



**International
Standard**

ISO 12185

**Crude petroleum, petroleum
products and related products —
Determination of density —
Laboratory density meter with an
oscillating U-tube sensor**

*Pétroles bruts, produits pétroliers et produits connexes —
Détermination de la masse volumique — Appareil de masse
volumique de laboratoire à capteur à tube en U oscillant*

**Second edition
2024-03**

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Published in Switzerland

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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 document 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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This document was prepared by Technical Committee ISO/TC 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*, Subcommittee SC 2, *Measurement of petroleum and related products*, in collaboration with 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 accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 12185:1996), which has been technically revised. It also incorporates the Technical Corrigendum ISO 12185:1996/Cor 1:2001. [www.iso.org/iso-12185-2024](http://www.iso.org/iso/12185-2024)

The main changes are as follows:

- definitions have been added in [Clause 3](#);
- a quality control (QC) check has been added in [9.5](#).

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.

Introduction

The first edition of this standard (ISO 12185:1996) was written at a time when there were relatively few models of density meter with an oscillating U-tube sensor on the market.

There are now a considerable number of different manufacturers and models of laboratory density meter available worldwide, many of which use different methodologies or algorithms to cope with the effect of viscosity on displayed density.

This document therefore encompasses a wider range of instruments than those covered in the first edition and gives guidance and requirements for accurate density analyses, such as apparatus and apparatus preparation (see [Clauses 5](#) and [9](#), [Annex A](#)).

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