

STN	Ropné výrobky Určovanie typov aromatických uhľovodíkov v stredných destilátoch Metóda vysokoúčinnnej kvapalinovej chromatografie s detekciou indexu lomu	STN EN 12916+A1 65 6261
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Petroleum products - Determination of aromatic hydrocarbon types in middle distillates - High performance liquid chromatography method with refractive index detection

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

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English Version

**Petroleum products - Determination of aromatic
hydrocarbon types in middle distillates - High
performance liquid chromatography method with
refractive index detection**

Produits pétroliers - Détermination des familles
d'hydrocarbures aromatiques dans les distillats
moyens - Méthode par chromatographie liquide à
haute performance avec détection par réfractométrie
différentielle

Mineralölerzeugnisse - Bestimmung von aromatischen
Kohlenwasserstoffgruppen in Mitteldestillaten -
Hochleistungsflüssigkeitschromatographie-Verfahren
mit Brechzahl-Detektion

This European Standard was approved by CEN on 15 April 2019 and includes Amendment 1 approved by CEN on 20 May 2022.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 12916:2019+A1:2022 (E)

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European foreword

This document (EN 12916:2019+A1:2022) 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of an identical text or by endorsement, at the latest by February 2023, and conflicting national standards shall be withdrawn at the latest by February 2023.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 includes Amendment 1 approved by CEN on 20 May 2022.

This document supersedes A1 EN 12916:2019 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

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EN 12916:2019+A1:2022 (E)**1 Scope**

This document specifies a test method for the determination of the content of mono-aromatic, di-aromatic and tri+-aromatic hydrocarbons in diesel fuels, paraffinic diesel fuels and petroleum distillates.

This document defines two procedures, A and B.

Procedure A is applicable to diesel fuels that may contain fatty acid methyl esters (FAME) up to 30 % (V/V) (as in [1], [2] or [3]) and petroleum distillates in the boiling range from 150 °C to 400 °C (as in [4]).

Procedure B is applicable to paraffinic diesel fuels with up to 7 % (V/V) FAME. This procedure does not contain a dilution of the sample in order to determine the low levels of aromatic components in these fuels.

The polycyclic aromatic hydrocarbons content is calculated from the sum of di-aromatic and tri+-aromatic hydrocarbons and the total content of aromatic compounds is calculated from the sum of the individual aromatic hydrocarbon types. ^[A1] The measurement ranges that apply to this method are given in Table 2 and 3. ^[A1]

Compounds containing sulfur, nitrogen and oxygen can interfere in the determination; mono-alkenes do not interfere, but conjugated di-alkenes and poly-alkenes, if present, can do so.

NOTE 1 For the purpose of this European Standard, the terms “% (m/m)” and “% (V/V)” are used to represent the mass fraction, μ , and the volume fraction, φ , of a material respectively.

NOTE 2 By convention, the aromatic hydrocarbon types are defined on the basis of their elution characteristics from the specified liquid chromatography column relative to model aromatic compounds. Their quantification is performed using an external calibration with a single aromatic compound for each of them, which may or may not be representative of the aromatics present in the sample. Alternative techniques and test methods may classify and quantify individual aromatic hydrocarbon types differently.

NOTE 3 Backflush is part of laboratory-internal maintenance.

WARNING — The use of this standard can involve hazardous materials, operations and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of users of this standard to take appropriate measures to ensure the safety and health of personnel prior to application of the standard, and fulfil statutory and regulatory requirements for this purpose.

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 14214, *Liquid petroleum products — Fatty acid methyl esters (FAME) for use in diesel engines and heating applications — Requirements and test methods*

EN ISO 1042, *Laboratory glassware - One-mark volumetric flasks (ISO 1042:1998)*

EN ISO 3170, *Petroleum liquids - Manual sampling (ISO 3170:2004)*

EN ISO 3171, *Petroleum liquids - Automatic pipeline sampling (ISO 3171:1988)*

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