

Väetised. Sulfaadisisalduse määramine kolme eri meetodi abil

Fertilizers - Determination of sulfates content using three different methods

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15749:2009 sisaldab Euroopa standardi EN 15749:2009 ingliskeelset teksti.

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English Version

Fertilizers - Determination of sulfates content using three different methods

Engrais - Dosage des sulfates selon trois méthodes
différentes

Düngemittel - Bestimmung von Sulfat mit drei
verschiedenen Verfahren

This European Standard was approved by CEN on 20 September 2009.

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Foreword

This document (EN 15749:2009) 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of an identical text or by endorsement, at the latest by April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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Introduction

This document specifies three different methods for the determination of sulfur. Based on the statistical results of the inter-laboratory tests, obtained with the same samples, the three methods produce equivalent results, and hence can be used all three methods on decision of the user and availability of equipment.

1 Scope

This European Standard specifies three different methods (Methods A, B and C) for the determination of sulfur present in fertilizers extracts in the form of sulfates. Method A specifies the gravimetric method. Method B specifies the method using inductively coupled plasma optical spectrometry (ICP-OES). Method C specifies the method using ion chromatography (IC).

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 15925, *Fertilizers — Extraction of total sulfur present in various forms*

CEN/TS 15926, *Fertilizers — Extraction of water soluble sulfur where the sulfur is in various forms*

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 forms of sulfates)*

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)*

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

4.1 Method A: Gravimetric method

Sulfur is extracted from the sample according to the methods described in CEN/TS 15925, CEN/TS 15926, CEN/TS 15960 or CEN/TS 15961 and determined based on the gravimetric determination as barium sulfate.

4.2 Method B: ICP-OES

Sulfur is extracted from the sample according to the methods described in CEN/TS 15925, CEN/TS 15926, CEN/TS 15960 or CEN/TS 15961 and its concentration in the extract is measured by inductively coupled plasma-optical emission spectrometry (ICP-OES).