Inorganic fertilizers - Determination of cyanamide nitrogen

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NATIONAL FOREWORD

See Eesti standard EVS-EN 15562:2023 sisaldab Euroopa standardi EN 15562:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 15562:2023 consists of the English text of the European standard EN 15562:2023.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 23.08.2023.	Date of Availability of the European standard is 23.08.2023.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Inorganic fertilizers - Determination of cyanamide nitrogen

Engrais inorganiques - Dosage de l'azote cyanamidé

Anorganische Düngemittel - Bestimmung des Cyanamidstickstoffs

This European Standard was approved by CEN on 26 June 2023.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

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European foreword

This document (EN 15562:2023) 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of an identical text or by endorsement, at the latest by February 2024, and conflicting national standards shall be withdrawn at the latest by February 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15562:2009.

In comparison with the previous edition EN 15562:2009, the following technical modifications have been made:

— technical changes have been made to the description of the procedure (Clause 8) and to Table 1 (8.2);

— deletion of distillation apparatus drawings.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

1 Scope

This document specifies a method for the determination of cyanamide nitrogen in fertilizers. The method is applicable to calcium cyanamide and mixtures of calcium cyanamide with calcium nitrate.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Fertilizers and liming materials — Vocabulary — Part 1: General terms*

EN 12944-2, *Fertilizers and liming materials — Vocabulary — Part 2: Terms relating to fertilizers*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12944-1 and EN 12944-2 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

4 Principle

Precipitation of cyanamide nitrogen as a silver complex. Digestion in sulfuric acid with the aid of a catalyst. Distillation of the ammonia from an alkaline solution, absorption in an excess of sulfuric acid volumetric solution and back-titration with sodium or potassium hydroxide volumetric solution.

5 Reagents

Use only reagents of recognized analytical grade and water with an electrical conductivity < 0,5 mS/m (at 25 °C).

5.1 Glacial acetic acid

5.2 Ammonia solution, containing 10 % of ammonia gas by mass, ρ_{20} = 0,96 g/ml

5.3 Ammoniacal silver solution, according to Tollens

Mix 500 ml of 10 % silver nitrate ($AgNO_3$) solution in water with 500 ml of 10 % ammonia solution (5.2).

Do not expose unnecessarily to light, heat or air. The solution normally keeps for years. As long as the solution remains clear, the reagent is of good quality.

5.4 Sulfuric acid, mass concentration ρ_{20} = 1,84 g/ml

5.5 Potassium sulphate, analytical grade