

ICS 65.080

English Version

## Fertilizers - Determination of magnesium by complexometry

Engrais - Dosage du magnésium par complexométrie

Düngemittel - Komplexometrische Bestimmung von  
Magnesium

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## Foreword

This document (CEN/TS 16198:2011) has been prepared by Technical Committee CEN/TC 260 "Fertilizers and liming materials", the secretariat of which is held by DIN.

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## 1 Scope

This Technical Specification specifies a method for the determination of magnesium in fertilizer extracts.

The method is applicable to the following EC fertilizer extracts for which the determination of total magnesium and/or water-soluble magnesium is provided for according to the Regulation (EC) No 2003/2003, Annex I [3]:

- fertilizers listed in [3], Annex I: straight nitrogenous fertilizers, type 1b + 1c (calcium magnesium nitrate), type 7 (magnesium sulfonitrate), type 8 (nitrogenous fertilizers with magnesium) and straight potassic fertilizers, type 2 (enriched kainite), type 4 (potassium chloride containing magnesium), type 6 (potassium sulfate containing magnesium salt);
- fertilizers listed in [3], Annex I D relating to secondary nutrients.

## 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 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*

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

CEN/TS 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

The magnesium is solubilized according to CEN/TS 15960 or CEN/TS 15961. First titration: with EDTA of Ca and Mg in the presence of Eriochrome black-T. Second titration: with EDTA of Ca in the presence of calcein or of calcone carbonic acid. Determination of magnesium by difference.

## 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.