

Alpha Resources, Inc.

Certificate Of Analysis

AR 646
OXYGEN & NITROGEN PIN STANDARD
LOT # 31694A498

PPM OXYGEN
MEAN = 31
ONE SIGMA = 3
TWO SIGMA = 6
RANGE = 25 - 37

PPM NITROGEN
MEAN = 677
ONE SIGMA = 9
TWO SIGMA = 18
RANGE = 660 - 693

Method of analysis
ASTM E 1019
(Latest Revision)

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

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

The following Primary Standards were used for calibration.

NIST	73c, 343a, 50c
German	BAM SRM 231, 238
Japanese	JSS GS-1C

Notes:

This Certificate was revised in October of 2001 to correct a typographical error in the oxygen, two sigma value and the range of the oxygen values.

The statistical analysis, 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 April, 1998

