Irish Standard
I.S. EN ISO 21644:2021

Solid recovered fuels - Methods for the determination of biomass content (ISO 21644:2021)

I.S. EN ISO 21644:2021

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National Foreword

I.S. EN ISO 21644:2021 is the adopted Irish version of the European Document EN ISO 21644:2021, Solid recovered fuels - Methods for the determination of biomass content (ISO 21644:2021)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 21644

January 2021

ICS 75.160.10

Supersedes EN 15440:2011

English Version

Solid recovered fuels - Methods for the determination of biomass content (ISO 21644:2021)

Combustibles solides de récupération - Méthode de détermination de la teneur en biomasse (ISO 21644:2021)

Feste Sekundärbrennstoffe - Verfahren zur Bestimmung des Gehaltes an Biomasse (ISO 21644:2021)

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

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European foreword

This document (EN ISO 21644:2021) has been prepared by Technical Committee ISO/TC 300 "Solid recovered materials, including 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of an identical text or by endorsement, at the latest by July 2021, and conflicting national standards shall be withdrawn at the latest by July 2021.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.

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Endorsement notice

The text of ISO 21644:2021 has been approved by CEN as EN ISO 21644:2021 without any modification.

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I.S. EN ISO 21644:2021

INTERNATIONAL STANDARD

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Solid recovered fuels — Methods for the determination of biomass content

Combustibles solides de récupération – Méthode de détermination de la teneur en biomasse

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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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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 biomass content of solid recovered fuels is relevant for the evaluation of the impact of energy production on greenhouse gas emission. Instrumental methods, wet chemical and manual procedures are available for the calculation of the renewable energy fraction. Instrumental methods are based on the determination of ^{14}C content while manual procedures are based on separation of different fractions by visual inspection. The wet chemical procedure differentiate biomass from non-biomass materials as function of the acid dissolution behaviour.

The fraction of biomass is expressed:

— by mass;

— by energy content (gross or net calorific value);

— by carbon content.

This document is primarily intended for laboratories, producers, suppliers and purchasers of solid recovered fuels, but is also useful for the authorities and inspection organizations.

Solid recovered fuels — Methods for the determination of biomass content

1 Scope

This document specifies three methods for the determination of the biomass content in solid recovered fuels: the ^{14}C content method, the selective dissolution and the manual sorting methods.

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 21637:2020, *Solid recovered fuels — Terminology, definitions and descriptions*

ISO 21645[1)], *Solid recovered fuels — Methods for sampling*

ISO 21646[2)], *Combustibles solides de récupération — Préparation des échantillons*

ISO 21654[3)], *Solid recovered fuels — Determination of calorific value*

ISO 21656[4)], *Solid recovered fuels — Determination of ash content*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21637:2020 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
ash content on dry basis
mass of inorganic residue remaining after ignition of a fuel under specified conditions, expressed as mass fraction in percent of the dry matter in the fuel, also includes removed ash contributors

Note 1 to entry: This is typically expressed as a percentage of the mass of dry matter in the fuel source.

Note 2 to entry: Depending on the combustion efficiency the ash may contain combustibles.

Note 3 to entry: If a complete combustion is realized, ash contains only inorganic, non-combustible components.

[SOURCE: ISO 21637:2020, 3.3]

1) Under preparation. Stage at the time of publication ISO/FDIS 21645.

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

3) Under preparation. Stage at the time of publication ISO/FDIS 21654.

4) Under preparation. Stage at the time of publication ISO/FDIS 21656.