SLOVENSKI STANDARD
oSIST prEN 15937:2009

01-julij-2009

Tla, blato in bioodpadki - Določ evanje specifič ne električ ne prevodnosti

Soil, sludge, and treated biowaste - Determination of specific electrical conductivity

Boden, Schlamm und behandelter Bioabfall - Bestimmung der spezifischen elektrischen Leitfähigkeit

Sol, boue et biodéchet traité - Détermination de la conductivité électrique spécifique

Ta slovenski standard je istoveten z: **prEN 15937**

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13.030.01 Odpadki na splošno Wastes in general

oSIST prEN 15937:2009 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS

English Version

Soil, sludge, and treated biowaste - Determination of specific electrical conductivity

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/SS S99.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Contents

Foreword

This document (prEN 15937:2009) has been prepared by Technical Committee CEN/SS S99 "Health, environment and medical equipment - Undetermined", the secretariat of which is held by CMC.

The document is currently submitted to the CEN Enquiry.

This draft standard has been prepared by the European project «Horizontal » and presented to CEN/TC BTTF 151 “Horizontal Standards in the Fields of Sludge, Biowaste, and Soil”, the secretariat of which is held by DS. Standardisation is carried out under mandate M330 given to CEN by the European Commission, and supports essential requirements of EU Directive(s).

The standard is part of a modular horizontal approach in which this standard belongs to the analytical step.

The results of the desk study as well as the evaluation and validation studies have been subject to discussions with all parties concerned in the CEN structure during the development by project Horizontal. The results of these consultations with interested parties in the CEN structure have been presented to and discussed in CEN BT/TF 151.

I has been concluded in TG 5 and supported by BTTF 151 that according to the evaluation test and ruggedness test, the method is fit for purpose. However, the data from the interlaboratory study do not support this conclusion, possible because the method was not followed in details. It was decided to forward the draft standard for CEN enquiry for possible publication as TS should further documentation not be made available.

It is recognized that standardization in the environmental field in most national standardization bodies is organized in national standardization committees that mirror the vertical structure of technical committees in the environmental field in CEN. The present CEN enquiry therefore asks for a special attention by the NSBs to assure that the relevant and interested parties are consulted during the CEN enquiry, i.e. to assure that one single consolidated enquiry reply on the draft standard can be presented by the NSB that covers the entire scope of the draft standard.

The standard is applicable and validated for several types of matrices as indicated below:

Material	Validated for (type of sample, e.g. municipal sludge, compost)	Document
Sludge	Municipal sludge, Germany	Johnsson, L., Nilsson, S.I. & Jennische, P. (2005). Desk study to asses the feasibility of a draft horizontal standard for electrical conductivity
Soil	Sludge amnded soil, Germany Agricultural soil, UK	Johnsson, L., Nilsson, S.I. & Jennische, P. (2005). Desk study to asses the feasibility of a draft horizontal standard for electrical conductivity
Treated Biowaste	Compost, Austria Compost, Germany	Johnsson, L., Nilsson, S.I. & Jennische, P. (2005). Desk study to asses the feasibility of a draft horizontal standard for electrical conductivity

Introduction

This draft standard is one of a number of draft standards developed and validated in the European project 'Horizontal' financed by the EU commission and EU member states. The project “Horizontal” was conducted by a European Consortium under the management by ECN, The Netherlands. This draft standard was presented by the project Horizontal to CEN/BT TF 151 in June 2008 with a view to be formally adopted as European Standard under CEN rules.

The standardisation by CEN is carried out on a mandate by the European Commission (Mandate M/330). The mandate considers standards on sampling and analytical methods for hygienic and biological parameters as well as inorganic and organic determinants. It was the aim of the initiative to develop standards that are suitable for a wide range of environmental materials and lead to equivalent results as far as this is technically feasible.

Until now test methods determining properties of materials within the environmental area were prepared in Technical Committees (TCs) working on specific products/matrices (soil, waste, sludge etc). However, it is recognized that many steps in test procedures can be used in test procedures for other products/matrices. By careful determination of these steps and selection of specific questions within these steps, elements of the test procedure can be described in a way that can be used for more matrices and materials with certain specifications. This optimization is in line with the development among end-users of standards. A majority of routine environmental analyses are carried out by institutions and laboratories working under a scope which is not limited to one single environmental matrix but covers a wide variety of matrices. Availability of standards covering more matrices contributes to the optimization of laboratory procedures and standard maintenance costs, e.g. cost related to accreditation and recognition.

A horizontal modular approach was developed in the project 'Horizontal'. 'Modular' means that a test standard developed in this approach concerns a specific step in assessing a property and not the whole ” chain of measurement” (from sampling to analyses). A beneficial feature of this approach is that “modules” can be replaced by better ones without jeopardizing the standard “chain”.

The modules that relates to this standard are specified in section 2 - Normative references.

1 Scope

This European Standard (CSS99037) describes an instrumental method for routine determinations of specific electrical conductivity in aqueous extracts of sludge (fresh), treated biowaste (fresh) or soil (fresh or air-dry). Please note that soil improvers and growing media are not included in this standard. The EC determination is carried out to obtain an indication of the content of water-soluble electrolytes in the materials mentioned. The standard is based on ISO 11265. There is presently no international standard for sludge or treated biowaste. For practical reasons, for instance if there is a need to make strict comparisons with previous measurements, soils should generally be air-dried. Air-drying can be used for all soils, except for those containing sulphidic minerals or volatile acids. In both cases fresh soil should be used to avoid either sulphide oxidation resulting in the formation of sulphuric acid, or volatilisation of low-molecular organic acids. Regarding sludge and treated biowaste, fresh samples are recommended. In these materials air-drying may introduce artefacts due to a stimulation of oxidation processes and should therefore be avoided.