Solid biofuels - Determination of moisture content - Oven dry method - Part 3: Moisture in general analysis sample

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 14774-3:2009 sisaldab Euroopa standardi EN 14774-3:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 14774-3:2009 consists of the English text of the European standard EN 14774-3:2009.
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Solid biofuels - Determination of moisture content - Oven dry method - Part 3: Moisture in general analysis sample

Biocombustibles solides - Méthodes de détermination de la teneur en humidité - Méthode par séchage à l'étuve - Partie 3 : Humidité de l'échantillon pour analyse générale

Feste Biobrennstoffe - Bestimmung des Wassergehaltes - Ofentrocknung - Teil 3: Wassergehalt in allgemeinen Analysenproben

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

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Foreword

This document (EN 14774-3:2009) 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of an identical text or by endorsement, at the latest by April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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 14774-3:2004.

EN 14774 consists of the following parts:

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

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

— EN 14774-3, *Solid biofuels – Determination of moisture content – Oven dry method – Part 3: Moisture in general analysis sample*.

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, 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.

1 Scope

This European Standard describes the method of determining the moisture in the analysis sample by drying the sample in an oven. It is intended to be used for general analysis samples according to CEN/TS 14780. The method described in this document is applicable to all solid biofuels.

NOTE The term moisture content when used with biomass materials can be misleading since untreated biomass frequently contains varying amounts of volatile compounds (extractives) which may evaporate when determining the moisture content of the general analysis sample by oven drying (see Bibliography).

Since small particle size biofuels are very hygroscopic, their moisture content will vary with change of humidity of the atmosphere and therefore the moisture of the analyses sample should always be determined simultaneously when portions are weighed out for other analytical determinations, for example calorific value, carbon, nitrogen.

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 14588:2003, *Solid biofuels – Terminology, definitions and descriptions*

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 14780, *Solid biofuels – Methods for sample preparation*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in CEN/TS 14588:2003 apply.

NOTE In this method the moisture content should be reported on an as analysed basis.

4 Principle

The analysis sample of biofuel is dried at a temperature of 105 °C and the moisture content is calculated from the loss of mass of the test sample. Automatic equipments may be used when the method is validated with biomass reference samples of an adequate biomass type. This equipment shall fulfill all the requirements given in Clause 7 regarding sample size, temperature, atmosphere and weighing accuracy.

NOTE The analysis sample can be dried in air atmosphere or in nitrogen atmosphere. If the sample material is susceptible to oxidation (at 105 °C), drying in nitrogen atmosphere is to be preferred and detailed in ISO 11722. The used drying atmosphere should be reported in accordance with Clause 10.

5 Apparatus

5.1 Drying oven, capable of being controlled (manufacturers specification) at a temperature within the range of (105 ± 2) °C and in which for air the atmosphere changes between three and five times per h.