



International
Standard

ISO 6729

**Petroleum products and other
liquids — Standard test method for
ethanol determination in gasoline
blends by gas chromatography**

*Produits pétroliers et autres liquides - Éthanol — Détermination
de l'éthanol dans les mélanges d'essence par chromatographie 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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This document was prepared by Technical Committee ISO/TC 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*, Subcommittee SC 7, *Liquid Biofuels*.

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.

Petroleum products and other liquids — Standard test method for ethanol determination in gasoline blends by gas chromatography

1 Scope

This document establishes a method for determining the ethanol content in gasoline blends by gas chromatography (GC). This method is applicable to gasoline samples with ethanol contents ranging from 1,02 % to 52,3 %, in volume fraction.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

gasoline

hydrocarbon fuel or blends thereof, which is liquid at atmospheric pressure and is used in spark ignition engines

4 Principle

A sample is analysed by gas chromatography, using a flame ionization detector, split/splitless injector, nonpolar column, and external standardization technique for quantifying the ethanol content in gasoline blends.

5 Apparatus

5.1 Gas chromatograph equipped with a flame ionization detector, split/splitless inlet, automatic sampler, and oven with programmable temperature.

5.2 Electronic instrument for data acquisition, integrated with software for data processing.

5.3 Fused-silica capillary column with nonpolar stationary phase, 100 % dimethylpolysiloxane, and dimensions of 50 m x 0,20 mm x 0,50 µm.

5.4 Analytical balance, with minimum resolution of 0,1 mg.

5.5 GC autosampler vials (e.g 2 ml of volume capacity) with cap and septa [e.g septa of rubber-membrane/self-sealing polytetrafluoroethylene (PTFE)].