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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 des composés oxygénés de l'essence pour moteurs
automobiles et du carburant pour automobiles éthanol (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.

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 28, *Petroleum products and related products of synthetic or biological origin*.

This third edition cancels and replaces the second edition (ISO 22854:2014), which contained a serious mistake in the scope regarding the levels of oxygen content.

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Introduction

This International Standard is a small update of the second edition (ISO 22854:2014), which in turn was a revision to extend the scope of the first edition. Originally ISO 22854:2008 (and its predecessor EN 14517:2004) was used for determination of saturated, olefinic, aromatic and oxygenated hydrocarbons in automotive motor gasoline according to European fuel specifications. Recent round-robin work has shown that the scope of the method can be updated without alteration to include petrol with higher oxygen percentages than mentioned in the first edition and will now be applicable for automotive motor gasoline up to and including E10.

An interlaboratory study organized by CEN has shown that the method can also be used for high-ethanol gasoline [also called ethanol (E85) automotive fuel], provided that the sample is diluted with a component that will not interfere with any of the components or group of components that need to be analysed. Details of how to perform such analysis are given in 8.2.

The derived precision data for methanol do not comply with the precision calculation as presented in this International Standard. No precision calculation for methanol has been established as the need for such data has not been expressed. If methanol is present in the automotive motor gasoline sample, it is recommended that its contents is verified by the use of an appropriate test method, for instance as given in EN 228^[1].

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