Elemental Microanalysis Ltd
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United Kingdom Certificate of Analysis

Part No. 12416
Steel Pin Standard

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| Analytical Results |  |
| :---: | :---: |
| \% Oxygen | \% Nitrogen |
| Mean $=0.0110$ | Mean $=0.0102$ |
| Standard Deviation $= \pm 0.0011$ | Standard Deviation $= \pm 0.0004$ |
| Expanded Uncertainty $= \pm 0.0024$ | $(\mathrm{k}=2$, @95\% confidence, $\mathrm{n}=60)$ |
| $(\mathrm{k}=2, @ 95 \%$ confidence, $\mathrm{n}=60)$ |  |
| Primary (NMI/Guide 34/ISO17034) Reference Materials Employed: |  |
| NIST: 2168, 50c, 368, 1099, 1098, 345b, 12h |  |
| BAM: 183-1, 079-1, 027-1 |  |
| JSS: SS 2-76, GS-5D, 387-1 |  |
| NCS: NS20050, NS11037 |  |
| Method of Analysis is ASTM E 1019-18 |  |

*The analytical results above are provided by an accredited reference material manufacturer with a current certification in ISO 17025 and 17034.

The intended use of this Reference Material (RM) is to be a calibration or QC validation of Oxygen and Nitrogen on inert gas fusion analysers utilizing infrared ( O ) and thermal conductivity ( N ) detection as described in ASTM E1019.

The minimum sample size to perform this intended use is 1 pin ( 1 g nominal).
The Period of Validity for this RM is not able to be determined and should be reviewed 25 years after the date below.

This bottle contains 100 g of Steel Pins to be used per the test method you follow. Keep sealed tightly and store under normal laboratory conditions.

Refer to your test methods and or manufacturer manual for expanded uncertainties, repeatability/reproducibility factors.

For good laboratory practice, we recommend that all reference materials be verified as fit for purpose prior to use. 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.

Certified on the $04^{\text {th }}$ of April 2024.
Elemental Microanalysis Ltd

