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Fertilizers - Determination of the sodium extracted by flameemission spectrometry

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## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 16199:2012 sisaldab Euroopa standardi EN 16199:2012 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.11.2012 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 14.11.2012.

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This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2012 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 14.11.2012.

The standard is available from Estonian standardisation organisation.

ICS 65.080

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English Version

## Fertilizers - Determination of the sodium extracted by flame-emission spectrometry

Engrais - Dosage du sodium extrait par spectrométrie  
d'émission de flamme

Düngemittel - Bestimmung von extrahiertem Natrium mit  
Emissions-Flammenspektrometrie

This European Standard was approved by CEN on 6 October 2012.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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## Foreword

This document (EN 16199:2012) has been prepared by Technical Committee CEN/TC 260 "Fertilizers and liming materials", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

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 16199:2011.

The following changes have been made to the former edition:

- a) the CEN Technical Specification has been adopted as a European Standard;
- b) the document has been editorially revised.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies a method for the determination of the sodium content in fertilizer extracts by flame-emission spectrometry.

The method is applicable to EC fertilizers for which a declaration of the sodium content is provided for in Regulation (EC) Nr 2003/2003, Annex I [3].

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1482-2, *Fertilizers and liming materials — Sampling and sample preparation — Part 2: Sample preparation*

EN 12944-1:1999, *Fertilizers and liming materials and soil improvers — Vocabulary — Part 1: General terms*

EN 12944-2:1999, *Fertilizers and liming materials and soil improvers — Vocabulary — Part 2: Terms relating to fertilizers*

EN 15960, *Fertilizers — Extraction of total calcium, total magnesium, total sodium and total sulfur in the forms of sulfates*

EN 15961, *Fertilizers — Extraction of water soluble calcium, magnesium, sodium and sulfur in the form of sulfates*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12944-1:1999 and EN 12944-2:1999 apply.

## 4 Principle

Following suitable dilution of the extract obtained according to EN 15960 or EN 15961, the sodium content of the solution is determined by flame-emission spectrometry.

## 5 Sampling

Sampling is not part of the method specified in this document. A recommended sampling method is given in EN 1482-1.

Sample preparation shall be carried out in accordance with EN 1482-2. Grinding of the laboratory sample is recommended for homogeneity reasons.

## 6 Reagents

### 6.1 Diluted hydrochloric acid.

Add one volume of hydrochloric acid for analysis ( $\rho_{20} = 1,18$  g/ml) to one volume of water.

### 6.2 Aluminium nitrate, $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$ .

### 6.3 Caesium chloride, $\text{CsCl}$ .

### 6.4 Anhydrous sodium chloride, $\text{NaCl}$ .