

Elemental Microanalysis Limited

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Certificate of Analysis**Part No. B2418****Oxygen & Nitrogen Pin Standard**

| | |
|--------------------|----------------|
| Certificate Number | 1214B |
| Date | 18 August 2015 |
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% Oxygen**Mean = 0.0039****One Sigma Standard Deviation = +/- 0.0003****Expanded Uncertainty = +/- 0.0006****(k=2, 95% confidence, n=100)****% Nitrogen****Mean = 0.054****One Sigma Standard Deviation = +/- 0.001****Expanded Uncertainty = +/- 0.002****(k=2, 95% confidence, n=110)**

Method of Analysis is ASTM E 1019-11, and ARI 034

Primary (NMI) Standard Employed:

| | |
|------|------------------|
| NIST | 345a, 1093 |
| NCS | NS11043, NS22006 |
| JSS | GS-1d, |

Notes

The mean analytical values were derived by data sets showing traceability to the above mentioned standards, and reported in mass fraction. The precision values represent the estimated uncertainty derived from the data sets and may not represent your testing capabilities. Refer to your test method for the expanded method derived uncertainty and typical analysis sample size if needed.

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. This bottle contains 100g, 1.0gm pins (nominal), to be used directly from the bottle with no preparation. This standard has an indefinite shelf life. Keep sealed and store in a cool dry place.

Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Elemental Microanalysis Ltd 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 July 29, 2015

Elemental Microanalysis Limited