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Fourth edition
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Liquid petroleum products — Determination of hydrocarbon types and oxygenates in automotive- motor gasoline and in ethanol (E85) automotive fuel — Multidimensional gas chromatography method

*Produits pétroliers liquides — Détermination des groupes
d'hydrocarbures et de la teneur en composés oxygénés de l'essence
pour moteurs automobiles et du carburant éthanol pour automobiles
E85 — Méthode par chromatographie multidimensionnelle 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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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*, 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 fourth edition cancels and replaces the third edition (ISO 22854:2016), which has been technically revised.

The main changes compared to the previous edition are as follows:

- the Scope and precision have been extended in concentration range;
- the precision statement has been updated;
- new examples of typical chromatograms have been added to [Annex B](#);
- the text has been further harmonized with ASTM D6839^[Z].

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.

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Introduction

Previous editions of this document were used for determination of saturated, olefinic, aromatic and oxygenated hydrocarbons in automotive motor gasoline according to European fuel specifications.

An interlaboratory study has shown that the method can be used for gasolines with a higher concentration of oxygenated compounds, including methanol. The interlaboratory study also provided data to calculate precision for toluene in gasoline.

[Annex B](#) now includes example chromatograms of gasolines with a variety of oxygenates which can be used for the correct identification of these oxygenates.

The test method described in this document is harmonized with ASTM D6839^[2].