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National Standards Authority of Ireland

STANDARD RECOMMENDATION

S.R. CEN/TS 15604:2007

ICS 65.080

FERTILIZERS - DETERMINATION OF DIFFERENT FORMS OF NITROGEN IN THE SAME SAMPLE, CONTAINING NITROGEN AS NITRIC, AMMONIACAL, UREA AND CYANAMIDE NITROGEN

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
http://www.nsai.ie

Sales
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TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN/TS 15604

July 2007

ICS 65.080

English Version

Fertilizers - Determination of different forms of nitrogen in the same sample, containing nitrogen as nitric, ammoniacal, urea and cyanamide nitrogen

Engrais - Détermination des différentes formes d'azote dans un même échantillon contentant l'azote sous forme nitrique, ammoniacale, uréique et cyanamidique

Düngemittel - Bestimmung verschiedener, nebeneinander anwesender Stickstoff-Formen in derselben Probe mit Stickstoff in Form von Ammonium, Nitrat, Harnstoff und Cyanamid

This Technical Specification (CEN/TS) was approved by CEN on 8 May 2007 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Management Centre: rue de Stassart, 36 B-1050 Brussels

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Contents

Page

Foreword 3
1 Scope 4
2 Normative references 4
3 Terms and definitions 4
4 Principle 4
5 Reagents 6
6 Apparatus 9
7 Sampling and sample preparation 14
8 Procedure 15
9 Verification of the result 22
10 Test report 22
Bibliography 23

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Foreword

This document (CEN/TS 15604:2007) has been prepared by Technical Committee CEN/TC 260 “Fertilizers and liming materials”, the secretariat of which is held by DIN.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This Technical Specification specifies a method for the determination of any one form of nitrogen in the presence of any other form.

The method is applicable to any fertilizer provided for in Annex I of the Regulation (EC) No 2003/2003 [1] containing nitrogen in various forms.

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 15475, *Fertilizers — Determination of ammoniacal nitrogen*

CEN/TS 15562, *Fertilizers — Determination of cyanamide nitrogen*

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

4.1 Total soluble and insoluble nitrogen

According to the list of standard fertilizers given in Annex I of [1], this determination is applicable to products containing calcium cyanamide.

In the absence of nitrates, the test sample is mineralized by direct Kjeldahl digestion.

In the presence of nitrates, the test sample is mineralized by Kjeldahl digestion after reduction with the aid of metallic iron and stannous chloride.

In both cases, the ammonia is determined according to CEN/TS 15475.

NOTE If analysis shows an insoluble nitrogen content of more than 0,5 %, one concludes that the fertilizer contains other forms of insoluble nitrogen not included in the list in [1], Annex I.

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