

ICS 65.080

English Version

**Fertilizers - Manganimetric determination of extracted calcium
following precipitation in the form of oxalate**

Engrais - Dosage manganimétrique du calcium extrait
après précipitation sous forme d'oxalate

Düngemittel - Manganometrische Bestimmung von Calcium
nach Oxalatfällung

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Foreword

This document (CEN/TS 16196:2011) 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 manganimetric method for the determination of the calcium content in fertilizer extracts.

This method is applicable to EC fertilizers for which a declaration of the total and/or water-soluble calcium content is provided for in Regulation (EC) 2003/2003, Annex I [3].

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 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.

5 Principle

Precipitation of the calcium contained in an aliquot of the extraction solution in the form of an oxalate, which is determined by titration using potassium permanganate.

6 Reagents

6.1 Diluted hydrochloric acid, one volume of hydrochloric acid, $\rho = 1,18\text{g/ml}$, and one volume of water.