

# Alpha Resources, Inc. Certificate Of Analysis

AR 651  
TITANIUM STANDARD  
LOT # 568X

PPM OXYGEN  
MEAN = 1275  
ONE SIGMA = 18  
TWO SIGMA = 36  
RANGE = 1239 - 1311

PPM NITROGEN  
MEAN = 51  
ONE SIGMA = 8  
TWO SIGMA = 16  
RANGE = 35 - 67

PPM HYDROGEN  
MEAN = 29  
ONE SIGMA = 2  
TWO SIGMA = 4  
RANGE = 25 - 33

Method of Analysis

Vacuum Hot Extraction  
Inert Gas Fusion

Instruments Used

NRC Model 917  
LECO TC-436, RH-404, RH-402, TC-136

The following Primary Standards were used for calibration:

Gas Dose  
NIST 352, 352c, 353  
BCR 24, 318  
NCS GBW 02602

Notes

The mean values reported are derived from a number of data sets using the instruments listed above. The precision value is based on the standard deviation; two times the standard deviation, and complete range of analyses. When necessary, professional judgment is applied toward consideration of data and statistical information. The statistical analysis, 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 May, 2003



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