

This document is a preview generated by EVS

**Ethanol as a blending component for petrol -  
Determination of water content - Karl Fischer  
potentiometric titration method**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15692:2009 sisaldab Euroopa standardi EN 15692:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 29.05.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 22.04.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 15692:2009 consists of the English text of the European standard EN 15692:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 29.05.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 22.04.2009.

The standard is available from Estonian standardisation organisation.

ICS 75.160.20

Võtmesõnad:

### Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:  
Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

### Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:  
Aru str 10 Tallinn 10317 Estonia; [www.evs.ee](http://www.evs.ee); Phone: 605 5050; E-mail: [info@evs.ee](mailto:info@evs.ee)

ICS 75.160.20

English Version

## Ethanol as a blending component for petrol - Determination of water content - Karl Fischer potentiometric titration method

Ethanol comme base de mélange à l'essence -  
Détermination de la teneur en eau - Méthode de titrage  
potentiométrique Karl Fischer

Ethanol zu Verwendung als Blendkomponente in  
Ottokraftstoff - Bestimmung des Wassergehaltes -  
Potentiometrische Titration nach Karl Fischer

This European Standard was approved by CEN on 19 March 2009.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

**Contents**

Page

Foreword.....	3
1 Scope .....	4
2 Normative references .....	4
3 Terms and definitions .....	4
4 Principle.....	4
5 Reagents and materials .....	4
6 Apparatus .....	5
7 Sampling and sample handling.....	5
8 Procedure .....	6
8.1 Standardization of the Karl Fischer reagent.....	6
8.2 Analysis .....	6
9 Calculation.....	7
10 Expression of results .....	7
11 Precision.....	7
11.1 General.....	7
11.2 Repeatability, $r$ .....	8
11.3 Reproducibility, $R$ .....	8
12 Test report .....	8
Bibliography.....	9

## Foreword

This document (EN 15692:2009) 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 October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.

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.

This document was prepared by CEN/TC 19's Ethanol Task Force under its Working Group 21 and is based on ISO 760 [1]. It is developed as an alternative to EN 15489 [2], delivering a method more widely used in the alcohol and beverage industry environment.

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 the United Kingdom.

## 1 Scope

This European standard specifies a method for the direct determination of water in ethanol to be used in gasoline blends. It is applicable in the range 0,05 % (m/m) to 0,54 % (m/m).

NOTE For the purposes of this European Standard, the term “% (m/m)” is used to represent the mass fraction.

**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 determine the applicability of regulatory limitations prior to use.**

## 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)*