

Analytical Results	
% Carbon Value = 0.0617 Expanded Uncertainty = 0.0048 Method & Detection = Induction Furnace Combustion/IR Detection k \approx 2 (95% confidence)	% Sulfur Value = 0.0243 Expanded Uncertainty = 0.0026 Method & Detection = Induction Furnace Combustion/IR Detection k \approx 2 (95% confidence)
Primary Reference Standards Used: NIST 349a, NIST 178, NIST 123c	
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 (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 (accessed February 2025). ISO33405:2024 – Reference materials – Approaches for characterization and assessment of homogeneity and stability.	

**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 and calibration of combustion for the determination of carbon and sulfur.

The minimum sample size to perform this intended use is no less than 1 ring of RM material be used for destructive test methods

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

This bottle contains 454g of steel rings of nominal mass 1.0g 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 13th of March 2025

Elemental Microanalysis Ltd