



SLOVENSKI STANDARD SIST EN ISO 16948:2015

01-julij-2015

Nadomešča:
SIST EN 15104:2011

Trdna biogoriva - Določevanje vsebnosti celotnega ogljika, vodika in dušika (ISO 16948:2015)

Solid biofuels - Determination of total content of carbon, hydrogen and nitrogen (ISO 16948:2015)

Biogene Festbrennstoffe - Bestimmung des Gesamtgehaltes an Kohlenstoff, Wasserstoff und Stickstoff - Instrumentelle Verfahren (ISO 16948:2015)
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Biocarburants solides - Détermination de la teneur totale en carbone, hydrogène et azote (ISO 16948:2015) <https://standards.iteh.ai/catalog/standards/sist/1b5863a7-7df4-4a69-b22a-3e6531cebd36/sist-en-iso-16948-2015>

Ta slovenski standard je istoveten z: EN ISO 16948:2015

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75.160.10	Trda goriva	Solid fuels

SIST EN ISO 16948:2015 en,fr,de

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EUROPEAN STANDARD

EN ISO 16948

NORME EUROPÉENNE

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May 2015

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Supersedes EN 15104:2011

English Version

**Solid biofuels - Determination of total content of carbon,
hydrogen and nitrogen (ISO 16948:2015)**Biocombustibles solides - Détermination de la teneur totale
en carbone, hydrogène et azote (ISO 16948:2015)Biogene Festbrennstoffe - Bestimmung des
Gesamtgehaltes an Kohlenstoff, Wasserstoff und Stickstoff
- Instrumentelle Verfahren (ISO 16948:2015)

This European Standard was approved by CEN on 31 January 2015.

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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Foreword

This document (EN ISO 16948:2015) has been prepared by Technical Committee ISO/TC 238 "Solid biofuels" in collaboration with Technical Committee CEN/TC 335 "Solid biofuels" the secretariat of which is held by SIS.

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 November 2015, and conflicting national standards shall be withdrawn at the latest by November 2015.

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 supersedes EN 15104:2011.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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The text of ISO 16948:2015 has been approved by CEN as EN ISO 16948:2015 without any modification.

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INTERNATIONAL
STANDARD

ISO
16948

First edition
2015-05-15

**Solid biofuels — Determination of
total content of carbon, hydrogen and
nitrogen**

*Biocombustibles solides — Détermination de la teneur totale en
carbone, hydrogène et azote*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 238, *Solid biofuels*.

For the purposes of research on instrumental methods for the determination of total carbon, hydrogen and nitrogen contents in solid biofuels standards, users are encouraged to share their views on ISO 16948:2015 and their priorities for changes to future editions of the document. Click on the link below to take part in the online survey:

[ISO 16948 online survey](#)

Introduction

Instrumental methods for the analysis of carbon, hydrogen and nitrogen are now in widespread and in regular use, often in preference to formerly developed chemical methods for which International Standards exist.

The reliable determination of carbon, hydrogen and nitrogen is important for quality control and the results can be used as input parameters for calculations applied to the combustion of solid biofuels. The environmental importance of the nitrogen content is linked to emissions of NO_x (formation of fuel NO_x). Hydrogen content is important for calculation of the net calorific value. Carbon content is required for the determination of CO₂-emissions.

It is recognized that the Kjeldahl method is most reliable for determining nitrogen contents with a concentration lower than 0,1 %. Possible suitable methods are summarized in the bibliography.

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