertainty: (0.1 to 10.0) % Concentration Range: (0.0001 to 100 000) µg/ml (0.0001 to 100 000) µg/g Uncertainty: (0.1 to 10.0) % Concentration Range: (0.1 to 10) M Uncertainty: (0.1 to 5.0) %	ICP-OES ICP-MS Titrimetry Gravimetric Ion Chromatography

Certified Reference Material/ Artifact or Matrix	Concentration Ranges and Uncertainty	Approach Used to Assign Property Values
Inorganic Reference Materials – Stock Single Standards, Stock Multi Standards, Custom Single Standards, Custom Multi Standards Anions	<u>Concentration Range:</u> (0.002 to 100 000) µg/ml (0.002 to 100 000) µg/g <u>Uncertainty:</u> (0.1 to 10.0) %	Ion Chromatography Gravimetric Titrimetry
Inorganic Reference Materials – Organic Acids	<u>Concentration Range:</u> (0.001 to 10 000) µg/mL <u>Uncertainty:</u> (0.1 to 10) %	Ion Chromatography
pH Standards – pH buffers	<u>Concentration Range:</u> (< 1 to 14) S.U. <u>Uncertainty:</u> (0.01 to 0.2) S.U.	Potentiometry
Ion Selective Electrode Standards – Cyanide Standards	<u>Concentration Range:</u> (0.1 to 20 000) µg/ml (0.1 to 20 000) µg/g <u>Uncertainty:</u> (0.1 to 10.0) %	Ion Selective Electrode Titrimetry
Conductivity Standards	<u>Concentration Range:</u> > 2 µmhos/cm <u>Uncertainty:</u> (0.1 to 5.0) %	Electrochemical
Buffer Solutions	<u>Concentration Range:</u> > 0.1 M <u>Uncertainty:</u> (0.1 to 5.0) %	Gravimetric Titrimetry Ion Selective Electrode

Certified Reference Material/ Artifact or Matrix	Concentration Ranges and Uncertainty	Approach Used to Assign Property Values
<p>Organic Reference Materials – Stock Single Compound Standards, Stock Multi-Compound Standards, Custom Single Compound Standards, Custom Multi-Compound Standards</p> <p>Chromatography Standards:</p> <ul style="list-style-type: none"> Alkanes Alkenes Acetates Alcohols Aldehydes Anilines Amides Amines Aromatics Carbamates Ethers Esters Pesticides Herbicides Anhydrides Haloethers Ketones Cyanates Nitriles Nitroaromatics Oxides Phenols Phthalates Pyridines Sugars Organic Acids OrganoMetalics Explosives Epoxides Alkynes Herbicide Esters Sulfides Ketones Thiols Carbonyls Silicates Anisoles Silanes Organosulfates Glycerides Bio-Diesel 	<p><u>Concentration Range:</u> (0.001 to 1 000 000) µg/ml (0.001 to 1 000 000) µg/g</p> <p><u>Uncertainty:</u> (0.6 to 10.0) %</p>	<p>GC/MS Gravimetric LC/MS</p>

Certified Reference Material/ Artifact or Matrix	Concentration Ranges and Uncertainty	Approach Used to Assign Property Values
<p>Organic Reference Materials – Stock Single Compound Standards, Stock Multi-Compound Standards, Custom Single Compound Standards, Custom Multi-Compound Standards (cont)</p> <p>Chromatography Standards: Amino Acids Pharmaceuticals Lubricants Halogenated Ethers Dyes Halogenated Alkanes Halogenated Alkenes Halogenated Aromatics Halogenated Organic Acids High Boiling Point Fuels Low Boiling Point Fuels Carbonyl-DNPH-Derivatives PAH's (Polyaromatic Hydrocarbons) PCB's (Polychlorinated Biphenyls)</p>	<p><u>Concentration Range:</u> (0.001 to 1 000 000) µg/ml (0.001 to 1 000 000) µg/g <u>Uncertainty:</u> (0.6 to 10.0) %</p>	<p>GC/MS Gravimetric LC/MS</p>
<p>Solid Organic Reference Materials –</p> <p>Phthalates Organic Acids Sugars Pesticides PAH's PCB's</p>	<p><u>Concentration Range:</u> (5.0 to 50 000) µg/g <u>Uncertainty:</u> 12 %</p>	<p>GC/MS LC/MS</p>
<p>Spectroscopy Standards</p>	<p><u>Concentration:</u> (0.1 to 24) Au/mm <u>Uncertainty:</u> (0.5 to 5.0) %</p>	<p>Slope Spectroscopy</p>

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Physiochemical Properties – Density	<u>Concentration Range:</u> (0.5 to 5) g/cm ³ <u>Uncertainty:</u> (0.01 to 1) %	Density Meter
Plastics and Rubbers – Identity, Plasticizers Phthalate Standards	<u>Concentration Range:</u> (0.25 to 2) % <u>Uncertainty:</u> (1 to 20) %	FTIR



Accredited Reference Material Producer

A2LA has accredited

SPEX CERTIPREP GROUP, LLC.

Metuchen, NJ

This accreditation covers the specific materials listed on the agreed upon Scope of Accreditation.

This producer meets the requirements of ISO 17034:2016 *General Requirements for the Competence of Reference Material Producers*. This accreditation demonstrates technical competence for a defined scope and the operation of a quality management system.



Presented this 14th day of February 2023

A blue ink signature of Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2495.01
Valid to January 31, 2025
Revised February 22, 2023