

**Petroleum products - Determination of boiling
range distribution by gas chromatography method
- Part 3: Crude oil**

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EESTI STANDARDI EESSÕNA

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<p>Käesolev Eesti standard EVS-EN 15199-3:2008 sisaldab Euroopa standardi EN 15199-3:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 21.07.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 21.05.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 15199-3:2008 consists of the English text of the European standard EN 15199-3:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 21.07.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 21.05.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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ICS 75.080

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ICS 75.080

English Version

Petroleum products - Determination of boiling range distribution
by gas chromatography method - Part 3: Crude oil

Produits pétroliers - Détermination de la répartition dans
l'intervalle de distillation par méthode de chromatographie
en phase gazeuse - Partie 3: Pétrole brut

Mineralölerzeugnisse - Gaschromatographische
Bestimmung des Siedeverlaufes - Teil 3: Rohöle

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Foreword

This document (EN 15199-3:2008) 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of an identical text or by endorsement, at the latest by November 2008, and conflicting national standards shall be withdrawn at the latest by November 2008.

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

EN 15199 consists of the following parts, under the general title *Petroleum products — Determination of boiling range distribution by gas chromatography method*:

- *Part 1: Middle distillates and lubricating base oils*
- *Part 2: Heavy distillates and residual fuels*
- *Part 3: Crude oil*

A fourth part on light fractions is under study.

This part of the standard describes the determination of boiling range distribution of materials with initial boiling points (IBP) below 100 °C and final boiling points (FBP) above 750 °C. For testing materials with initial boiling points (IBP) above 100 °C and final boiling point (FBP) below 750 °C, part 1 of the standard may be used. For testing materials with initial boiling points (IBP) above 100 °C and final boiling point (FBP) above 750 °C, part 2 of the standard may be used.

This part of the standard is harmonized with IP 545 [1] and ASTM D 7169 [2].

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

1 Scope

This European Standard describes a method for the determination of the boiling range distribution of petroleum products by capillary gas chromatography using flame ionisation detection. The standard is applicable to crude oils. The boiling range distribution and recovery to C₁₀₀ or C₁₂₀ can be determined.

Two procedures are described: single and dual analysis mode. The basis of each is the calculation procedure as described in Annex A.

NOTE 1 This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations.

NOTE 2 For the purposes of this European Standard, the terms “% (m/m)” and “% (V/V)” are used to represent respectively the mass fraction and the volume fraction.

WARNING — Use of this European Standard may involve hazardous materials, operations and equipment. This European Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

2 Normative references

The following referenced documents are indispensable for the application 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 3170:2004)*

EN ISO 3171, *Petroleum liquids - Automatic pipeline sampling (ISO 3171:1988)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE Explanation of some of the terms is given in Figure 1.

3.1 initial boiling point IBP

temperature corresponding to the retention time at which a net area count equal to 0,5 % of the total sample area under the chromatogram is obtained

3.2 final boiling point FBP

temperature corresponding to the retention time at which a net area count equal to 99,5 % of the total sample area under the chromatogram is obtained

NOTE If the found recovery is less than 100 %, the final boiling point is reported as > 720 °C or > 750 °C at that recovery.