

**Certificate of Analysis
Part No. B2522
Steel Pin Standard**

Okehampton Business Park
Exeter Road
Okehampton
Devon EX20 1UB
Telephone 01837 54446/7
Fax 01837 54544

Certificate Number 917B
Page 1 of 1

% Carbon Mean = 0.0055 One Sigma Standard Deviation = +/- 0.0007 Expanded Uncertainty = 0.0016 (k=2, @ 95% confidence limit) (n=41)	%Sulphur Mean = 0.0027 One Sigma Standard Deviation = +/- 0.0003 Expanded Uncertainty = 0.0006 (k=2, @ 95% confidence limit) (n=41)
--	--

Method of analysis is ASTM E1019-11, and ARI 033

Primary (NMI) / Guide 34 Reference Standards Employed:

NIST SRM	166c, 101g, 2165, 131g,
JSS	151-14
BAM/BCS	191-2, 260/4
JK	CRM 36
ALPHA	AR892-511B, AR892-914K, AR946-614C

Notes

The intended use of this reference standard is for the calibration and validation of induction combustion Carbon/Sulphur analysis by infra-red detection as described by ASTM E-1019. The mean analytical values shown are derived by 4 data sets showing trace-ability 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 set. Refer to your test method for additional uncertainty information.

The material used in production of this standard was evaluated and accepted in accordance with ARI 032. The samples used for round robin 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. While unable to determine a definite shelf life, this reference should be reviewed every 25 years from the date of certification. 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 While unable to determine a definite shelf life, this reference should be reviewed every 25 years from the date of certification. Keep sealed and store under normal laboratory conditions. standard), and is traceable to the above-mentioned standard. For good laboratory practice it is recommended that all standards be verified prior to use

Certified April 28, 2015

Elemental Microanalysis Limited