

Mullaparandajad ja kasvukeskkond. Elektri juhtivuse määramine.

Soil improvers and growing media - Determination of electrical conductivity

EESTI STANDARDI EESSÕNA

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English Version

Soil improvers and growing media - Determination of electrical conductivity

Amendements du sol et supports de culture -
Détermination de la conductivité électrique

Bodenverbesserungsmittel und Kultursubstrate -
Bestimmung der elektrischen Leitfähigkeit

This European Standard was approved by CEN on 17 September 2011.

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Foreword

This document (EN 13038:2011) has been prepared by Technical Committee CEN/TC 223 “Soil improvers and growing media”, the secretariat of which is held by ASI.

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of an identical text or by endorsement, at the latest by May 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.

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 EN 13038:1999.

The main change to the previous is the change of the scope.

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 the United Kingdom.

1 Scope

This European Standard specifies an instrumental method for the routine determination of electrical conductivity in a water extract of a soil improver or growing medium. The determination is carried out to obtain an indication of the content of water soluble electrolytes in either soil improvers or growing media.

This method is not applicable to liming materials and preformed materials such as mineral wool slabs and foam slabs.

NOTE The requirements of the standard may differ from the national legal requirements for the declaration of the products concerned.

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 13040:2007, *Soil improvers and growing media – Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory compacted bulk density*

EN ISO 3696, *Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)*

ISO 1770, *Solid-stem general purposes thermometers*

3 Terms and definitions

For the purposes of this document the terms and definitions given in EN 13040:2007 and the following apply.

3.1

electrical conductivity

ability of an aqueous extract of the sample to conduct electricity as a function of the ion concentration

4 Principle

A test portion is extracted with water at $(22 \pm 3,0)$ °C in an extraction ratio of 1 : 5 (1 *V* sample + 5 *V* water) to dissolve the electrolytes. The specific electrical conductivity of the extract is measured and the result is adjusted to a measurement temperature of 25 °C.

5 Reagents

5.1 Water having an electrical conductivity not higher than 0,2 mS/m at 25 °C and a pH >5,6 (grade 2 water according to EN ISO 3696).

5.2 Potassium chloride solution, $c(\text{KCl}) = 0,100$ mol/l

Dissolve 7,456 g potassium chloride, (KCl), previously dried for 2 h at 105 °C, in water (see 5.1) and dilute to 1000 ml. The specific electrical conductivity of this solution at 25 °C is 1290 mS/m.