ICS 75.080 SLOVENSKÁ TECHNICKÁ NORMA Marec 2020

STN	**Ropné výrobky Stanovenie distribúcie bodov varu Metóda plynovej chromatografie (ISO 3924: 2019)**	**STN EN ISO 3924 65 6517**

Petroleum products - Determination of boiling range distribution - Gas chromatography method (ISO 3924:2019)

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/20

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 3924

September 2019

ICS 75.080

Supersedes EN ISO 3924:2016

English Version

Petroleum products - Determination of boiling range distribution - Gas chromatography method (ISO 3924:2019)

Produits pétroliers - Détermination de la répartition dans l'intervalle de distillation - Méthode par chromatographie en phase gazeuse (ISO 3924:2019)

Mineralölerzeugnisse - Bestimmung des Siedeverlaufs - Gaschromatographisches Verfahren (ISO 3924:2019)

This European Standard was approved by CEN on 30 June 2019.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN ISO 3924:2019) 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of an identical text or by endorsement, at the latest by March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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 3924:2019 has been approved by CEN as EN ISO 3924:2019 without any modification.

INTERNATIONAL STANDARD

ISO 3924

Fifth edition
2019-07

Petroleum products — Determination of boiling range distribution — Gas chromatography method

Produits pétroliers — Détermination de la répartition dans l'intervalle de distillation — Méthode par chromatographie en phase gazeuse

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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).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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.

This document was prepared by Technical Committee ISO/TC 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*.

This method was originally based on the joined IP 406[3] and ASTM D2887[4] methods.

This fifth edition cancels and replaces the fourth edition (ISO 3924:2016), which has been technically revised. The main changes compared with the previous edition are as follows.

— The accelerated procedure has been moved from Annex B to the main body text. It is described as Procedure B and has a precision and bias calculation in relation to Procedure A (the original procedure).

— A new annex has been added with the newly defined boiling points for n-alkanes to keep the method technically equivalent with IP 406 and ASTM D2887.

— Annexes E and F have been added with information on the use of alternative carrier gases.

— Several safety warnings and editorial updates have been made.

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.

INTERNATIONAL STANDARD **ISO 3924:2019(E)**

Petroleum products — Determination of boiling range distribution — Gas chromatography method

WARNING — The use of this document can involve hazardous materials, operations and equipment. This document does not purport to address all 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 the document.

1 Scope

This document specifies a method for the determination of the boiling range distribution of petroleum products. The method is applicable to petroleum products and fractions with a final boiling point of 538 °C or lower at atmospheric pressure as determined by this document. This document does not apply to gasoline samples or gasoline components. The method is limited to products having a boiling range greater than 55 °C and having a vapour pressure sufficiently low to permit sampling at ambient temperature.

The document describes two procedures.

a) Procedure A allows a larger selection of columns and analysis conditions, such as packed and capillary columns as well as a thermal conductivity detector in addition to the flame ionization detector. Analysis times range from 14 min to 60 min.

b) Procedure B is restricted to only three capillary columns and requires no sample dilution. The analysis time is reduced to about 8 min.

Both procedures have been successfully applied to samples containing fatty acid methyl esters (FAME) up to 20 % (volume fraction).

NOTE For the purposes of this document, the terms "% (mass fraction)" and "% (volume fraction)" are used to represent the mass fraction (μ), the volume fraction (φ) of a material.

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*

