Alpha Resources, Inc. Certificate Of Analysis

OXYGEN & NITROGEN PIN STANDARD

AR 1652 LOT 127528A97

PPM OXYGEN MEAN = 54 PPM ONE SIGMA = 8 PPM TWO SIGMA = 16 PPM RANGE = 42 - 66 PPM PPM NITROGEN MEAN = 532 PPM ONE SIGMA = 10 PPM TWO SIGMA = 20 PPM RANGE = 515 - 548 PPM

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

One or more of the following standard reference materials were employed in calibration:

NOTES:

JAPANESE SRM JSS GS-1C GERMAN BAM SRM 231, 238, 239, 285

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 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 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 OCTOBER, 1997

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