

Petroleum products - Determination of sulfur content of automotive fuels - Wavelength-dispersive X-ray fluorescence spectrometry (ISO 20884:2011)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 20884:2011 sisaldab Euroopa standardi EN ISO 20884:2011 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 31.05.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.04.2011.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 20884:2011 consists of the English text of the European standard EN ISO 20884:2011.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 31.05.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 15.04.2011.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

Petroleum products - Determination of sulfur content of
automotive fuels - Wavelength-dispersive X-ray fluorescence
spectrometry (ISO 20884:2011)

Produits pétroliers - Détermination de la teneur en soufre
des carburants pour automobiles - Spectrométrie de
fluorescence de rayons X dispersive en longueur d'onde
(ISO 20884:2011)

Mineralölerzeugnisse - Bestimmung des Schwefelgehaltes
in Kraftstoffen für Kraftfahrzeuge - Wellenlängendispersive
Röntgenfluoreszenz-Spektrometrie (ISO 20884:2011)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN ISO 20884:2011) has been prepared by Technical Committee ISO/TC 28 "Petroleum products and lubricants" in collaboration 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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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Endorsement notice

The text of ISO 20884:2011 has been approved by CEN as a EN ISO 20884:2011 without any modification.

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Petroleum products — Determination of sulfur content of automotive fuels — Wavelength-dispersive X-ray fluorescence spectrometry

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

1 Scope

This International Standard specifies a wavelength-dispersive X-ray fluorescence (WDXRF) test method for the determination of the sulfur content of liquid, homogeneous automotive fuels from 5 mg/kg to 500 mg/kg, which have a maximum oxygen content of 3,7 % (m/m). This product range covers diesel fuels containing up to about 10 % (V/V) fatty acid methyl esters (FAME) and motor gasolines containing up to about 10 % (V/V) ethanol.

NOTE 1 Sulfur contents higher than 500 mg/kg can be determined after sample dilution. However, the precision was not established for diluted samples.

Products with higher oxygen content show significant matrix effects, e.g. FAME used as biodiesel. Nevertheless, FAME may be analysed when the corresponding procedures are followed (see 4.3 and 7.1).

Other products may be analysed with this test method. However, precision data for products other than those mentioned have not been established for this International Standard.

NOTE 2 For the purposes of this International Standard, the terms “% (m/m)” and “% (V/V)” are used to represent the mass fraction and the volume fraction of a material respectively.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 3170, *Petroleum liquids — Manual sampling*

ISO 3171, *Petroleum liquids — Automatic pipeline sampling*

3 Principle

The sample under analysis is exposed in a sample cell to the primary radiation of an X-ray tube. The count rates of the S K-L_{2,3} X-ray fluorescence and, where required, the count rate of the background radiation are measured. The sulfur content of the sample is determined from a calibration curve defined for the relevant measuring range.