ICS 75.160.20 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2026

STN	**Kvapalné ropné výrobky Stanovenie obsahu metylesterov mastných kyselín (FAME) v stredných destilátoch Metóda infračervenej spektrometrie**	**STN EN 14078** 65 6532

Liquid petroleum products - Determination of fatty acid methyl ester (FAME) content in middle distillates - Infrared spectrometry method

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/26

Obsahuje: EN 14078:2025

Oznámením tejto normy sa ruší
STN EN 14078 (65 6532) z decembra 2014

142179

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 14078

December 2025

ICS 75.160.20 Supersedes EN 14078:2014

English Version

Liquid petroleum products - Determination of fatty acid methyl ester (FAME) content in middle distillates - Infrared spectrometry method

Produits pétroliers liquides - Détermination de la teneur en esters méthyliques d'acides gras (EMAG) des distillats moyens - Méthode par spectrométrie infrarouge

Flüssige Mineralölerzeugnisse - Bestimmung des Gehaltes an Fettsäuremethylester (FAME) in Mitteldestillaten - Infrarotspektrometrisches Verfahren

This European Standard was approved by CEN on 26 October 2025.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.

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

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

Ref. No. EN 14078:2025 E

Contents

Page

European foreword

This document (EN 14078:2025) 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 June 2026, and conflicting national standards shall be withdrawn at the latest by June 2026.

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 will supersede EN 14078:2014.

EN 14078:2025 includes the following significant technical changes with respect to EN 14078:2014:

— necessity of a correction added in the case that the average molecular mass of the FAME material in the sample differs from that of the FAME material used for the calibration;

— possibility to use a cell with windows consisting of ZnSe added;

— gravimetric dilution described in 8.5 corrected to volumetric dilution.

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.

1 Scope

This document specifies a test method for the determination of fatty acid methyl ester (FAME) content in diesel fuel or domestic heating fuel by mid-infrared (IR) spectrometry and a transmission sample cell, which applies to FAME contents of the three measurement ranges as follows:

— range A: for FAME contents ranging from approx. 0,05 % (*V*/*V*) to approx. 3 % (*V*/*V*);

— range B: for FAME contents ranging from approx. 3 % (*V*/*V*) to approx. 20 % (*V*/*V*);

— range C: for FAME contents ranging from approx. 20 % (*V*/*V*) to approx. 50 % (*V*/*V*).

Principally, higher FAME contents can also be analysed if diluted; however, no precision data for results outside the specified range is available at present.

This test method was verified to be applicable to samples which contain FAME conforming to EN 14214. Reliable quantitative results are obtained only if the samples do not contain any significant amounts of other interfering components, especially esters and other carbonyl compounds which possess absorption bands in the spectral region used for quantification of FAME. If such interfering components are present, this test method is expected to produce higher values.

NOTE 1 For the purposes of this document, the term "% (*V*/*V*)" is used to represent the volume fraction (φ) of a material.

NOTE 2 For conversion of grams FAME per litre (g FAME/l) to volume fraction, a fixed density for FAME of 883,0 kg/m^3 is adopted.

WARNING — The use of this document can 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 14103:2020, *Fat and oil derivatives - Fatty Acid Methyl Esters (FAME) - Determination of ester and linolenic acid methyl ester contents*

EN 14331, *Liquid petroleum products — Separation and characterisation of fatty acid methyl esters (FAME) from middle distillate fuels — Liquid chromatography (LC)/gas chromatography (GC) method*

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

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