
Trdna biogoriva - Določevanje porazdelitve velikosti delcev za nestisnjena goriva - 1. del: Metoda z nihajočim sitom z odprtini 3,15 mm ali več (ISO/DIS 17827-1:2015)

Solid Biofuels - Determination of particle size distribution for uncompressed fuels - Part 1: Oscillating screen method using sieves with apertures of 3,15 mm and above (ISO/DIS 17827-1:2015)

Biogene Festbrennstoffe - Bestimmung der Partikelgrößenverteilung für unkomprimierte Brennstoffe - Teil 1: Horizontales Rüttelsiebverfahren (ISO/DIS 17827-1:2015)

Biocombustibles solides - Détermination de la distribution granulométrique des combustibles non comprimés - Partie 1: Méthode au tamis oscillant d'ouverture de maille égale ou supérieure à 3,15 mm (ISO/DIS 17827-1:2015)

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Solid Biofuels — Determination of particle size distribution for uncompressed fuels —

Part 1:

Oscillating screen method using sieves with apertures of 3,15 mm and above

Titre manque

ICS: 75.160.10; 27.190

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ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.



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ISO/DIS 17827-1:2014(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.

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Introduction

Determination of particle size distribution consists of the following parts under the general title *Solid biofuels - Determination of particle size distribution for uncompressed fuels*:

Part 1: Oscillating screen method using sieves with apertures of 3,15 mm and above

Part 2: Vibrating screen method using sieves with apertures of 3,15 mm and below

Note Part 2 can also be used for round hole sieves with apertures of 4,0 and 5,6 mm.

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Solid Biofuels — Determination of particle size distribution for uncompressed fuels —

Part 1:

Oscillating screen method using sieves with apertures of 3,15 mm and above

1 Scope

This document specifies a method for the determination of the size distribution of particulate biofuels by the horizontally oscillating screen method. It applies to particulate uncompressed fuels with a nominal top size of 3,15 mm and above as e.g. wood chips, hog fuel, olive stones etc.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO CD 18135 (14778), *Solid biofuels – Sampling*

ISO CD 14780, *Solid biofuels – Sample preparation*

<https://standards.iteh.ai/catalog/standards/sist/e16f3851-e6dd-4c6c-8654-e7d4ffb75b46/sist-17827-1:2016>
ISO/FDIS 18134-1, (14774-1), *Solid biofuels – Determination of moisture content – Oven dry method – Part 1: Total moisture – Reference method*

ISO/FDIS 18134-2, (14774-2), *Solid biofuels – Determination of moisture content – Oven dry method – Part 2: Total moisture – Simplified method*

ISO 17225-1, *Solid biofuels — Fuel specifications and classes — Part 1: General requirements*

ISO/DIS 17827-2, (15149-2), *Solid biofuels – Determination of particle size distribution for uncompressed fuels – Part 2: Vibrating screen method using sieves with apertures of 3,15 mm and below*

ISO 3310-2, *Test sieves — Technical requirements and testing — Part 2: Test sieves of perforated metal plate*

3 Terms and definitions

3.1

Median value of the size distribution

The median value [d₅₀] separates a distribution into two equal parts. Graphically the median value is the intercept point of the cumulative size distribution curve with the 50%-horizontal-line

3.2

Nominal top size

Aperture of the sieve where at least 95 % by mass of the material passes (see ISO 16559)

3.3

Test sample

The original sample sent to the laboratory for analysis

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3.4

Test portion

The sample extracted from the test sample and used during the analysis

3.5

Sub portion

A portion extracted from the test portion

3.6

Sieve fraction

The material collected on a sieve

Note 1 to entry: For the purpose of this document, the terms and definitions given in ISO 16559 apply.

4 Principle

A test sample is subjected to sieving through horizontally oscillating sieves, sorting the particles in decreasing size classes by mechanical means.

5 Apparatus

5.1 Sieves

For the test an appropriate number of either circular or rectangular sieves with a minimum effective sieve area of 1200 cm² is required. The sieves shall have round perforated holes in metal plate in accordance with ISO 3310 Part 2. The frame of the sieves shall have a height that enable the sieves to contain the sample and allows a free movement of the sample during the sieving process.

The number of sieves and the aperture sizes of the sieves shall be chosen in accordance with the size specification for the actual test sample material (see also ISO 17225-1).

Note 1 For test samples with a nominal top size of less than 10 mm an effective sieve area of less than 1200 cm² is adequate.

Note 2 For test samples such as wood chips the following set of sieves may be selected: 3,15, 8,0, 16, 31,5, 45, 63 mm. If no particles are caught by the larger sieves, these can be omitted from the set. For further size distribution determination of the fraction passing through the 3,15 mm sieve, see ISO/DIS 17827-2 (15149-2).

Note 3 Sieve sizes above 63 mm are not useful since the oscillation may not force the particles to orientate perpendicular to the plane of the sieves. Furthermore, the distance to the sieve below will have to be longer than the usual 80 mm in order to allow the long and slim particles to pass through the holes.

For checking compliance with particle size specification in ISO 17225-1, only those sieve sizes, which have limit values are required.

5.2 Collecting pan

For collection of material passing through the sieves a collecting pan of adequate size is required.

5.3 Weighing containers

The weighing of the sieved particle fractions can be performed either by weighing the remaining material directly on the tarred weighed sieves or by collecting and weighing the material in weighing containers. For this purpose an adequate number of weighing containers are required.