

SLOVENSKI STANDARD SIST EN ISO 12937:2001

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Petroleum products - Determination of water - Coulometric Karl Fischer titration method (ISO 12937:2000)

Mineralölerzeugnisse - Bestimmung des Wassergehaltes - Coulometrische Titration nach Karl Fischer (ISO 12937:2000) standards.iteh.ai)

Produits pétroliers - Dosage de l'eau - Méthode de titrage Karl Fischer par coulométrie (ISO 12937:2000) 69b62b4f1099/sist-en-iso-12937-2001

Ta slovenski standard je istoveten z: EN ISO 12937:2000

<u>ICS:</u>

75.080

Naftni proizvodi na splošno

Petroleum products in general

SIST EN ISO 12937:2001

en



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EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 12937

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English version

Petroleum products - Determination of water - Coulometric Karl Fischer titration method (ISO 12937:2000)

Produits pétroliers - Dosage de l'eau - Méthode de titrage Karl Fischer par coulométrie (ISO 12937:2000) Mineralölerzeugnisse - Bestimmung des Wassergehaltes -Coulometrische Titration nach Karl Fischer (ISO 12937:2000)

This European Standard was approved by CEN on 27 October 2000.

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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 Management Centre has the same status as the official versions.

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

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Ref. No. EN ISO 12937:2000 E

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Foreword

The text of the International Standard ISO 12937:2000 has been prepared by Technical Committee ISO/TC 28 "Petroleum products and lubricants" in collaboration with Technical Committee CEN/TC 19 "Petroleum products, lubricants and related products", 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of an identical text or by endorsement, at the latest by May 2001, and conflicting national standards shall be withdrawn at the latest by May 2001.

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

Endorsement notice

The text of the International Standard ISO 12937:2000 was approved by CEN as a European Standard without any modification.

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Annex ZA (normative) **Normative references to international publications with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

Publication	Year	Title	EN	Year
ISO 3170	1988	Petroleum liquids - Manual sampling	EN ISO 3170	1998
ISO 3171	1988	Petroleum liquids Automatic pipeline sampling (Standards.iteh.ai)	ENISO 3171	1999
ISO 3696	1987 https://star	Water for analytical laboratory use - Specification and test methods dards.iteh.ai/catalog/standards/sist/ac327b32-776 69b62b4f1099/sist_en_iso_12937-2001	EN ISO 3696 68-45da-970e-	1995

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INTERNATIONAL STANDARD

ISO 12937

First edition 2000-11-01

Petroleum products — Determination of water — Coulometric Karl Fischer titration method

Produits pétroliers — Dosage de l'eau — Méthode de titrage Karl Fischer par coulométrie

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

International Standard ISO 12937 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*, Subcommittee SC 6, *Bulk cargo transfer, accountability, inspection and reconciliation*.

Annex A forms a normative part of this International Standard. Annex B is for information only.

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Petroleum products — Determination of water — Coulometric Karl Fischer titration method

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

1 Scope

This International Standard specifies a method for the direct determination of water in petroleum products boiling below 390 °C. It covers the mass fraction range 0,003 % (m/m) to 0,100 % (m/m). It is not applicable to products containing ketones or to residual fuel oils.

This International Standard may be applicable to lubricating base oils. However, the precision has not been established for these materials.

The precision given in clause 12 is based upon data obtained using dual-cell, dual-electrolyte systems.

NOTE 1 A number of substances and classes of compounds associated with condensation or oxidation-reduction reactions interfere in the determination of water by Karl Fischer titration. In petroleum products, the most common interferences are hydrogen sulfide and mercaptan sulfur, however, Smass Ifractions7 of these below 0,003 % (*m/m*) as sulfur will not cause significant interference over the /range 0,003 % (*m/m*) to 0,100 % (*m/m*) water? (Other organic sulfur compounds commonly present such as sulfides, disulphides and thiophenes; do not interfere 2937-2001

NOTE 2 An alternative procedure is provided for information in annex B for the direct determination of water over the range 0,003 % (V/V) to 0,100 % (V/V) in petroleum products. The limitations under which this alternative volume measurement may be used are listed in annex B.

NOTE 3 For the purposes of this International Standard, the terms "% (m/m)" and "% (V/V)" are used to represent the mass and volume fraction of a material respectively.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3170:1988, Petroleum liquids — Manual sampling.

ISO 3171:1988, Petroleum liquids — Automatic pipeline sampling.

ISO 3696:1987, Water for analytical laboratory use — Specification and test methods.