

**Solid biofuels - Determination of particle size distribution - Part 2: Vibrating screen method using sieve apertures of 3,15 mm and below**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15149-2:2010 sisaldab Euroopa standardi EN 15149-2:2010 ingliskeelset teksti.

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English Version

**Solid biofuels - Determination of particle size distribution - Part  
2: Vibrating screen method using sieve apertures of 3,15 mm  
and below**

Biocombustibles solides - Détermination de la distribution  
granulométrique - Partie 2: Méthode au tamis vibrant  
d'ouverture de maille inférieure ou égale à 3,15 mm

Feste Biobrennstoffe - Bestimmung der  
Partikelgrößenverteilung - Teil 2: Rüttelsiebverfahren mit  
Sieb-Lochgrößen von 3,15 mm und darunter

This European Standard was approved by CEN on 26 September 2010.

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## Foreword

This document (EN 15149-2:2010) has been prepared by 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of an identical text or by endorsement, at the latest by April 2011, and conflicting national standards shall be withdrawn at the latest by April 2011.

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 CEN/TS 15149-2:2006.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

EN 15149, *Solid biofuels — Determination of particle size distribution*, consists of the following parts:

- *Part 1: Oscillating screen method using sieve apertures of 1 mm and above*
- *Part 2: Vibrating screen method using sieve apertures of 3,15 mm and below*

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

Part 1 describes the reference method for size classification of samples with a nominal top size of 1 mm and above.

Part 2 describes the reference method for size classification of samples with a nominal top size below 3,15 mm.

Manual sieving is not included in this standard, as no data is available which support that manual sieving operations are comparable to the here described mechanical sieving operations.

## 1 Scope

This European Standard specifies a method for the determination of the size distribution of particulate biofuels by the vibrating screen method. The method described is meant for particulate biofuels only, namely materials that either have been reduced in size, such as most wood fuels, or are physically in a particulate form. This document applies to particulate uncompressed fuels with a nominal top size of 3,5 mm and below (e.g. sawdust).

## 2 Normative references

The following referenced documents are indispensable for the application 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.

EN 14588:2010, *Solid biofuels — Terminology, definitions and descriptions*

EN 14774-1:2009, *Solid biofuels — Determination of moisture content — Oven dry method — Part 1: Total moisture — Reference method*

EN 14774-2:2009, *Solid biofuels — Determination of moisture content — Oven dry method — Part 2: Total moisture — Simplified method*

prEN 14778, *Solid biofuels — Sampling*

prEN 14780, *Solid biofuels — Sample preparation*

EN 14961-1, *Solid biofuels — Fuel specifications and classes — Part 1: General requirements*

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

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

## 3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 14588:2010 apply.

## 4 Principle

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

NOTE A manual sieving is excluded due to the fact that small sieve holes can easily be clogged by particles.

## 5 Apparatus

### 5.1 Sieves.

For the test an appropriate number of either circular or rectangular sieves with a minimum effective sieve area of 250 cm<sup>2</sup> is required. The geometry of the apertures, the thickness of the sieves, the hole distances and the diameter of the holes shall be in accordance with the requirements of ISO 3310-1 and -2. The frame of the sieves shall have a height that enables the sieves to contain the samples 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 according to the size specification of the actual sample material, see also EN 14961-1. For sawdust and similar fine grade materials it is recommended to use the following set of sieves: