

Reference Material Certificate

ISSUED BY **STANHOPE-SETA Richardson Laboratory**

PRODUCTION DATE **2024-09-03** CERTIFICATE NUMBER **000211**

Certificate Issued By:



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Approved By:
Duncan Black

Signature:



Name of material: FAME (Fatty Acid Methyl Ester) Verification Material 15 %

Product code: SETA-0112-0031 Batch number: 2409012001

Description of CRM: FAME in a liquid hydrocarbon mixture

Method of Certification: Produced in general accordance with the principles of ISO 17034:2016 and ISO 33405:2024 (previously ISO Guide 35). Components were weighed out using calibrated analytical balances, which have current ISO 17025:2017 calibration certificates. The mass per unit mass concentration was calculated gravimetrically.

Instructions for handling of the CRM: This CRM must be stored in the original tightly closed bottle between 15-25 °C. Pour directly from bottle. Do not return removed aliquots to bottle.

Hazards: Refer to SDS 'FAME (Fatty Acid Methyl Ester) Verification Material SDS' prior to handling.

Certified Value: FAME Volume fraction (%): **15.01**
Uncertainty (\pm v/v%) * **0.03**

Intended use: Certified reference material to be used in accordance with ASTM D8274 - Determination of Biodiesel (Fatty Acid Methyl Esters) Content in Diesel Fuel Oil by Portable Rapid Mid-Infrared Analyzer

* The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2.284$, providing a level of confidence of approximately 95 %. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

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- Commutability: Value is only commutable to the test methods stated in the intended use section.
- Level of homogeneity: Homogeneity samples are selected by a random sampling procedure. It has been demonstrated that this CRM batch is homogenous from inter-bottle testing. Stability is guaranteed during the whole shelf life provided the solution is kept under conditions presented below.
- Expiry date: 2 years from date of production. The certification is nullified if the material is damaged, contaminated, otherwise modified, or used in a manner for which it was not intended.