

STN	Kvapalné ropné výrobky Bezolovnatý benzín Stanovenie obsahu benzénu plynovou chromatografiou	STN EN 12177 65 6190
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Liquid petroleum products - Unleaded petrol - Determination of benzene content by gas chromatography

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Liquid petroleum products - Unleaded petrol - Determination of benzene content by gas chromatography

Produits pétroliers liquides - Essence sans plomb -
Détermination de la teneur en benzène par
chromatographie en phase gazeuse

Flüssige Mineralölerzeugnisse - Unverbleiter
Ottokraftstoff - Bestimmung des Benzolgehaltes mittels
Gaschromatographie

This European Standard was approved by CEN on 16 October 2022.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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EN 12177:2022 (E)

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European foreword

This document (EN 12177:2022) has been prepared by Technical Committee CEN/TC 19 “Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12177:1998.

At the time of the development of the test method, the ethanol content of gasoline was limited to 5 % (V/V) which was reflected in the scope of the test method. Since several years, fuels containing up to 10 % of ethanol (3,7 % (m/m)) are common in the European market. This revision is meant to extend the scope of the test methods to those fuels, thus reflecting market needs.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

EN 12177:2022 (E)**1 Scope**

This document specifies a column switching gas chromatographic method for the quantitative determination of benzene content in the range 0,05 % (V/V) to 6 % (V/V) in unleaded petrol having a final boiling point not greater than 220 °C.

The method described in this document is suitable for determining benzene in petrol, including petrol containing oxygenates up to E10 (up to 3,7 % (m/m) oxygen content), in line with the relevant EC Directives [1].

NOTE For the purposes of this document, the terms "% (V/V)" and "% (m/m)" are used to represent respectively the volume fraction and the mass fraction.

WARNING — Use of this document might involve hazardous materials, operations and equipment. This document does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 3170, *Petroleum liquids — Manual sampling (ISO 3170)*

EN ISO 3171, *Petroleum liquids — Automatic pipeline sampling (ISO 3171)*

EN ISO 3675, *Crude petroleum and liquid petroleum products — Laboratory determination of density — Hydrometer method (ISO 3675)*

EN ISO 3838, *Crude petroleum and liquid or solid petroleum products — Determination of density or relative density — Capillary-stoppered pycnometer and graduated bicapillary pycnometer methods (ISO 3838)*

EN ISO 12185, *Crude petroleum and petroleum products — Determination of density — Oscillating U-tube method (ISO 12185)*

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