

## Analytical Results

**LOI = 19.86%**

Expanded Uncertainty =  $\pm 0.21$

Method & Detection: Thermogravimetry

$k \approx 2$  (95% confidence)

% Loss on Ignition – Values indicate the amount of matter in the material matrix that is volatilized and released as gaseous substance when the material matrix is heated in an oxidative atmosphere at a prescribed temperature. Values are metrologically traceable to the International System of Units (SI) derived unit of mass fraction expressed as percent (%).

### Methods Employed:

JCGM 100:2008; Evaluation of Measurement Data – Guide to the Expression of Uncertainty in Measurement; (GUM 1995 with Minor Corrections), Joint Committee for Guides in Metrology (JCGM) (2008); available at [https://www.bipm.org/utis/common/documents/jcgm/JCGM\\_100\\_2008\\_E.pdf](https://www.bipm.org/utis/common/documents/jcgm/JCGM_100_2008_E.pdf) (accessed February 2025)

JCGM 101:2008; Evaluation of Measurement Data – Supplement 1 to the Guide for the Expression of Uncertainty in Measurement; Propagation Distributions Using a Monte Carlo Method; Joint Committee for guides in Metrology (JCGM) (2008); available at

[https://www.bipm.org/utis/common/documents/jcgm/JCGM\\_100\\_2008.pdf](https://www.bipm.org/utis/common/documents/jcgm/JCGM_100_2008.pdf) (accessed February 2025).

*\*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 verification of verification and calibration of thermogravimetry for the determination of LOI and other appropriate methods for the determination of loss on ignition at 950°C. The minimum sample size to perform this intended use is 1.0g of powder.

This reference material should be dried to constant mass at 105°C before use.

The Period of Validity for this RM is valid for 5 years from the initial certification date, provided the CRM is handled and stored in accordance with the instructions given in this certificate.

This bottle contains 100g of Loss on Ignition Powder to be used per the test method you follow. Bottles of powder should be kept sealed tight and stored in a cool, dry location.

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 25<sup>th</sup> of March 2026.

Elemental Microanalysis Ltd