

## **Soil improvers and growing media - Extraction of water soluble nutrients and elements**

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water soluble nutrients and elements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13652:2002 sisaldab Euroopa standardi EN 13652:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 14.03.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13652:2002 consists of the English text of the European standard EN 13652:2001.</p> <p>This document is endorsed on 14.03.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This European Standard specifies a method for the routine extraction of water-soluble extractable nutrients and elements (as listed in annex B) in soil improvers or growing media.</p> <p>The method is not applicable to liming materials and performed materials such as mineral wool slabs and foam slabs.</p>	<p><b>Scope:</b></p> <p>This European Standard specifies a method for the routine extraction of water-soluble extractable nutrients and elements (as listed in annex B) in soil improvers or growing media.</p> <p>The method is not applicable to liming materials and performed materials such as mineral wool slabs and foam slabs.</p>
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ICS 65.080

**Võtmesõnad:** extraction methods, extraction methods of an, growing media, methods of analysis, nutrient, nutrient content, soil improvement, soil improving materials, soils, soluble, solvents, substrates (insulating), water, water solubility, water soluble, water-soluble matter

ICS 65.080

English version

## Soil improvers and growing media - Extraction of water soluble nutrients and elements

Amendements du sol et supports de culture - Extraction  
des éléments nutritifs solubles dans l'eau

Bodenverbesserungsmittel und Kultursubstrate - Extraktion  
wasserlöslicher Nährstoffe und Elemente

This European Standard was approved by CEN on 11 August 2001.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 223 "Soil improvers and growing media", the secretariat of which is held by BSI.

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 March 2002, and conflicting national standards shall be withdrawn at the latest by March 2002.

The annexes A and B are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

**SAFETY PRECAUTIONS** — Care should be taken when handling samples that may contain sharps or is of a dusty nature.

## 1 Scope

This European Standard specifies a method for the routine extraction of water-soluble extractable nutrients and elements (as listed in annex B) in soil improvers or growing media.

The 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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

EN 13039, *Soil improvers and growing media – Determination of organic matter content and ash*.

EN 13040:1999, *Soil improvers and growing media - Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory compacted bulk density*.

## 3 Terms and definitions

For the purposes of this standard the terms and definitions given in EN 13039 and EN 13040 apply.

## 4 Principle

A sample is extracted with water at  $22\text{ °C} \pm 3\text{ °C}$  in an extraction volume ratio of 1 + 5. The extracted nutrients are determined by various methods as appropriate.

## 5 Reagents

### 5.1 General

All reagents used shall be of recognised analytical quality and water of grade 2 according to EN ISO 3696.

**5.2 Nitric acid**,  $c(\text{HNO}_3) = 15\text{ mol/l}$ ;  $\rho \approx 1,42\text{ g/ml}$ ; not less than 65 % mass/volume.

**5.3 Nitric acid**,  $c(\text{HNO}_3) = 0,5\text{ mol/l}$ , 35 ml nitric acid (5.2) dilute required volume of nitric acid (5.2) with water.