



SCOPE OF ACCREDITATION TO ISO/IEC 17034:2016

RUDOLPH RESEARCH ANALYTICAL  
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 Hackettstown, NJ 07840  
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REFERENCE MATERIAL PRODUCER

Valid To: November 30, 2027

Certificate Number: 7528.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this Reference Material Producer for the production of certified reference materials and reference materials of the following category:

<b>Certified Reference Material/ Matrix or Artifact</b>	<b>Properties Characterized/ Concentration Range</b>	<b>Uncertainty</b>	<b>Measurement Technique(s)</b>
Liquid Density Standards  Liquid Solvents and Solutions	(0.65 to 1.8) g/cm <sup>3</sup>	0.000 019 g/cm <sup>3</sup>	Indirect comparison to liquid reference standards.
Liquid Refractive Index Standards  Liquid Solvents and Solutions	Range Brix: (0 to 67.5) % (m/m)  Range Refractive Index: 1.332986 to 1.459413 based on % (m/m)	Brix: 0.0064% (m/m) Uncertainty is dependent on mass fraction.  Refractive Index: 0.000012 Uncertainty is dependent on mass fraction	Gravimetric formulation  Calculated from mass fraction according to ICUMSA SPS-3 (2000)

Certified Reference Material/ Matrix or Artifact	Properties Characterized/ Concentration Range	Uncertainty	Measurement Technique(s)
<p>Quartz Control Plate Optical Rotation Standard</p> <p>Quartz</p>	<p>Angle of Optical Rotation: 546.2271 nm (-41 to &lt;-30) ° (-30 to 41) °</p>	<p>0.0030 ° 0.0020 °</p>	<p>Indirect comparison to quartz control plate. Optical rotation values for other wavelengths provided in accordance with the formula ICUMSA SPS-1</p>



# Accredited Reference Material Producer

A2LA has accredited

## RUDOLPH RESEARCH ANALYTICAL

*Hackettstown, 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 13<sup>th</sup> day of February 2026.

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

Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 7528.02  
Valid to November 30, 2027

*For reference materials to which this accreditation applies, please refer to the reference material producer's Scope of Accreditation.*