



BSI Standards Publication

## Solid biofuels — Sample preparation

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## National foreword

This British Standard is the UK implementation of EN ISO 14780:2017+A1:2019. It is identical to ISO 14780:2017, incorporating amendment 1:2019. It supersedes BS EN ISO 14780:2017, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee PTI/17, Solid biofuels.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Published by BSI Standards Limited 2019

ISBN 978 0 539 01294 1

ICS 27.190; 75.160.40

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2017.

### Amendments/corrigenda issued since publication

Date	Text affected
30 November 2019	Implementation of ISO amendment 1:2019 with CEN endorsement A1:2019

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EUROPÄISCHE NORM

May 2017

ICS 75.160.40; 27.190

Supersedes EN 14780:2011

English Version

## Solid biofuels — Sample preparation (ISO 14780:2017)

Biocombustibles solides — Préparation  
des échantillons (ISO 14780:2017)

Biogene Festbrennstoffe —  
Probenherstellung (ISO 14780:2017)

This European Standard was approved by CEN on 15 March 2017.

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## European foreword

This document (EN ISO 14780:2017) 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of an identical text or by endorsement, at the latest by November 2017, and conflicting national standards shall be withdrawn at the latest by November 2017.

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### Endorsement notice

The text of ISO 14780:2017 has been approved by CEN as EN ISO 14780:2017 without any modification.

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## Foreword to amendment A1

This document (EN ISO 14780:2017/A1:2019) 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 April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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The text of ISO 14780:2017/Amd 1:2019 has been approved by CEN as EN ISO 14780:2017/A1:2019 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](http://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](http://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 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 238, *Solid biofuels*.

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## **Introduction**

Biofuels are a major source of renewable energy. International standards are needed for production, trade and use of solid biofuels. For sampling of solid biofuels, see ISO 18135.

This document can be used in regard to production, controlling and analysis of solid biofuels in general.

This document was developed with significant content from EN 14780:2011.



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# Solid biofuels — Sample preparation

## 1 Scope

This document defines methods for reducing combined samples (or increments) to laboratory samples and laboratory samples to sub-samples and general analysis samples and is applicable to solid biofuels.

The methods defined in this document can be used for sample preparation, for example, when the samples are to be tested for calorific value, moisture content, ash content, bulk density, durability, particle size distribution, ash melting behaviour, chemical composition, and impurities.

## 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 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 16559, *Solid biofuels — Terminology, definitions and descriptions*

ISO 18134-1, *Solid biofuels — Determination of moisture content — Oven dry method — Part 1: Total moisture — Reference method*

ISO 18134-2, *Solid biofuels — Determination of moisture content — Oven dry method — Part 2: Total moisture — Simplified procedure*

ISO 18135, *Solid Biofuels — Sampling*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16559 and the following apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **nominal top size**

aperture size of the sieve through which at least 95 % by mass of the material passes

Note 1 to entry: For pellets (and other long materials), the diameter is used to determine the nominal top size.

Note 2 to entry: Includes additional information not found in ISO 16559.

## 4 Symbols

$M_p$  moisture loss, in percentage

$m_{\text{sample},1}$  initial mass of the sample, g

$m_{\text{sample},2}$  mass of the sample after pre-drying, g