

ICS 65.080

English Version

Fertilizers - Extraction of total sulfur present in various forms

Engrais - Extraction du soufre total présent sous différentes formes

Düngemittel - Extraktion von Gesamtschwefel, der in verschiedener Form vorliegen kann

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....3

1 Scope4

2 Normative references4

3 Terms and definitions4

4 Sampling.....4

5 Principle.....4

6 Reagents.....4

7 Apparatus5

8 Procedure5

Bibliography.....6

Foreword

This document (CEN/TS 15925:2009) 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 document specifies a method for the extraction of the total sulfur contained in fertilizers in elemental form and/or in other chemical combinations.

The method is applicable to EC fertilizers for which a declaration of the total sulfur present in various forms (elemental, thiosulfate, sulfite, sulfate) is provided.

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 15749, *Fertilizers – Determination of sulfates content using three different methods*

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 is recommended for homogeneity reasons.

5 Principle

Elemental sulfur is converted in an alkaline medium into polysulfides and thiosulfate; these, together with any sulfites that may be present, are then oxidized with hydrogen peroxide. The various forms of sulfur are thus converted into sulfate that is determined by precipitation of barium sulfate.

6 Reagents

Use only reagents of recognized analytical grade and distilled or demineralized water.

6.1 Diluted hydrochloric acid.

Mix one volume of hydrochloric acid ($d = 1,18$) with one volume of water.

6.2 Sodium hydroxide solution, NaOH 30 % minimum, $d = 1,33$.

6.3 Hydrogen peroxide solution, $w = 30$ %.