

# Alpha Resources, Inc. Certificate Of Analysis

AR-1648

OXYGEN & NITROGEN PIN STANDARD

LOT # 102300

**PPM OXYGEN**  
**MEAN = 146**  
**ONE SIGMA = 6**  
**TWO SIGMA = 12**  
**RANGE = 134 - 158**

**PPM NITROGEN**  
**MEAN = 70**  
**ONE SIGMA = 5**  
**TWO SIGMA = 10**  
**RANGE = 60 - 80**

Method of Analysis is inert gas fusion  
ASTM E 1019  
(Latest revision)

Notes:

The mean value reported is from a number of data sets acquired over different days by different analysts utilizing ASTM E 1019 approved instruments.

The precision value is based on the standard deviation, two times the standard deviation, and complete range of analyses.

Standard Reference Materials employed were:

NIST SRM	1091A, 12h
JSS SRM	1D, 5C

The statistical analysis of this 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 should be verified, prior to use, against a primary standard material provided by a governing agency such as N.I.S.T., when available.

Certified November, 2000



P.O. Box 199 3090 Johnson Road Stevensville, MI 49127 USA Phone (269) 755-5555 Fax (269) 465-3629  
[www.alpharesources.com](http://www.alpharesources.com)