



SLOVENSKI STANDARD SIST EN ISO 16993:2016

01-oktober-2016

Nadomešča:
SIST EN ISO 16993:2015

Trdna biogoriva - Preračun analiznih rezultatov na različne osnove (ISO 16993:2016)

Solid biofuels - Conversion of analytical results from one basis to another (ISO 16993:2016)

Biogene Festbrennstoffe - Umwandlung von Analyseergebnissen einer Bezugsbasis in Ergebnisse mit anderer Bezugsbasis (ISO 16993:2016)

Biocombustibles solides - Conversion de résultats analytiques d'une base en une autre base (ISO 16993:2016)

Ta slovenski standard je istoveten z: EN ISO 16993:2016

ICS:

75.160.40 Biogoriva Biofuels

SIST EN ISO 16993:2016 **en,fr,de**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 16993:2016

<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>

EUROPEAN STANDARD

EN ISO 16993

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2016

ICS 75.160.10; 27.190

Supersedes EN ISO 16993:2015

English Version

Solid biofuels - Conversion of analytical results from one basis to another (ISO 16993:2016)

Biocombustibles solides - Conversion de résultats analytiques d'une base en une autre base (ISO 16993:2016)

Biogene Festbrennstoffe - Umwandlung von Analysenergebnissen einer Bezugsbasis in Ergebnisse mit anderer Bezugsbasis (ISO 16993:2016)

This European Standard was approved by CEN on 25 June 2016.

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, 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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 16993:2016
<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>

European foreword

This document (EN ISO 16993:2016) 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 January 2017, and conflicting national standards shall be withdrawn at the latest by January 2017.

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 ISO 16993:2015.

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.

Full STANDARD PREVIEW
(standard.iteh.ai)
Endorsement notice

The text of ISO 16993:2016 has been approved by CEN as EN ISO 16993:2016 without any modification.

<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 16993:2016

<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>

INTERNATIONAL
STANDARD

ISO
16993

Second edition
2016-07-01

**Solid biofuels — Conversion of
analytical results from one basis to
another**

*Biocombustibles solides — Conversion de résultats analytiques d'une
base en une autre base*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 16993:2016](https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016)

<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>



Reference number
ISO 16993:2016(E)

© ISO 2016

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 16993:2016

<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Symbols and abbreviated terms	1
4 Principle	2
5 Calculations for analyses of solid biofuels	2
5.1 General.....	2
5.2 Extra calculations for hydrogen, oxygen, and net calorific value	2
5.2.1 Hydrogen.....	2
5.2.2 Oxygen.....	2
5.2.3 Net calorific value	3
5.3 General formulae for the conversion from one basis to another basis.....	3
Annex A (informative) Tools for integrity check	4
Annex B (informative) Tables with units and conversion factors	7
Annex C (informative) Guideline for the use of validation parameters	8
Bibliography	10

ITeH STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 16993:2016](https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016)

<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>

ISO 16993:2016(E)

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 (see 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 (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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*.

This second edition cancels and replaces the first edition (ISO 16993:2015), of which it constitutes a minor revision.

<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>

Introduction

In the International Standards covering the analysis of solid biofuels, it is generally specified that the determination is intended to be carried out on the air-dried or in air-equilibrated general analysis test sample prepared according to ISO 14780. However, in making use of these analyses, it is necessary to express the results on dry basis and sometimes, also on some other basis. The bases in common use for solid biofuels are “air-dried” (sometimes stated as “as determined”), “as received” (sometimes stated “as sampled” or “as delivered”), “dry”, and “dry, ash free”.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 16993:2016](https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016)

<https://standards.iteh.ai/catalog/standards/sist/1c9ccb3c-0284-4c4f-8123-7b7030fb40e9/sist-en-iso-16993-2016>