

Certificate of Analysis
Part No. B2413
Oxygen & Nitrogen Pin Standard

Certificate Number 318A
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% Oxygen
Mean = 0.0035
Standard Deviation = +/-0.0004
Expanded Uncertainty = +/-0.0008
(k=2, @ 95% confidence, n=42)

% Nitrogen
Mean = 0.0738
Standard Deviation = +/-0.0006
Expanded Uncertainty = +/-0.0014
(k=2, @ 95% confidence, n=34)

Method of analysis is ASTM E 1019-18 and ARI 034

Primary (NMI) Standards Employed

NIST	343a
BAM	026-1
NCS	NS11043, NS11037, NS92008
ALPHA - AR646-415B, AR668-912A, AR646-414C, AR1652-717B, AR1658-717D, AR655-112A, AR676-514B	

Notes

This steel pin standard is intended to be a calibration or QC validation of Oxygen and Nitrogen on inert gas fusion analysers utilizing infrared and thermal conductivity detection as described in ASTM E1019. The analytical sample and minimum size used for testing was 1 pin (1.0g nominal). The precision values represent the estimated mean, standard deviation and expanded uncertainty derived from the data sets. Refer to your test method and or your instrument manufacturer for the expanded method derived uncertainty.

The material used in production of this standard was sampled in accordance with ARI 032. The samples used 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 consists of 100, 1.0g pins (nominal), to be used directly from the bottle with no preparation. While unable to determine a definite shelf life, this reference should be reviewed every 25 years from the date of certification. Keep sealed and store under normal laboratory conditions.

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 (working standard), and is traceable to the above-mentioned standards. For good laboratory practice it is recommended that all standards be verified prior to use.

Certified August 1, 2018

Elemental Microanalysis Limited