

# Alpha Resources, Inc. Certificate Of Analysis

AR-1648

OXYGEN & NITROGEN PIN STANDARD

LOT # 061501

**PPM OXYGEN**  
**MEAN = 195**  
**ONE SIGMA = 15**  
**TWO SIGMA = 30**  
**RANGE = 165 - 225**

**PPM NITROGEN**  
**MEAN = 73**  
**ONE SIGMA = 3**  
**TWO SIGMA = 6**  
**RANGE = 67 - 79**

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

Standard Reference Materials employed were:

NIST SRM	1090, 1091A, 12h
JSS CRM	5C
BAM CRM	O3
NCS CRM	NS20013

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.

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.

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 June, 2001

