

# Alpha Resources, Inc.

## Certificate Of Analysis

**AR 668**

**OXYGEN & NITROGEN PIN STANDARD**

**LOT # 303618498**

**PPM OXYGEN**  
**MEAN = 14**  
**ONE SIGMA = 3**  
**TWO SIGMA = 6**  
**RANGE = 9 - 19**

**PPM NITROGEN**  
**MEAN = 34**  
**ONE SIGMA = 4**  
**TWO SIGMA = 8**  
**RANGE = 27 - 41**

Method of analysis is Inert Gas Fusion  
ASTM E 1019  
(Latest revision)

The following Primary Standards were used for calibration:

NIST	SRM 1098, 1091a
German	BAM 038-1, 079-1
Japanese	JSS GS-2c, GS-5c

Notes:

The mean values reported were derived from a number of data sets utilizing ASTM approved instruments.

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

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 was 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 before use.

Certified July, 1998

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A handwritten signature in black ink that reads "Kent Dyer". The signature is written in a cursive style with a large, prominent 'K' and 'D'.