

Solid biofuels — Methods for sample preparation

ICS 75.160.10

National foreword

This Draft for Development is the official English language version of CEN/TS 14780:2005.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature because the new edition of the international document has been issued as a Technical Specification and is open to further development. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion to a European standard. A review of this publication will be initiated 2 years after its publication by the European organization so that a decision can be taken on its status at the end of its 3-year life. Notification of the start of the review period will be made in an announcement in the appropriate issue of *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into a European standard, to extend the life of the Technical Specification or to withdraw it. Comments should be sent in writing to the Secretary of BSI Technical Committee PTI/17, Solid biofuels, at British Standards House, 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Summary of pages

This document comprises a front cover, an inside front cover, the CEN/TS title page, pages 2 to 19 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

This Draft for Development was published under the authority of the Standards Policy and Strategy Committee on 2 February 2006

© BSI 2 February 2006

ISBN 0 580 47734 7

Amendments issued since publication

Amd. No.	Date	Comments

English Version

Solid biofuels - Methods for sample preparation

Biocombustibles solides - Méthodes de préparation des
échantillons

Feste Biobrennstoffe - Verfahren zur Probenherstellung

This Technical Specification (CEN/TS) was approved by CEN on 19 March 2005 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Symbols and abbreviations	7
5 Principles of correct sample reduction	7
6 Apparatus	7
7 Sample reduction – general principles	10
8 Methods for reducing combined samples	12
9 Method for reducing laboratory samples to sub-samples and general analysis samples	15
10 Storage and labelling of sub-samples	18
Bibliography	19

Foreword

This Technical Specification (CEN/TS 14780:2005) has been prepared by Technical Committee CEN/TC 335 “Solid biofuels”, the secretariat of which is held by SIS.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

Biofuels are a major source of renewable energy. Technical Specifications are needed for production, trade and use of solid biofuels. For sampling and sample preparation of biofuels the following Technical Specifications can be used:

CEN/TS 14778-1, *Solid biofuels Sampling – Part 1: Methods for sampling*

CEN/TS 14778-2, *Solid Biofuels Sampling – Part 2: Methods for sampling particulate material transported in lorries*

CEN/TS 14779, *Solid biofuels – Sampling – Methods for preparing sampling plans and sampling certificates*

CEN/TS 14780, *Solid biofuels - Methods for sample preparation*

Current practice and the best available knowledge have been used to write these Technical Specifications. The results of recent sampling experiments may be used to improve the sampling plans.

These Technical Specifications can be used by production and trading of solid biofuels. They are also useful for buyers of solid biofuels, regulators, controllers and laboratories.

1 Scope

This Technical Specification describes methods for reducing combined samples to laboratory samples and laboratory samples to sub-samples and general analysis samples, and is applicable to solid biofuels that are either:

- fine and regularly-shaped particulate materials, particle sizes up to about 10 mm 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 loose straw;
- large pieces with nominal top size above 200 mm;

The methods described in this Technical Specification may be used for sample preparation, for example, when the samples are to be tested for bulk density, 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.

CEN/TS 14588, *Solid biofuels – Terminology, definitions and descriptions*.

CEN/TS 14774-1, *Solid biofuels – Methods for determination of moisture content – Oven dry method – Part 1: Total moisture – Reference method*.

CEN/TS 14774-2, *Solid biofuels – Methods for determination of moisture content – Oven dry method – Part 2: Total moisture – Simplified procedure*.

CEN/TS 15149 (all parts), *Solid biofuels – Methods for the determination of particle size distribution*.

3 Terms and definitions

For the purposes of this Technical Specification, the terms and definitions given in CEN/TS 14588 and the following apply.

3.1

combined sample

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

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

3.2

common sample

sample collected for more than one intended use

NOTE Adapted from ISO 13909