

# Alpha Resources, Inc. Certificate Of Analysis

AR 303  
CAST IRON STANDARD  
LOT # 80201

**% CARBON**  
**MEAN = 3.95**  
**ONE SIGMA = 0.04**  
**TWO SIGMA = 0.08**  
**RANGE = 3.87 – 4.03**

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

Method of Analysis is ASTM E 1019  
(Latest Revision)

The certified mean values were derived by a number of data sets provided by various laboratories over different days by separate analysts utilizing ASTM approved instruments.

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

One or more of the following standard reference materials were employed:

NIST	SRM	4L
French	IRSID	FB-10-1
Japanese	JSS	111-12
China	NCS	HC16011, 56005

Notes:

The statistical analysis of the certification was performed by K.E. Dyer at Alpha Resources.

The overall direction and coordination of the analytical measurements leading to certification were 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 September, 2001

