Paragon Scientific Ltd

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CERTIFICATE OF CALIBRATION

ISSUED BY PARAGON SCIENTIFIC LIMITED

Date of Issue: Certificate No. **4159B**

Approved Signatory

Name Mr. P. Whitehurst

Technical Director

Signature

ISO 17034 Automatic Smoke Point of Jet Aviation Fuel

Part Number: **CRMU-SPKR** Lot No: **2211609** Expiry Date:

Nature:	**Jet Aviation Fuel**
Certified Value:	**23.90 mm**
Expanded Uncertainties, 95% Level of Confidence:	**0.2 mm**
Test Method Employed:	**ASTM D1322**
Alternative Test Methods:	**IP 57, IP 598, ISO3014, BS:2000:57**

Certification Procedure

The standard has been tested and certified in accordance with ISO 17034 and ISO Guide 35 by method specific inter-laboratory study involving a statistically significant number of laboratories with ISO 17025 accreditation for the relevant test method. The certified values and uncertainties were generated using automatically operated equipment.

Recommended Use

This product is intended to confirm the accuracy of an instrument and / or procedure for an analytical method. Samples should be prepared and thermally conditioned in accordance with the relevant standard before use. Certification is only valid for a freshly opened sample. Certification is not valid for reused standard. Sample should be disposed of according to local regulations. The shelf life of this product is guaranteed until the expiry date, provided the bottle is unopened and stored at +5 °C to +25 °C. The guarantee is void if the bottle seal is broken. No minimum volume is required to guarantee homogeneity.

Characterisation Procedures

Inter-laboratory Studies

The certified values and tolerances quoted for smoke point are derived from inter-laboratory studies involving a statistically significant number of laboratories. The competence of the laboratories involved in the studies was assured by only using laboratories accredited to ISO 17025 for the tests concerned by the appropriate national body.

Uncertainties

The uncertainty quoted for each test is calculated at a level of confidence of approximately 95%. When using this material to evaluate test procedures and / or instrument performance, the results obtained should be compared to the certified value with reference to the test reproducibility or other calculated protocols relevant to the test method employed.

Note

ASTM D1322 consists of both a manual smoke point procedure and an automatic smoke point procedure. The precision section details different repeatability / reproducibility for each of the two procedures. ASTM D1322 also details a bias between the two procedures in the form of a uniform ratio across the range of results that can be achieved. The user should take into account that this reference material has been certified using automatic equipment and automatic precision, there would therefore be a bias in the analysis if used with the manual procedure.