

STN	Kvapalné ropné výrobky Stanovenie obsahu síry v automobilovom etanolovom palive E85 Metóda vlnovodízkovou disperznou röntgenovou fluorescenčnou spektrometriou	STN EN 16997 65 6580
------------	---	--

Liquid petroleum products - Determination of the sulfur content in Ethanol (E85) automotive fuel- Wavelength dispersive X-ray fluorescence spectrometric 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. 01/18

Obsahuje: EN 16997:2017

126006

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2018
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

EN 16997

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2017

ICS 75.160.20

English Version

Liquid petroleum products - Determination of the sulfur content in Ethanol (E85) automotive fuel- Wavelength dispersive X-ray fluorescence spectrometric method

Produits pétroliers liquides - Détermination de la teneur en soufre dans le carburant éthanol pour automobiles (E85) - Méthode spectrométrique par fluorescence de rayons X dispersive en longueur d'onde

Flüssige Mineralölerzeugnisse - Bestimmung des Schwefelgehalts in Ethanolkraftstoff (E85) - Wellenlängendispersives Röntgenfluoreszenz-Spektrometrie-Verfahren

This European Standard was approved by CEN on 12 June 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: Avenue Marnix 17, B-1000 Brussels

Contents		Page
European foreword.....		3
1	Scope	4
2	Normative references	4
3	Principle	4
4	Reagents and materials.....	4
5	Apparatus.....	5
6	Sampling.....	5
7	Preparation of calibration solutions.....	6
7.1	Interferences	6
7.1.1	Background	6
7.1.2	FP-Method.....	7
7.1.3	Correction table	7
7.2	Blank calibration solution	7
7.3	Stock solution	7
7.4	Calibration solutions.....	7
7.5	Storage and stability of the calibration solutions	7
8	Settings.....	8
8.1	Measuring parameters.....	8
8.2	Optimization	8
8.2.1	Monochromatic excitation.....	8
8.2.2	Polychromatic excitation	8
8.3	Performance check of the spectrometer	8
9	Calibration.....	8
9.1	General.....	8
9.2	Calibration solutions.....	8
9.3	Calibration curves.....	9
9.3.1	Calibration without matrix correction	9
9.3.2	Calibration with matrix correction.....	9
9.4	Checking	10
10	Procedure.....	10
11	Expression of results.....	11
12	Precision.....	11
12.1	Repeatability.....	11
12.2	Reproducibility	11
13	Test report.....	12
Annex A (informative) Fundamental parameters method background		13
Bibliography.....		14

European foreword

This document (EN 16997:2017) 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 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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.

The methodology described in this document is based on EN ISO 20884 [1] and EN 15485 [2].

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, 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 European Standard specifies a wavelength-dispersive X-ray fluorescence (WDXRF) test method for the determination of the sulfur content in ethanol (E85) automotive fuel [3], containing ethanol between 50 % (V/V) and 85 % (V/V), from 5 mg/kg to 20 mg/kg, using instruments with either monochromatic or polychromatic excitation.

NOTE 1 Sulfur contents higher than 20 mg/kg can be determined after sample dilution with an appropriate solvent. However, the precision was not established for diluted samples.

NOTE 2 For the purposes 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.

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, 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)*

EN ISO 22854, *Liquid petroleum products - Determination of hydrocarbon types and oxygenates in automotive-motor gasoline and in ethanol (E85) automotive fuel - Multidimensional gas chromatography method (ISO 22854)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN