

Petroleum products - Determination of cloud point -  
Automated step-wise cooling method (ISO 22995:2019)

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ICS 75.080

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EUROPEAN STANDARD

**EN ISO 22995**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 75.080

English Version

## Petroleum products - Determination of cloud point - Automated step-wise cooling method (ISO 22995:2019)

Produits pétroliers - Détermination du point de trouble  
- Méthode automatisée par refroidissement par paliers  
(ISO 22995:2019)

Mineralölerzeugnisse - Bestimmung des Cloudpoints -  
Verfahren mit automatischer schrittweiser Abkühlung  
(ISO 22995:2019)

This European Standard was approved by CEN on 2 April 2019.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

## European foreword

This document (EN ISO 22995:2019) has been prepared by Technical Committee ISO/TC 28 "Petroleum and related products, fuels and lubricants from natural or synthetic sources" in collaboration with 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of an identical text or by endorsement, at the latest by November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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.

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## Endorsement notice

The text of ISO 22995:2019 has been approved by CEN as EN ISO 22995:2019 without any modification.

# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Principle</b> .....	<b>1</b>
<b>5 Reagents and materials</b> .....	<b>2</b>
<b>6 Apparatus</b> .....	<b>2</b>
<b>7 Sampling</b> .....	<b>3</b>
<b>8 Sample preparation</b> .....	<b>4</b>
<b>9 Preparation of the apparatus</b> .....	<b>4</b>
<b>10 Procedure</b> .....	<b>4</b>
<b>11 Expression of result</b> .....	<b>4</b>
<b>12 Precision</b> .....	<b>5</b>
12.1 General.....	5
12.2 Repeatability, <i>r</i> .....	5
12.3 Reproducibility, <i>R</i> .....	5
<b>13 Test report</b> .....	<b>5</b>
<b>Bibliography</b> .....	<b>6</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 19, *Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin*, in collaboration with ISO Technical Committee TC 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

This document describes an automated method for the determination of the cloud point, based on the manual determination technique described in ISO 3015<sup>[2]</sup>. In parallel with the revision of the manual method, the scope has been extended to new fuels.

# Petroleum products — Determination of cloud point — Automated step-wise cooling method

**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 users of this document to take appropriate measures to ensure the safety and health of personnel prior to application of this document and to fulfil other applicable requirements for this purpose.

## 1 Scope

This document specifies a method to determine cloud point using a step-wise cooling technique that is executed by means of automated equipment types with optical detection mode.

The method is applicable to distillate fuels, fatty-acid methyl esters (FAME) and paraffinic diesel fuels, including blends thereof, as well as those containing flow-improvers or other additives, intended for use in diesel engines and domestic heating installations.

The method can be applied to other products such as vegetable oils or lubricants, but these kinds of products have not been evaluated during the interlaboratory study (ILS), no precision data are available.

## 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.

ISO 3170, *Petroleum liquids — Manual sampling*

ISO 3171, *Petroleum liquids — Automatic pipeline sampling*

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

### 3.1

#### **cloud point**

temperature at which a cloud of wax crystals first appears in a liquid when it is cooled under specified conditions

## 4 Principle

A sample is cooled at a specified rate and examined periodically or continuously. The temperature at which a cloud is first observed in the test jar is recorded as the cloud point.