

## NANOMYTE® SOX-30 (fine-grade LLZTO)

### Physical Characteristics

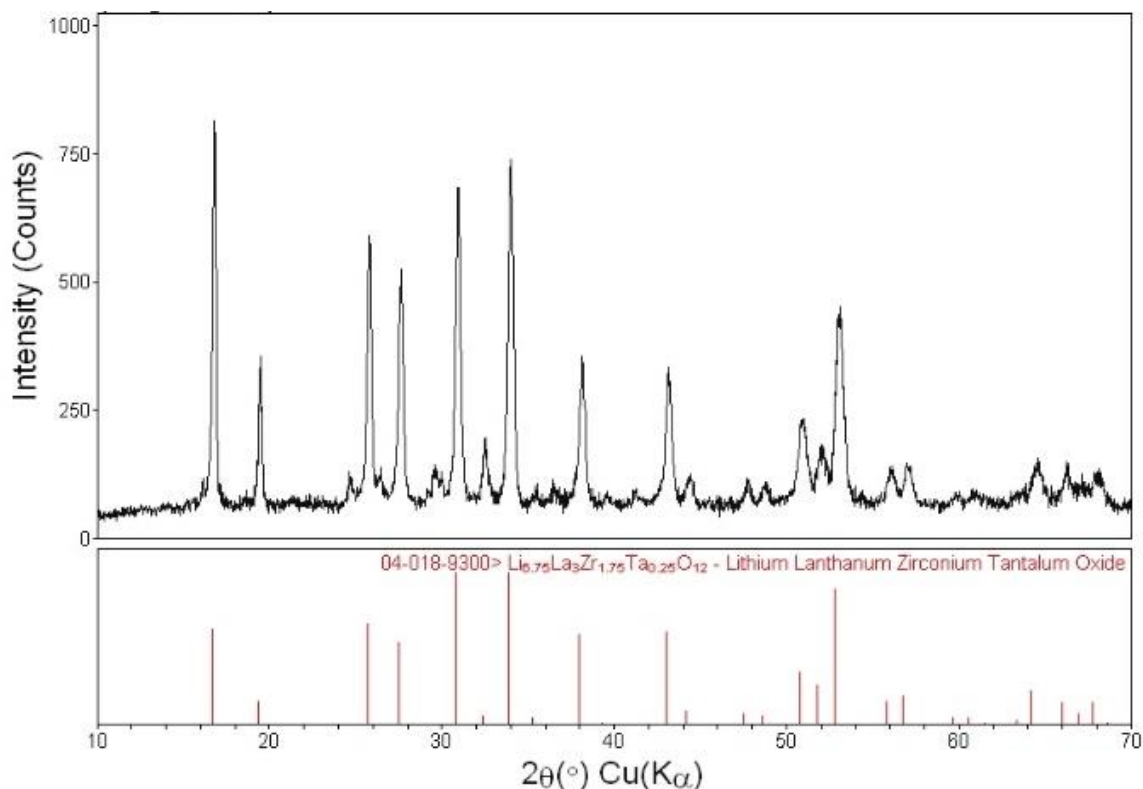
<b>Product Description:</b>	Ta-Doped Lithium Lanthanum Zirconium Oxide ("LLZTO")
<b>Chemical Formula:</b>	$\text{Li}_{6.2}\text{Al}_{0.2}\text{La}_3\text{Zr}_{1.8}\text{Ta}_{0.2}\text{O}_{12}$
<b>Color:</b>	Off-white
<b>Phase Purity:</b>	> 95%
<b>Average Particle Size (D50):</b>	1 – 2 $\mu\text{m}$
<b>Crystal Structure:</b>	Cubic
<b>Crystal Density:</b>	5.25 $\text{g}/\text{cm}^3$
<b>Specific Surface Area:</b>	3.57 $\text{m}^2/\text{g}$
<b>Ionic Conductivity:</b>	$10^{-5}$ to $10^{-4}$ S/cm (unsintered, cold-pressed pellet @ RT)

*\*Sintered material will have higher ionic conductivity*

### Operating Conditions

<b>Stability Voltage Window:</b>	~ 5.0V vs. Li/Li+
<b>Sensitivity to Air or Moisture:</b>	Stable in dry air, but limit exposure to air/ $\text{CO}_2$
<b>Recommended Working Atmosphere:</b>	Air

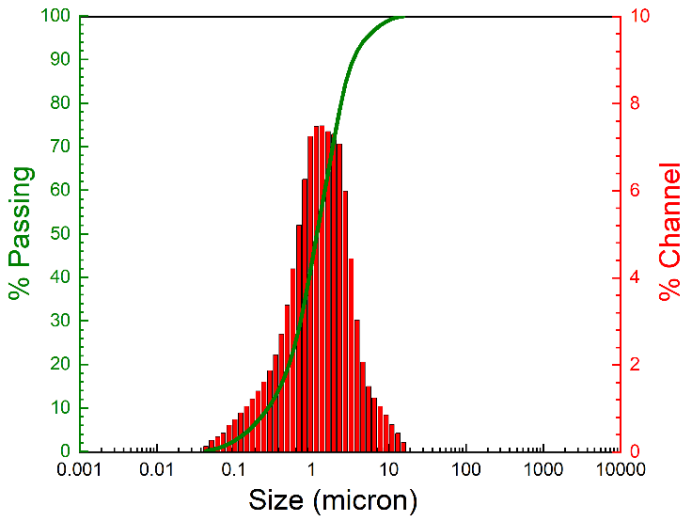
### Characterization Data



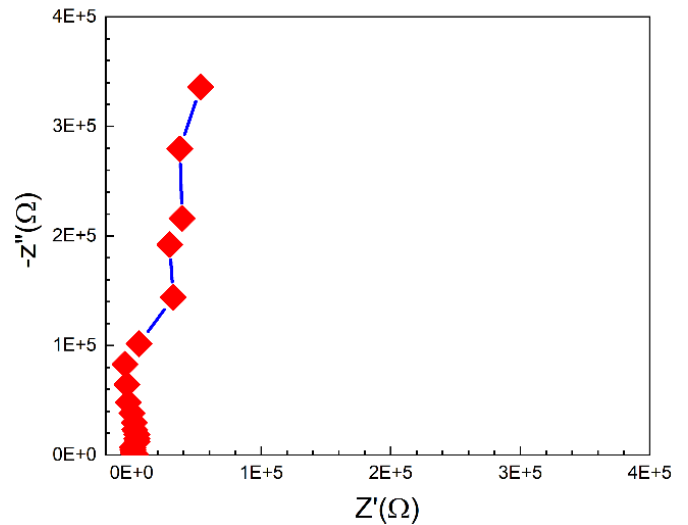
X-ray Diffraction (XRD)

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Characterization Data (continued)



Particle Size Distribution



Ionic Conductivity

Storage & Handling

**Precautions for Safe Handling**

Handle in a controlled environment, under inert gas. Appropriate personal protective equipment should be used at all times. Avoid contact with eyes and skin. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Avoid breathing dust.

**Conditions for Safe Storage**

Keep container tightly sealed, in a cool, dry place under inert gas. This material is moisture and air sensitive. Protect from humidity and keep away from water. Keep away from oxidizing agents. Store in a locked cabinet or with access restricted to technical experts or their assistants.

**Refer to SDS for complete information on the safe handling of this material.**

**NOTE:** NEI Corporation believes that the information in this spec sheet is an accurate description of the typical use of the product. However, NEI disclaims any liability for incidental or consequential damages, which may result from the use of their products that are beyond its control. Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. Therefore, it is the user's responsibility to thoroughly test the product in their particular application to determine its performance, efficacy, and safety. Nothing contained herein is to be considered as permission or a recommendation to infringe any patent or any other intellectual right.