

Elemental Microanalysis Limited

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**Certificate of Analysis
Part No. B2753
Carbon Steel Chip Standard**

Certificate Number 1114B
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% Carbon
Mean = 0.389
One Sigma Standard Deviation = 0.008
Expanded Uncertainty = 0.016
(k=2, 95% confidence) n=40

%Sulphur
Mean = 0.117
One Sigma Standard Deviation = 0.002
Expanded Uncertainty = 0.004
(k=2, 95% confidence) n=40

% Nitrogen
Mean = 0.0090
One Sigma Standard Deviation = 0.0004
Expanded Uncertainty = 0.0008
(k=2, 95% confidence) n=50

Method of analysis is
ASTM E 1019-11, ARI 033 and ARI 034

Primary (NMI) Standards employed:
NIST SRM 12h, 100b, 6g, 20g, 50c, 368, 163
NCS NS22007, HC11111
JSS 602-10,
BAM/BCS 226-1, 058-2, 284-2, 035-1, 306/1, 232/2

Notes

The mean analytical values were derived by data sets showing trace-ability to the above mentioned NMI standards, and reported in mass fraction. 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 the expanded method derived uncertainty if needed

The material used in production of this standard was sampled 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 150g, clean chips, to be used directly from the bottle with no preparation needed. This product 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. For good laboratory practice it is recommended that all standards be verified prior to use

This is a Certified Reference Standard (working standard), and is traceable the above-mentioned standards.

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Certified June 30, 2015