

Alpha Resources, Inc.

Certificate Of Analysis

AR 951

CARBON STEEL CHIP STANDARD

LOT # 89093698

% CARBON
MEAN = 0.179
ONE SIGMA = 0.002
TWO SIGMA = 0.004
RANGE = 0.174 – 0.184

% SULFUR
MEAN = 0.023
ONE SIGMA = 0.001
TWO SIGMA = 0.002
RANGE = 0.021 – 0.025

PPM NITROGEN
MEAN = 90
ONE SIGMA = 5
TWO SIGMA = 10
RANGE = 80 - 100

Method of Analysis is ASTM E 1019 (Latest Revision)
Carbon & Sulfur combustion IR detection
Nitrogen inert gas fusion

Standards employed:

NIST	SRM 368, 362, 343a, 16f, 11h, 73c
German	BAM 035-1, 021-1, 227-1, 038-1
Japanese	JSS 150-8, 154-9

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 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.

Certified February, 1999

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