

Alpha Resources, Inc.

Certificate Of Analysis

AR 660
OXYGEN & NITROGEN PIN STANDARD
LOT # T39074B02

PPM OXYGEN
MEAN = 57
ONE SIGMA = 5
TWO SIGMA = 10
RANGE = 47 – 67

PPM NITROGEN
MEAN = 61
ONE SIGMA = 4
TWO SIGMA = 8
RANGE = 53 – 69

Method of Analysis is ASTM E 1019-00

Primary Standards Employed:

NIST	SRM 133a, 1091a
JSS	GS 1d, GS 5c
NCS	NS 20015

Notes:

This certificate was revised in January 2003 to reflect new one sigma, two sigma and range values for oxygen and nitrogen.

The mean analytical values were derived by a number of data sets utilizing various ASTM approved instruments.

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

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.

The material used in production of this standard was sampled in accordance with ARI 032. The samples for round robin testing were selected in accordance with ARI 014. The above values relate only to the material used to produce this standard.

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 November, 2002

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