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## Certificate of Analysis Part No. B2461 Zirconium Pin Standard

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## Analytical Results

% Oxygen

Mean = 0.142 St Dev = 0.013 Expanded Uncertainty = 0.030 k=2, @95% CI, n=40 % Nitrogen Mean = 0.0079 St Dev = 0.0017 Expanded Uncertainty = 0.0036 k=2, @95% CI, n=40

% Hydrogen

Mean = 0.0026 St Dev = 0.0002 Expanded Uncertainty = 0.0004 k=2, @95% Cl, n=40

Primary (NMI)/GUIDE 34/ISO 17034 Reference Standards Employed: AR635, AR631, AR628, AR640, AR648, LECO 502-947

## Method of Analysis: ASTM E1019-18, ASTM E1447-22, ALY-012, ALY-018

\*The analytical results above are provided by an accredited reference material manufacturer with a current certification in ISO 17025 and 17034.

The intended use of this Reference Material (RM) is for the calibration and validation of inert gas fusion analyzers as described in the above ASTM methods.

The minimum sample size to perform this intended use is 1pin. Refer to test method recommendations for appropriate sample size.

The Period of Validity for this RM is not able to be determined and should be reviewed every 20 years years from the date below.

This bottle contains 10g of 0.1g (nominal) pins to be used per the test method you follow. Keep sealed tightly and store under normal laboratory conditions.

Refer to your test methods and or manufacturer manual for expanded uncertainties, repeatability/reproducibility factors.

For good laboratory practice, we recommend that all reference materials be verified as fit for purpose prior to use. Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Elemental Microanalysis Ltd. be liable for incidental or consequential damages.

## Certified on the 22<sup>nd</sup> of May 2024

Elemental Microanalysis Ltd