

**Certificate of Analysis  
Part No. B2515  
Carbon & Sulphur Pin Standard**

Certificate Number 216B  
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**% Carbon**  
**Mean = 0.192**  
**Standard Deviation = +/- 0.002**  
**Expanded Uncertainty = +/- 0.005**  
**(k=2.5, @ 95% confidence limit) (n=58)**

**%Sulphur**  
**Mean = 0.0195**  
**Standard Deviation = +/- 0.0008**  
**Expanded Uncertainty = +/- 0.0016**  
**(k=2, @ 95% confidence limit) (n=59)**

Method of analysis is ASTM E 1019-11 and ARI 033

Primary (NMI) Standards employed:

NIST SRM	337a, 19h, 293
NCS	NS13016, NS11011
JSS	151-18
BCS/BAS	238/2, 232/2, 086-1
IPT	26

**Notes**

The mean analytical values were derived by 6 data sets showing trace-ability to the above-mentioned NMI standards and reported in mass fraction. The sample size for testing was 1g per ASTM E1019 method. The intended use of this reference standard is for the calibration and continued QC validation following ASTM E-1019 method. The precision values represent the mean value and estimated uncertainty derived from the data sets and may not represent your testing capabilities. Refer to your test method for additional uncertainty information.

The material used in production of this standard was identified in accordance with ARI 032. The samples used for round robin style testing were selected in accordance with ARI 014. The above values relate only to the material used to produce this standard. This bottle consists of 454g, 1g pins (nominal weight) to be used directly from the bottle with no preparation needed. This standard has an indefinite shelf life. Keep sealed and store under normal laboratory conditions.

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.

This is a Certified Reference Material (working standard) and is traceable to the above-mentioned standards. For good laboratory practice it is recommended that all standards be verified prior to use.

Certified October 18, 2016

Elemental Microanalysis Limited