

# Alpha Resources, Inc.

## Certificate Of Analysis

OXYGEN & NITROGEN PIN STANDARD

AR 661  
LOT AA897

PPM OXYGEN	PPM NITROGEN
MEAN = 11 PPM	MEAN = 304 PPM
ONE SIGMA = 3 PPM	ONE SIGMA = 15 PPM
TWO SIGMA = 6 PPM	TWO SIGMA = 30 PPM
RANGE = 6 - 16 PPM	RANGE = 278 - 319 PPM

METHOD OF ANALYSIS IS ASTM E 1019 (LATEST REVISION)  
(INERT GAS FUSION)

PRIMARY STANDARDS USED DURING CALIBRATION:  
NIST 368, 1095, 1099, 163  
GERMAN 079-1, 285-1, 04-833, 228

### NOTES:

The mean value reported is derived by a number of data sets utilizing ASTM approved instrumentation.

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

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 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 AUGUST, 1997 \_\_\_\_\_