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NSAI Standards

Irish Standard
I.S. EN 15559:2009

Fertilizers - Determination of nitric and ammoniacal nitrogen according to Arnd

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I.S. EN 15559:2009

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN 15559

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ICS 65.080

Supersedes CEN/TS 15559:2007

English Version

Fertilizers - Determination of nitric and ammoniacal nitrogen according to Arnd

Engrais - Dosage de l'azote nitrique et ammoniacal selon Arnd

Düngemittel - Bestimmung von Nitrat- und Ammoniumstickstoff nach Arnd

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Foreword

This document (EN 15559:2009) 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of an identical text or by endorsement, at the latest by July 2009, and conflicting national standards shall be withdrawn at the latest by July 2009.

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1 Scope

This European Standard specifies a method for the determination of nitric and ammoniacal nitrogen with reduction according to Arnd (modified for each of the variants a, b and c).

The method is applicable to all nitrogenous fertilizers, including compound fertilizers, in which nitrogen is found exclusively in nitrate form, or in ammoniacal and nitrate form.

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*

EN ISO 3696:1995, *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

Reduction of nitrates and nitrites to ammonia in a neutral aqueous solution by means of a metallic alloy composed of 60 % Cu and 40 % Mg (Arnd's alloy) in the presence of magnesium chloride.

Distillation of the ammonia and determination of the yield in a known volume of standard sulfuric acid solution. Titration of the excess acid by means of a standard solution of sodium or potassium hydroxide.

5 Reagents

5.1 General

Use only reagents of recognized analytical grade and distilled or demineralized water, free from carbon dioxide and all nitrogenous compounds (grade 3 according to EN ISO 3696:1995).

5.2 Diluted hydrochloric acid

Mix one volume of concentrated hydrochloric acid solution, ρ(HCl) = 1,18 g/ml, with one volume of water.

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