Solid recovered fuels - Methods for the determination of carbon (C), hydrogen (H), nitrogen (N) and sulphur (S) by the instrumental method (ISO 21663:2020)

EESTI STANDARDIKESKUS
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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 21663:2020 sisaldab Euroopa standardi EN ISO 21663:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 21663:2020 consists of the English text of the European standard EN ISO 21663:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 09.12.2020.	Date of Availability of the European standard is 09.12.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Solid recovered fuels - Methods for the determination of carbon (C), hydrogen (H), nitrogen (N) and sulphur (S) by the instrumental method (ISO 21663:2020)

Combustibles solides de récupération - Méthodes de détermination de la teneur en carbone (C), hydrogène (H), azote (N) et soufre (S) par la méthode instrumentale (ISO 21663:2020)

Feste Sekundärbrennstoffe - Verfahren zur instrumentellen Bestimmung von Kohlenstoff (C), Wasserstoff (H), Stickstoff (N) und Schwefel (S) (ISO 21663:2020)

This European Standard was approved by CEN on 10 November 2020.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 21663:2020) has been prepared by Technical Committee ISO/TC 300 "Solid Recovered Fuels" in collaboration with Technical Committee CEN/TC 343 “Solid Recovered Fuels” the secretariat of which is held by SFS.

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of an identical text or by endorsement, at the latest by June 2021, and conflicting national standards shall be withdrawn at the latest by June 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15407:2011.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 21663:2020 has been approved by CEN as EN ISO 21663:2020 without any modification.

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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 (see www.iso.org/directives).

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

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 300 *Solid recovered fuels*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The determination of total content of carbon, hydrogen, nitrogen and sulfur is usually performed using instrumental methods. Depending on the amount of test portion used two different types of instrumental methods can be used: micro methods require few milligrams of sample; macro methods use grams of sample. Micro methods require a very careful preparation of the test sample for Solid Recovered Fuel (SRF) analysis.

Solid recovered fuels — Methods for the determination of carbon (C), hydrogen (H), nitrogen (N) and sulphur (S) by the instrumental method

1 Scope

This document specifies the determination of total content of carbon, hydrogen, nitrogen and sulfur in solid recovered fuels by instrumental method. Depending on the amount of test portion, micro or macro instrumental apparatus are used.

This method is applicable for concentrations on dry matter basis of C > 0,1 %, N > 0,1 %, H > 0,1 % and S > 0,05 %.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 21637, *Solid recovered fuels — Terminology, definitions and descriptions*

ISO 21660-3[1)], *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 3: Moisture in general analysis sample*

ISO 21646[2)], *Solid recovered fuels — Sample preparation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21637 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
coefficient of variation
estimate of the standard deviation of a population from a *sample* (3.10) of n results divided by the mean of that sample

Note 1 to entry: Frequently stated as a percentage.

Note 2 to entry: Adapted from Eurachem/Citac Guide CG 4.

3.2
dry basis
calculation basis in which the material is considered free from *moisture* (3.6)

[SOURCE: ISO 21637, 3.20]

1) Under preparation. Stage at the time of publication ISO/FDIS 21660-3.

2) Under preparation. Stage at the time of publication ISO/DIS 21646.