Ethanol as a blending component for petrol - Determination of inorganic chloride - Potentiometric method

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 15484:2007 sisaldab Euroopa standardi EN 15484:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 30.10.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 15484:2007 consists of the English text of the European standard EN 15484:2007. This document is endorsed on 30.10.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This standard specifies a potentiometric method for the determination of inorganic chloride content in ethanol from 4 mg/l to 30 mg/l.	**Scope:** This standard specifies a potentiometric method for the determination of inorganic chloride content in ethanol from 4 mg/l to 30 mg/l.

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Võtmesõnad:

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Ethanol as a blending component for petrol - Determination of inorganic chloride - Potentiometric method

Ethanol comme base de mélange à l'essence - Dosage du chlorure minéral - Méthode potentiométrique

Ethanol zur Verwendung als Blendkomponente in Ottokraftstoff - Bestimmung des Gehalts an anorganischen Chloriden aus dem Eindampfrückstand - Potentiometrisches Verfahren

This European Standard was approved by CEN on 30 June 2007.

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Foreword

This document (EN 15484:2007) has been prepared by Technical Committee CEN/TC 19 “Gaseous and liquid fuels, lubricants and related produts 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of an identical text or by endorsement, at the latest by February 2008, and conflicting national standards shall be withdrawn at the latest by February 2008.

The method described in this document is based on ISO 6227 [1] and a method from a European Regulation on wine [2].

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This standard specifies a potentiometric method for the determination of inorganic chloride content in ethanol from 4 mg/l to 30 mg/l. The chloride content is determined in aqueous solution after dissolution of the evaporation residue of the ethanol sample.

WARNING — Use of this standard may 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 establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

NOTE For the purposes of this document, the terms "% (*m/m*)" and "% (*V/V*)" are used to represent respectively the mass fraction and the volume fraction.

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.

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

EN ISO 3696, *Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)*

3 Principle

A weighed test portion of ethanol sample is evaporated on a water bath. The dry residue is dissolved in deionised water. Inorganic chloride content is determined by potentiometric titration either manually or using automated equipment.

4 Reagents and materials

All reagents shall be of analytical reagent grade or of higher purity.

4.1 Acetone.

4.2 Nitric acid, ρ approximately 1,40 g/ml, about 68 % (*m/m*) solution.

4.3 Potassium nitrate, solution saturated at room temperature.

4.4 Silver nitrate solution 1, c ($AgNO_3$) = 0,1 mol/l approximately. Dissolve 8,5 g of silver nitrate in a 500 ml one-mark volumetric flask, dilute to the mark and mix. Store in a dark glass bottle.

4.5 Silver nitrate solution 2, c ($AgNO_3$) = 0,004 mol/l approximately. Prepare the solution at the time of use from silver nitrate solution 1 (4.4), diluting when required in a one-mark volumetric flask.

4.6 Potassium chloride standard reference solution 1, c (KCl) = 0,100 mol/l. Weigh 3,727 6 g of potassium chloride to the nearest 0,000 1 g. Potassium chloride was previously dried for 1 h at about 130 °C and cooled in a dessicator. Dissolve in a little water and transfer the solution quantitatively into a 500 ml one-mark volumetric flask. Dilute to the mark and mix. This solution shall not be kept for more than one month.