

Certificate of Analysis

CERTIFIED REFERENCE MATERIAL

Distillation Standard acc to ASTM D86 and EN ISO 3405 (diesel)

Lot N: XXXXXX
Barcode: XXXXXXXX

Ref N: PPDD.L25

Certification Date: XXXXXX

Parameter	Certified Value*	Uncertainty**	Test Methods
Distillation characteristics:			ASTM D86 / EN ISO 3405
Initial Boiling Point (IBP)	168.16 °C	+/- 0.73 °C	
5% v/v recovered	203.98 °C	+/- 0.38 °C	
10% v/v recovered	215.91 °C	+/- 0.34 °C	
20% v/v recovered	231.37 °C	+/- 0.36 °C	
30% v/v recovered	244.05 °C	+/- 0.37 °C	
40% v/v recovered	256.52 °C	+/- 0.40 °C	
50% v/v recovered	269.83 °C	+/- 0.37 °C	
60% v/v recovered	284.75 °C	+/- 0.39 °C	
70% v/v recovered	300.74 °C	+/- 0.64 °C	
80% v/v recovered	319.62 °C	+/- 0.52 °C	
90% v/v recovered	344.33 °C	+/- 0.71 °C	
95% v/v recovered	364.61 °C	+/- 1.28 °C	
Final Boiling Point (FBP)	367.66 °C	+/- 1.18 °C	

* The certified values were obtained using calibration acc. to internal procedures WQP 5.15.1/37

** The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA 4/02.

Metrological traceability:

The metrological traceability is assured through calibration on Automatic distiller. The certified values and their uncertainties are based solely on the exploitation of the results of analyses obtained by methods recognized by ISO, ASTM and other associated organizations.

This certified reference material is produced from a petroleum product.

The measurement results are traceable to SI.

The thermometers and laboratory glassware used for solution's calibration are calibrated from an ISO 17025 accredited laboratory. The ambient conditions are controlled with a hygrometer, calibrated from an ISO 17025 accredited laboratory.

Expiry date: XXXXXX

Storage Conditions: Store under normal laboratory conditions, at temperatures between 15° to 25°C



Intended use: For Laboratory Use Only



This CRM is intended for:

- Calibration or adjustment of Automatic distiller
- Internal Quality Control of the measurements
- Validation of analytical methods

This statement is not intended to restrict the use for other purposes.

Instructions for the correct use:

The certified values are valid only for freshly opened bottle, they are not valid for reused samples.

This certified reference material could be used directly.

To ensure the homogeneity gently invert bottle several times, without shaking, before use. Shaking adds air to the sample and may cause erroneous results.

Stability and storage:

This CRM is with a guaranteed stability until +/- 0.5% of the certified value within its shelf-life. Stability is guaranteed, provided that the solution is kept in its original packaging, stored tightly closed, as written in the section: Storage Conditions. According to an internal procedure the producer will monitor this CRM at appropriate intervals and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of the CRM during the stated period of its certificate's validity.

Hazardous situation:

The normal laboratory safety precautions should be observed while working with this CRM. Further details for the handling of this CRM are available in its safety data sheet.

Level of homogeneity:

The material was tested for homogeneity by analyzing randomly selected samples according to an internal procedure. The material was judged to be homogeneous. The level of homogeneity proved satisfactory for a sample volume of 2 ml. The uncertainty incorporates the sample standard deviation combined with the uncertainty calculated from the homogeneity and stability studies. To ensure sufficient homogeneity of the sample, please follow the Instruction for correct usage.

Names of certifying officers:

Laboratory: Nikola Pavlov

Manager: Krassimira Taralova

This certificate has been computer generated and does not signed

This document is designed and the certified value(s) and uncertainty(ies) are determined in accordance with ISO Guide 31, ISO Guide 35, and Eurachem / CITAC Guides

This certificate relates solely to the lot number given above.

All processes (including generating of this certificate) are completely controlled by a specialized Computer-Aided-Manufacturing (CAM) software.

This Certified Reference Material was produced under a quality management system that is:

- Registered to ISO 9001 Quality Management System (Lloyd's Register Quality Assurance Ltd Cert No 0039638)
- Accredited according to ISO/IEC 17025
- Accredited according to ISO 17034

Signed by: , Chemical Production Manager