

**Solid recovered fuels - Methods for the preparation of the laboratory sample**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15443:2011 sisaldab Euroopa standardi EN 15443:2011 ingliskeelset teksti.

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English Version

## Solid recovered fuels - Methods for the preparation of the laboratory sample

Combustibles solides de récupération - Méthodes de  
préparation des échantillons de laboratoire

Feste Sekundärbrennstoffe - Verfahren zur Herstellung von  
Laboratoriumsproben

This European Standard was approved by CEN on 22 January 2011.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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## Foreword

This document (EN 15443:2011) has been prepared by 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of an identical text or by endorsement, at the latest by September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

This document supersedes CEN/TS 15443:2006.

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

This European Standard is one of series of European Standards dealing with sampling solid recovered fuel.

EN 15442, *Solid recovered fuels — Methods for sampling*.

EN 15443, *Solid recovered fuels — Methods for the preparation of the laboratory sample*.

This document differs from CEN/TS 15443:2006 mainly as follows:

- a) results of interlaboratory tests supplemented as an informative Annex D;
- b) whole document editorially revised.

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 United Kingdom.

## Introduction

Solid recovered fuels (SRF's) are a major source of renewable energy. European Standards are needed for production, trade and use of solid recovered fuels. For sampling and sample preparation of solid recovered fuels the following European Standards can be used:

EN 15442, *Solid recovered fuels — Methods for sampling*;

EN 15443, *Solid recovered fuels — Methods for the preparation of the laboratory sample*.

These European Standards can be used by production and trading of solid recovered fuels. They are also useful for buyers of solid recovered fuels, regulators, controllers and laboratories.

Figure 1 shows the links between the essential elements of a testing program.

The sample preparation technique adopted depends on a combination of different characteristics of the material and circumstances encountered at the sampling location. The determining factors are:

- the type of solid recovered fuel;
- the physical behaviour of the specific solid recovered fuel;
- the (expected) degree of heterogeneity (e.g. monostreams, mixed fuels, blended fuels).

For the sample preparation of solid biofuels prEN 14780 is available [1]. For the characterization of waste EN 15002 is available [2].

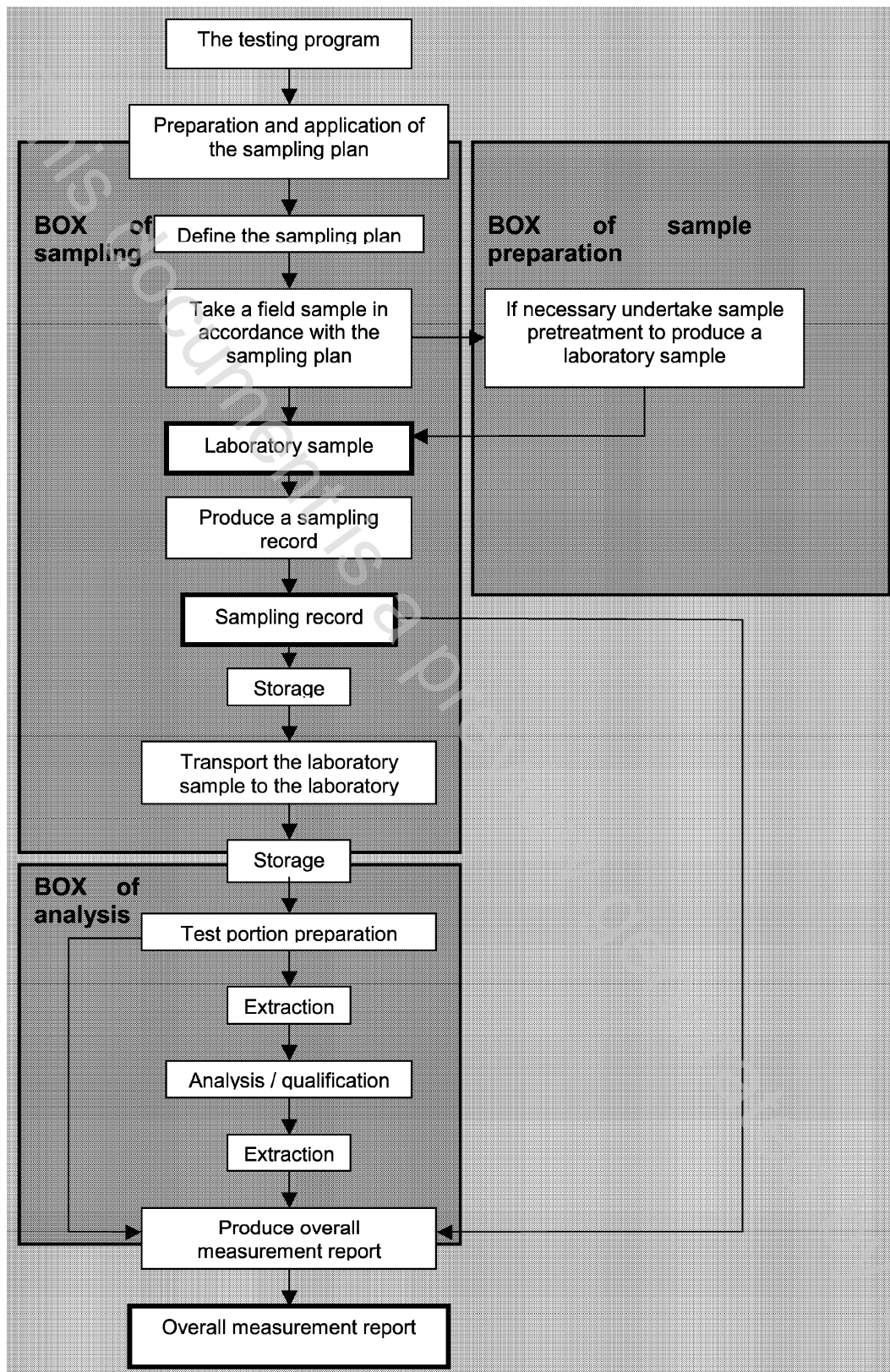


Figure 1 — Links between the essential elements of a testing program



# 1 Scope

This European Standard specifies methods for reducing combined samples to laboratory samples and laboratory samples to sub-samples and general analysis samples.

The methods described in this European Standard may be used for sample preparation, for example, when the samples are to be tested for bulk density, biomass determination, durability, particle size distribution, moisture content, ash content, ash melting behaviour, calorific value, chemical composition, and impurities. The methods are not intended to be applied to 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 15297, *Solid biofuels — Determination of minor elements — As, Cd, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, V and Zn*

EN 15357:2011, *Solid recovered fuels — Terminology, definitions and descriptions*

CEN/TS 15414-1:2010, *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 1: Determination of total moisture by a reference method*

CEN/TS 15414-2:2010, *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 2: Determination of total moisture by a simplified method*

EN 15414-3, *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 3: Moisture in general analysis sample*

EN 15415-1<sup>1)</sup>, *Solid recovered fuels — Determination of particle size and particle size distribution — Part 1: Screen method for small dimension particles*

EN 15442, *Solid recovered fuels — Methods for sampling*

# 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15357:2011 and the following apply.

## 3.1

### **combined sample**

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

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

## 3.2

### **general analysis sample**

sub-sample of a laboratory sample having a nominal top size of 1 mm or less and used for a number of chemical and physical analyses

## 3.3

### **increment**

portion of solid recovered fuel extracted in a single operation of the sampling device

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<sup>1)</sup> To be published.