

# Alpha Resources, Inc. Certificate Of Analysis

AR 322  
CAST IRON STANDARD  
LOT # 071602

**% CARBON**  
MEAN = 3.37  
ONE SIGMA = 0.03  
TWO SIGMA = 0.06  
RANGE = 3.31 – 3.43

**% SULFUR**  
MEAN = 0.046  
ONE SIGMA = 0.002  
TWO SIGMA = 0.004  
RANGE = 0.042 – 0.050

Method of Analysis is ASTM E 1019-00

#### Primary Standards Employed:

NIST	SRM 4L, 107c, 112b
IRSID	502-1
EURO	2291
NCS	NS 56005
CKD	230
CTIF	FB-12

#### Notes:

The mean analytical values were derived by a number of data sets utilizing various ASTM approved instruments.

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

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.

Certified November, 2002



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

[www.alpharesources.com](http://www.alpharesources.com)

Page 1 Of 1