
Surova nafta in tekoči naftni proizvodi - Laboratorijsko določanje gostote - Metoda z areometrom (ISO/DIS 3675:2026)

Crude petroleum and liquid petroleum products - Laboratory determination of density - Hydrometer method (ISO/DIS 3675:2026)

Rohöl und flüssige Mineralölerzeugnisse - Bestimmung der Dichte im Labor - Aräometer-Verfahren (ISO/DIS 3675:2026)

Pétrole brut et produits pétroliers liquides - Détermination en laboratoire de la masse volumique - Méthode à l'aréomètre (ISO/DIS 3675:2026)

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ICS:

75.040	Surova nafta	Crude petroleum
75.080	Naftni proizvodi na splošno	Petroleum products in general

oSIST prEN ISO 3675:2026**en,fr,de**

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DRAFT International Standard

ISO/DIS 3675

Crude petroleum and liquid petroleum products — Laboratory determination of density — Hydrometer method

*Pétrole brut et produits pétroliers liquides — Détermination en
laboratoire de la masse volumique — Méthode à l'aréomètre*

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ISO/DIS 3675:2026(en)

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.

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.

International Standard ISO 3675 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*, subcommittee SC 2, *Static petroleum measurement*.

This fifth edition cancels and replaces the fourth edition, of which it constitutes a Technical revision.

[Annex A](#) forms an integral part of this International Standard. [Annex B](#) is for information only. Appendix 1 has been added, since after the withdrawal of ISO 649/1 “Laboratory glassware - Density hydrometers for general purposes - Part 1 : Specification” in 2024, there is no remaining ISO standard covering the general principles for the construction of hydrometers.

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Crude petroleum and liquid petroleum products — Laboratory determination of density — Hydrometer method

WARNING — The use of this International Standard may involve hazardous materials, operations and equipment. This International Standard does not purport to address all 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 prior to use.

1 Scope

This International Standard specifies a method for the laboratory determination, using a glass hydrometer, of the density of crude petroleum, liquid petroleum products, and mixtures of petroleum and non-petroleum products normally handled as liquids and having a Reid vapour pressure (RVP) of 100 kPa or less.

This International Standard is suitable for determining the density of mobile transparent liquids. It can also be used for viscous liquids by carrying out the determinations at temperatures above ambient using a suitable liquid bath for temperature control. It can also be used for opaque liquids by reading the hydrometer scale where the top of the meniscus meets the stem of the hydrometer and applying a correction from [table 1](#) (see [11.2](#)).

Since hydrometers are calibrated to read correctly at the specified temperature, scale readings made at other temperatures are only hydrometer readings and not values of density at these other temperatures.

NOTES

- 1 The accuracy of the density, determined by the procedures given in this International Standard, for volatile and/or waxy crude oils containing free and/or suspended water and sediments can be less than inferred from the precision data quoted in [clause 13](#). This is due to the possible loss of light components during sample mixing. However, sample mixing is necessary to ensure that the test portion transferred to the hydrometer cylinder is as representative as possible of the bulk sample. Suggested techniques are given in [clause 7](#) which may help to minimize such loss of light components.
- 2 Values of density at any temperature can be converted using standard measurement tables to equivalent values of other units, such as API gravity or relative density, so that measurements may be made in the units of local convenience.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. The latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 91, *Petroleum and related products — Temperature and pressure volume correction factors (petroleum measurement tables) and standard reference conditions*

ISO 387, *Hydrometers — Principles of construction and adjustment*

ISO 3170, *Hydrocarbon Liquids — Manual sampling*

ISO 3171, *Petroleum liquids — Automatic pipeline sampling*

3 Terms and Definitions

For the purposes of this International Standard, the following definitions apply.