

Alpha Resources, Inc.

Certificate Of Analysis

AR 948
CARBON STEEL CHIP STANDARD
LOT # 62206

% CARBON
MEAN = 0.509
ONE SIGMA = 0.004
TWO SIGMA = 0.008
RANGE = 0.501 to 0.517

% SULFUR
MEAN = 0.084
ONE SIGMA = 0.002
TWO SIGMA = 0.004
RANGE = 0.080 to 0.088

PPM NITROGEN
MEAN= 86 PPM
ONE SIGMA= 1 PPM
TWO SIGMA= 2 PPM
RANGE= 84 to 88 PPM

Oxygen = 101ppm (reference only)

Method of Analysis is ASTM E 1019-03, ARI 033 and ARI 034

Primary Standards Employed:

NIST	SRM 8j, 13g, 50c, 346a, 107c, 12h, 14e, 368, 163
BAM	284-2, 035-1, 079-1
IPT	43
JSS	SS-2-28, 602-9, 102-6, 3-15

Notes:

The mean analytical values were derived by a number of data sets (n=40) by various instrumentation meeting ASTM E1019-03. The precision values represent the standard deviation, two times the standard deviation, and complete range of analysis. When necessary, professional judgment is applied toward consideration of data and statistical information. The statistical analysis and the overall direction and coordination of the analytical measurements leading to certification were performed by K.E. Dyer at Alpha Resources.

The material used in production of this standard was sampled in accordance with ARI 032. The samples for round robin testing were selected in accordance with ARI 014. The above values relate only to the material used to produce this standard.

Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Alpha Resources be liable for incidental or consequential damages.

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

Alpha Resources is an ISO/IEC 17025 accredited laboratory. For more information concerning our scope of accreditation contact Alpha Resources.

Certified March, 2007



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Page 1 Of 1