STN

Automobilové palivá a deriváty tukov a olejov Stanovenie obsahu nasýtených monoglyceridov v metylesteroch mastných kyselín (FAME) Metóda FID plynovou chromatografiou

STN EN 17057

65 6543

Automotive fuels and fat and oil derivates - Determination of saturated monoglycerides content in Fatty Acid Methyl Esters (FAME) - Method by GC-FID

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. 06/18

Obsahuje: EN 17057:2018

STN EN 17057: 2018

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 17057

January 2018

ICS 75.160.20

English Version

Automotive fuels and fat and oil derivates - Determination of saturated monoglycerides content in Fatty Acid Methyl Esters (FAME) - Method by GC-FID

Carburants pour automobiles et produits dérivés des corps gras - Détermination de la teneur en monoglycérides saturés (SMG) des esters méthyliques d'acides gras (EMAG) - Méthode par GC-FID Kraftstoffe und Erzeugnisse aus Fetten und Ölen -Bestimmung des Gehalts an gesättigten Monoglyceriden in Fettsäure-Methylester (FAME) -Verfahren mit GC-FID

This European Standard was approved by CEN on 19 November 2017.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey 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

EN 17057:2018 (E)

Contents		Page
Europ	ean foreword	3
1	Scope	4
2	Normative references	4
3	Principle	4
4	Reagents and materials	4
5	Apparatus	5
6	Preparation of solutions	
6.1 6.2	Glyceryl monononadecanoate stock solution, 2,5 mg/mlReference solution	
7	Sampling	
8 8.1	ProcedureOperating conditions	
8.2	Column evaluation	
8.3	Analysis of the reference solution	
8.4	Preparation and analysis of the samples	
8.5	Identification	
8.6	Calibration	8
9	Determination of results	
9.1	Integration of the peaks	
9.2 10	Calculation Expression of results	
_	•	
11 11.1	PrecisionGeneral	
11.1	Repeatability, r	
11.3	Reproducibility, R	
12	Test report	10
Annex	A (informative) Saturated monoglyceride standards	11
Annex	B (informative) Calculation of column performance	12
Annex	C (informative) Example chromatograms	14
Bibliography		15

EN 17057:2018 (E)

European foreword

This document (EN 17057:2018) 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 July 2018 and conflicting national standards shall be withdrawn at the latest by July 2018.

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

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

1 Scope

This document specifies a method to determine the saturated monoglyceride content in Fatty Acid Methyl Esters (FAME). This method only identifies and quantifies the following saturated monoglycerides: 1-C16:0, 2-C16:0 and 1-C18:0. The total saturated monoglyceride content is calculated by the summation of the contents of these three saturated monoglycerides. The precision has been established for FAMEs having saturated monoglycerides in the (200 to 1500) mg/kg range.

This method is not suitable for FAME produced from or containing coconut and palm kernel oil derivatives because of overlapping of various peaks.

NOTE This Standard determines only three saturated monoglycerides, i.e. 1-C16:0, 2-C16:0 and 1-C18:0. FAMEs can contain also other saturated monoglycerides such as 1-C17:0, but these are generally much lower than the three targeted saturated monoglycerides and are therefore not included in the Standard's scope.

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 the user 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, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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)

koniec náhľadu – text ďalej pokračuje v platenej verzii STN