

Solid biofuels - Sampling

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Solid biofuels - Sampling

Biocombustibles - Echantillonnage

Feste Biobrennstoffe - Probenahme

This European Standard was approved by CEN on 5 May 2011.

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Foreword

This document (EN 14778:2011) 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of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.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 14778-1:2005, CEN/TS 14778-2:2005 and CEN/TS 14779:2005.

This document differs from CEN/TS 14778-1:2005, CEN/TS 14778-2:2005 and CEN/TS 14779:2005 mainly as follows:

- a) CEN/TS 14778-1:2005, CEN/TS 14778-2:2005 and CEN/TS 14779:2005 are merged into one document and upgraded to EN 14778:2011;
- b) results of interlaboratory tests are supplemented as informative annexes;
- c) the whole document is restructured and editorially revised;
- d) decision schemes are updated;
- e) updated normative references are included.

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

Solid biofuels are a major source of renewable energy. European Standards are needed for production, trade and use of solid biofuels.

This European Standard can be used with regard to production, trading, controlling and analysis of solid biofuels in general. It is also useful for buyers of solid biofuels, regulators, controllers and laboratories.

This standard creates new working methods and practices for a broad fuel source, while for coal there are many years of experience for a single fuel source. This standard is based on the coal sampling methods, however due to the limited experience of biomass sampling, it is recognized that this standard will change in future versions when more experience is gained. What today is utilized as solid biofuels may change in the future.

1 Scope

This European Standard describes methods for preparing sampling plans and certificates and taking samples of solid biofuels, for example, from the place where the raw materials grow, from production plant, from deliveries e.g. lorry loads, or from stock. It includes both manual and mechanical methods, and is applicable to solid biofuels that are either:

- fine (particle size up to about 10 mm) and regularly-shaped particulate materials that can be sampled using a scoop or pipe, for example: sawdust, olive stones and wood pellets;
- coarse or irregularly-shaped particulate materials, particle sizes up to about 200 mm that can be sampled using a fork or shovel, for example: wood chips and nut shells, forest residue chips, and straw;
- baled materials for example: baled straw or grass;
- large pieces (particles sizes above 200 mm) which are either picked manually or automatically;
- vegetable waste, fibrous waste from virgin pulp production and from production of paper from pulp that has been dewatered;
- round wood.

It may be possible to use this standard on other solid biofuels. The methods described in this European Standard may be used, for example, when the samples are to be tested for moisture content, ash content, calorific value, bulk density, durability, particle size distribution, ash melting behaviour and chemical composition. The methods are not intended for obtaining the very large samples required for the testing of bridging properties.

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 14780, *Solid biofuels — Sample preparation*

3 Terms and definitions

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

3.1

bias

systematic error that leads to the average value of a series of results being persistently higher or persistently lower than those that are obtained using a reference sampling method

3.2

combined sample

sample consisting of all the increments taken from a lot or sub-lot

NOTE The increments may be reduced by division before being added to the combined sample.