

**Lubiväetised. Magneesiumisisalduse määramine.
Aatomabsorptsiooni spektromeetriline meetod**

Liming materials - Determination of magnesium content -
Atomic absorption spectrometric method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 12947:2000 sisaldab Euroopa standardi EN 12947:2000 ingliskeelset teksti.

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ICS 65.080

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ICS 65.080

English version

Liming materials

**Determination of magnesium content – Atomic absorption
spectrometric method**

Amendements calcaïques et/ou
magnésiens – Détermination de la
teneur en magnésium – Méthode par
spectrométrie d'absorption atomique

Calcium-/Magnesium-Boden-
verbesserungsmittel – Bestimmung
des Magnesiumgehaltes – Atom-
absorptionsspektrometrisches
Verfahren

This European Standard was approved by CEN on 1999-11-13.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard 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of an identical text or by endorsement, at the latest by December 2000, and conflicting national standards shall be withdrawn at the latest by December 2000.

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.

1 Scope

This draft European Standard specifies a method for the determination of the magnesium content of all liming materials by atomic absorption spectrometry.

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 1482, *Sampling of solid fertilisers and liming materials*

ISO 3310-1, *Test sieves - Technical requirement and testing part 1: Test sieves of metal wire cloth*

3 Principle

Dissolution of the test portion in diluted hydrochloric acid. Filtration and dilution. Determination of magnesium by flame atomic absorption spectrometry at a wavelength of 285,2 nm.

4 Reagents

4.1 General

Commercially available standard solutions may be used instead of standard solutions produced on-site in the laboratory.

4.2 Hydrochloric acid solution, diluted

Dilute 500 ml of concentrated hydrochloric acid ($\rho_{20} = 1,18$ g/ml) to 1 000 ml with water.

4.3 Hydrochloric acid solution

Approximately $c(\text{HCl}) \approx 1$ mol/l

4.4 Hydrochloric acid solution

Approximately $c(\text{HCl}) \approx 0,5$ mol/l

4.5 Standard magnesium solution

Containing 1,000 g of magnesium per litre.

4.5.1 Weigh 1,013 g of magnesium sulfate ($\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$) into a 100 ml volumetric flask, dissolve in hydrochloric acid solution (4.4) and dilute to the mark with the same solution.

or

4.5.2 Heat magnesium oxide (MgO) at 600 °C for 2 h. Weigh 1,658 g of the freshly calcined MgO into a 500 ml beaker, dissolve in 100 ml of water and 120 ml of hydrochloric acid solution (4.3). Transfer quantitatively the solution to a 1 000 ml volumetric flask, dilute to the mark with water and mix thoroughly.