



SLOVENSKI STANDARD
SIST-TS CEN/TS 15961:2010

01-februar-2010

Gnojila - Ekstrakcija v vodi topnega kalcija, magnezija, natrija in žvepla (v obliki sulfatov) (metoda 8.3)

Fertilizers - Extraction of water-soluble calcium, magnesium, sodium and sulfur (in the forms of sulfates) (Method 8.3)

Düngemittel - Extraktion von wasserlöslichem Calcium, Magnesium und Natrium sowie von Schwefel in Form von Sulfat

Engrais - Extraction des formes solubles dans l'eau du calcium, du magnésium, du sodium et du soufre sous forme de sulfate

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Ta slovenski standard je istoveten z: CEN/TS 15961:2009

ICS:

65.080 Gnojila Fertilizers

SIST-TS CEN/TS 15961:2010 en,fr,de

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 15961

December 2009

ICS 65.080

English Version

**Fertilizers - Extraction of water soluble calcium, magnesium,
sodium and sulfur in the form of sulfates**

Engrais - Extraction des formes solubles dans l'eau du calcium, du magnésium, du sodium et du soufre sous forme de sulfate

Düngemittel - Extraktion von wasserlöslichem Calcium, Magnesium und Natrium sowie von Schwefel in Form von Sulfat

This Technical Specification (CEN/TS) was approved by CEN on 19 October 2009 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.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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Foreword

This document (CEN/TS 15961:2009) has been prepared by Technical Committee CEN/TC 260 "Fertilizers and liming materials", the secretariat of which is held by DIN.

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

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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CEN/TS 15961:2009 (E)**1 Scope**

This Technical Specification specifies a method for the extraction of water-soluble calcium, magnesium, sodium and sulfur (in the form of sulfates), so that the same extract may be used for the determination of each nutrient required.

The method is solely applicable to fertilizers listed in Regulation (EC) 2003/2003, Annex I (see [1]), for which a declaration of the water-soluble calcium, magnesium, sodium, and sulfur (in the form of sulfates) is provided for in this Regulation.

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*

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3 Terms and definitions

[SIST-TS CEN/TS 15961:2010](https://standards.iteh.ai/catalog/standards/sist/49d9f8c2-a859-4ed8-b632-435c50e0e288/sist-ts-cen-ts-15961-2010)
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For the purposes of this document, the terms and definitions given in EN 12944-1:1999 and EN 12944-2:1999 apply.

4 Principle

Extraction of the calcium, magnesium, sodium, and sulfur (present in the form of sulfates) in the fertilizer by boiling in water under the specified conditions.

5 Sampling

Sampling is not part of the method specified in this document. A recommended sampling method is given in EN 1482-1.

Sample preparation shall be carried out in accordance with EN 1482-2. Grinding of the laboratory sample is recommended for homogeneity reasons.

6 Reagents

6.1 Water, distilled or demineralized.

7 Apparatus

7.1 Standard laboratory equipment

7.2 **Electric hot plate**, with adjustable temperature.

7.3 **Beaker**, capacity 600 ml.

7.4 **Graduated flask**, capacity 500 ml.

7.5 **Dry filter**.

8 Procedure

8.1 Test portion

Where fertilizers contain no sulfur or where they contain, at the same time, no more than 3 % of sulfur (S) i.e. 7,5 % SO_3 , and no more than 4 % of calcium (Ca) i.e. 5,6 % CaO, weigh 5 g of the test sample to the nearest 1 mg. Place it in the beaker (7.3).

Where fertilizers contain more than 3 % of sulfur (S) and more than 4 % of calcium (Ca), weigh 1 g of the test sample to the nearest 1 mg. Place it in the beaker (7.3).

8.2 Preparation of the solution

Add approximately 400 ml of water (6.1) to the test portion (8.1) and boil for 30 min. Allow to cool, stirring occasionally. Decant quantitatively into a graduated flask (7.4). Make up to volume with water (6.1), and mix. Pass through a filter (7.5) into a dry container. Discard the initial portions of the filtrate.

The filtrate shall be completely transparent. Stopper if the filtrate is not used immediately.

9 Test report

The test report shall contain at least the following information:

- a) all information necessary for the complete identification of the sample;
- b) test method used with reference to this document;
- c) test results obtained;
- d) date of sampling and sampling procedure (if known);
- e) date when the analysis was finished;
- f) whether the requirement of the repeatability limit has been fulfilled;
- g) all operating details not specified in this document, or regarded as optional, together with details of any incidents occurred when performing the method, which might have influenced the test result(s).

Bibliography

- [1] Regulation (EC) No 2003/2003 of the European Parliament and of the Council of 13 October 2003 relating to fertilisers, Official Journal L 304, 21/11/2003, P. 0001-0194, Annex I and Annex IV, method 8.1
- [2] EN 1482-1, *Fertilizers and liming materials — Sampling and sample preparation — Part 1: Sampling*

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