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IRISH STANDARD

**I.S. CEN/TS 15105:2005**

ICS 75.160.10

**SOLID BIOFUELS - METHODS FOR  
DETERMINATION OF THE WATER SOLUBLE  
CONTENT OF CHLORIDE, SODIUM AND  
POTASSIUM**

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Údarás um Chaighdeán Náisiúnta na hÉireann



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**CEN/TS 15105**

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English Version

**Solid biofuels - Methods for determination of the water soluble  
content of chloride, sodium and potassium**

Biocombustibles solides - Détermination de la teneur en  
chlorure, sodium et potassium solubles dans l'eau

Feste Biobrennstoffe - Verfahren zur Bestimmung des  
wasserlöslichen Gehaltes an Chlorid, Natrium und Kalium

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.

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## **Foreword**

This Technical Specification (CEN/TS 15105:2005) 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.

## **CEN/TS 15105:2005 (E)**

### **Introduction**

The elements chlorine, sodium and potassium are to a larger or a smaller extent present in solid biofuels. They can contribute significantly to utilisation problems such as corrosion, fouling and slagging in furnaces. Also they affect the gaseous emissions from the thermal processes.

The chlorine content in solid biofuels is mainly present as water soluble inorganic salts as e.g. sodium and potassium chlorides or other ion-exchangeable forms. Determination of the water soluble chloride content is thus an alternative and simple method to achieve information of the level of chlorine in solid biofuels. The content of water soluble chloride shall however not be mistaken for the total content of chlorine in the fuels.

In solid biofuels sodium and potassium can be present as both minerals and salts. The latter forms of the elements are extractable with water and are readily volatile. By determination of the water soluble content of sodium and potassium an estimate of the aggressive content of the elements in relation to potential slagging and fouling problems can be achieved. For some biofuels, as e.g. straw, it is an experience that the water soluble content of sodium and potassium correspond to the total content of the elements. The content of water soluble sodium and potassium shall not be mistaken for the total content of the elements.

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