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STN	**Kvapalné ropné výrobky Stanovenie destilačných charakteristík pri atmosférickom tlaku Mikrodestilácia**	**STN EN 17306** 65 6038

Liquid petroleum products - Determination of distillation characteristics at atmospheric pressure - Micro-distillation

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Liquid petroleum products - Determination of distillation characteristics at atmospheric pressure - Micro-distillation

Produits pétroliers liquides - Détermination des caractéristiques de distillation à la pression atmosphérique - Microdistillation

Flüssige Mineralölerzeugnisse - Bestimmung der Destillationseigenschaften bei atmosphärischem Druck - Mikrodestillation

This European Standard was approved by CEN on 18 September 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 17306:2023) has been prepared by Technical Committee CEN/TC 19 "Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 17306:2019.

In comparison with the previous edition, a bias correction explanation has been introduced, which has no effect on the method precision.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

The distillation (volatility) characteristics of hydrocarbons and other liquids have an important effect on their safety and performance, especially in the case of fuels and solvents. The boiling range gives information on the composition, the properties, and the behaviour of the fuel during storage and use. Volatility is the major determinant of the tendency of a hydrocarbon mixture to produce potentially explosive vapours.

The distillation characteristics are critically important for both automotive and aviation gasolines, affecting starting, warm-up and tendency to vapour lock at high operating temperature or at high altitude, or both. The presence of high boiling point components in these and other fuels can significantly affect the degree of formation of solid combustion deposits.

Distillation limits are often included in petroleum product specifications, in commercial contract agreements, process refinery/control applications, and for compliance to regulatory rules.

This test method can be applied to contaminated products or hydrocarbon mixtures. This is valuable for fast product quality screening, refining process monitoring, fuel adulteration control, or other purposes including use as a portable apparatus for field testing.

This document is at of the time of publication technically equivalent to ASTM D7345 [1], on which it is based.

This test method uses an automatic micro distillation apparatus, provides fast results using small sample volume, and eliminates much of the operator time and subjectivity in comparison to EN ISO 3405 or ASTM D1160 [2].

1 Scope

This document specifies a laboratory method for the determination of the distillation characteristics of light and middle distillates derived from petroleum and related products of synthetic or biological origin with initial boiling points above 20 °C and end-points below approximately 400 °C, at atmospheric pressure utilizing an automatic micro distillation apparatus.

This test method is applicable to such products as light and middle distillates, automotive spark-ignition engine fuels, automotive spark-ignition engine fuels containing up to 20 % (*V/V*) ethanol, aviation gasolines, aviation turbine fuels, (paraffinic) diesel fuels, FAME (B100), diesel blends up to 30 % (*V/V*) fatty acid methyl esters (FAME), special petroleum spirits, naphtha's, white spirits, kerosene's, burner fuels, and marine fuels.

The test method is also applicable to hydrocarbons with a narrow boiling range, like organic solvents or oxygenated compounds.

The test method is designed for the analysis of distillate products; it is not applicable to products containing appreciable quantities of residual material.

WARNING — The use of this document can involve hazardous materials, operations and equipment. This document does not purport to address all of the safety problems associated with its use. It is the responsibility of user of this document to take appropriate measures to ensure the safety and health of personnel prior to application of the document, and to fulfil statutory and regulatory requirements for this purpose.

NOTE For the purpose of this document, the expression "% (*V/V*)" is used to represent the volume fraction.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 3170, *Petroleum liquids — Manual sampling (ISO 3170)*

EN ISO 3171, *Petroleum liquids — Automatic pipeline sampling (ISO 3171)*

EN ISO 3405, *Petroleum and related products from natural or synthetic sources — Determination of distillation characteristics at atmospheric pressure (ISO 3405)*