

Alpha Resources, Inc. Certificate Of Analysis

AR 953

CHIP STANDARD HIGH CARBON STEEL

LOT # 109597

% CARBON
MEAN = 0.968
ONE SIGMA = 0.006
TWO SIGMA = 0.012
RANGE = 0.960 - 0.976

% SULFUR
MEAN = 0.013
ONE SIGMA = 0.001
TWO SIGMA = 0.002
RANGE = 0.011 - 0.015

PPM NITROGEN
MEAN = 78
ONE SIGMA = 2
TWO SIGMA = 4
RANGE = 74 - 82

Method of Analysis is ASTM E 1019 (Latest Revision)
Carbon & Sulfur combustion IR detection
Nitrogen Inert Gas Fusion TC detection

Standards employed:
NIST SRM 11h, 14f, 16f, 153a, 1099

Notes:

The mean analytical values were determined by a number of data sets provided by ASTM approved instruments.

The precision values represent the standard deviation, two times the standard deviation, and complete range of analyses.

The statistical analysis and overall coordination leading to certification was performed by K.E. Dyer at Alpha Resources.

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 secondary standard reference material and should be verified, prior to use, against a primary standard material provided by a governing agency such as N.I.S.T., when available.

Certified January, 1997

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