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Certificate of Analysis Part No. B2502 Steel Ring Standard

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Analytical Results

%Carbon

Value = 0.1680 Expanded Uncertainty = 0.0044 $k \approx 2$ (95% confidence)

%Sulfur

Value = 0.0256Expanded Uncertainty = 0.0025 $k \approx 2 \text{ (95\% confidence)}$

Methods and References

(1) 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/utils/common/documents/jcgm/JCGM_100_2008_E.pdf (accessed February 2025) (2) 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/utils/common/documents/jcgm/JCGM_100_2008.pdf (accessed February 2025).

The intended use of this Reference Material (RM) is for the verification of Carbon and Sulphur.

The minimum sample size to perform this intended use is one ring.

The Period of Validity for this RM is 15 years after from the date below, if handling and storage instructions are followed.

This bottle contains 454g of rings nominal 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 10th of October 2025

Elemental Microanalysis Ltd

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