

Alpha Resources, Inc.

Certificate Of Analysis

AR 954
CARBON STEEL CHIP STANDARD
LOT # 92809

% CARBON
MEAN = 0.424
ONE SIGMA = 0.004
TWO SIGMA = 0.00
RANGE = 0.415 to 0.432

% SULFUR
MEAN = 0.031
ONE SIGMA = 0.001
TWO SIGMA = 0.002
RANGE = 0.029 to 0.033

PPM NITROGEN
MEAN= 84 PPM
ONE SIGMA= 1 PPM
TWO SIGMA= 2 PPM
RANGE= 82 to 86 PPM

Method of Analysis is ASTM E 1019-08, ARI 033 and ARI 034
Primary Standards Employed:

NIST	12h, 13g, 100b, 50c, 368, 163
EURO (BAM, BCS, BAS)	079-1, 086-1, 035-1, 284-2, 306/1
JSS	150-15, SS-3-37, 102-6
NCS	HC11001

Notes:

The mean analytical values were derived by a number of data sets (n=40) by various instrumentation meeting ASTM E1019-08. The precision values represent the standard deviation, two times the standard deviation (k=2, 95% confidence limit), 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.

This calibration standard is accredited and meets the requirements of ISO/IEC 17025 as verified by the ACLASS ANSI-ASQ National Accreditation board. Alpha Resources is an ISO/IEC 17025 accredited laboratory. For more information concerning our certificate and scope of accreditation contact Alpha Resources.

Certified January 12, 2010



P.O Box 199 3090 Johnson Road Stevensville, MI 49127 Phone (269) 465-5559 Fax (269) 465-3629

www.alpharesources.com

Page 1 Of 1