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Certificate of Analysis
Part No. B2523
Steel Pin Standard

Certificate Number 617A

% Carbon
Mean = 0.724
One Sigma Standard Deviation = +/- 0.006
Expanded Uncertainty = +/- 0.012
(k=2, @ 95% confidence limit) (n=38)

%Sulphur
Mean = 0.0234
One Sigma Standard Deviation = +/- 0.0009
Expanded Uncertainty = +/- 0.0018
(k=2, @ 95% confidence limit) (n=39)

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

Primary (NMI) / Guide 34 Reference Standards Employed:

NIST SRM	163, 2160, 32e, 14e, 16f, 363, 13g, 364
BCS	161/3
BAM	227-1
NCS	NS11010
ALPHA	AR884-1114C, AR886-SDC23811207, AR886-1070B97

Notes

The intended use of this reference standard is for the calibration and verification of induction combustion Carbon/Sulphur analysis by infra-red detection as described by ASTM E-1019.The mean analytical values were derived by 4 data sets showing traceability to the above-mentioned primary reference standards and reported in mass fraction. The minimum and typical size for testing was 1g (1 pin) per ASTM E1019. The precision values represent the estimated uncertainty derived from the data sets and may not represent your testing capabilities. Refer to your test method for additional uncertainty information. When necessary, professional judgement is applied toward consideration of data and statistical information.

The material used in production of this standard was evaluated and accepted in accordance with ARI 032. The samples 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 (nominal weight) pins to be used directly from the bottle with no preparation needed. This reference 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 reference standard), and is traceable to the above mentioned reference materials. For good laboratory practice it is recommended that all standards be verified prior to use.

Certified August 7, 2017

Elemental Microanalysis Limited