



SLOVENSKI STANDARD
SIST EN 15959:2024

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Anorganska gnojila - Določanje ekstrahiranega fosforja P2O5

Inorganic fertilizers - Determination of extracted phosphorus P2O5

Anorganische Düngemittel - Bestimmung des Gehalts an extrahiertem Phosphor P2O5

Engrais inorganiques - Dosage du phosphore extrait P2O5

Ta slovenski standard je istoveten z: EN 15959:2023

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EUROPEAN STANDARD

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English Version

Inorganic fertilizers - Determination of extracted phosphorus P₂O₅

Engrais inorganiques - Dosage du phosphore extrait
P₂O₅Anorganische Düngemittel - Bestimmung des Gehalts
an extrahiertem Phosphor P₂O₅

This European Standard was approved by CEN on 27 November 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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Contents	Page
European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Principle	4
5 Reagents	4
6 Apparatus and equipment	5
7 Sampling and sample preparation	6
8 Procedure	6
8.1 Treatment of the solution	6
8.2 Hydrolysis	6
8.3 Weighing the crucible	6
8.4 Precipitation	7
8.5 Filtering and washing	7
8.6 Drying and weighing	7
8.7 Blank test	7
8.8 Verification	7
9 Calculation and expression of the result	7
10 Precision	8
10.1 Inter-laboratory tests	8
10.2 Repeatability	8
10.3 Reproducibility	8
11 Test report	9
Annex A (informative) Statistical results of the inter-laboratory tests	10
Bibliography	13

European foreword

This document (EN 15959:2023) 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of an identical text or by endorsement, at the latest by June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.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 15959:2011.

In comparison with the previous edition EN 15959:2011, the following technical modifications have been made:

- precision data for the determination of the formic acid soluble P_2O_5 content have been added to Table 2 and Annex A.

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.

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EN 15959:2023 (E)

1 Scope

This document specifies a method for the determination of phosphorus in fertilizer extracts.

The method is applicable to all extracts of fertilizers for the determination of the different forms of phosphorus as phosphorus soluble in mineral acids, water-soluble phosphorus, phosphorus soluble in solutions of neutral ammonium citrate, phosphorus soluble in 2 % citric acid and phosphorus soluble in a mass fraction of 2 % formic acid.

The method has only been validated on inorganic fertilizers but can be applicable to all extracted phosphorous if proper extraction methods are used.

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 terminological 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

After possible hydrolysis, phosphorus is precipitated in an acid media in the form of quinoline phosphomolybdate.

After filtering and washing, the precipitate is dried at 250 °C and weighed.

In the above-mentioned conditions no interfering action is exerted by the compounds likely to be found in the solution (mineral and organic acids, ammonium ions, soluble silicates, etc.) if a reagent based on sodium molybdate or ammonium molybdate is used in the precipitation.

5 Reagents

Use only reagents of recognized analytical grade.

5.1 Water, distilled or demineralized.

5.2 Concentrated nitric acid, mass concentration $\rho = 1,40$ g/ml.