

Fertilizers and liming materials - Determination of chromium(VI) by photometry (method A) and by ion chromatography with spectrophotometric detection (method B)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16318:2013+A1:2016 sisaldab Euroopa standardi EN 16318:2013+A1:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 16318:2013+A1:2016 consists of the English text of the European standard EN 16318:2013+A1:2016.
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English Version

Fertilizers and liming materials - Determination of chromium(VI) by photometry (method A) and by ion chromatography with spectrophotometric detection (method B)

Engrais et amendements minéraux basiques - Dosage du chrome (VI) par spectrophotométrie (méthode A) et chromatographie ionique avec détection spectrophotométrique (méthode B)

Düngemittel und Kalkdünger - Bestimmung von Chrom (VI) mit Photometrie (Verfahren A) und mit Ionenchromatographie mit spektrometrischer Detektion (Verfahren B)

This European Standard was approved by CEN on 15 September 2013 and includes Amendment 1 approved by CEN on 19 December 2015.

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European foreword

This document (EN 16318:2013+A1:2016) 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of an identical text or by endorsement, at the latest by August 2016, and conflicting national standards shall be withdrawn at the latest by August 2016.

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 includes Amendment 1 approved by CEN on 2015-12-19.

This document supersedes A1 EN 16318:2013 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

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

A1 *deleted text* A1

A1 **WARNING — Avoid any contact with the skin, ingestion or inhalation of Cr(VI) compounds. Cr(VI) compounds are genotoxic and potentially carcinogenic to humans.** A1

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

1 Scope

■^{A1} This European Standard specifies two methods for the determination of the content of soluble chromate in fertilizers and liming materials. ^{A1}

Method A specifies the determination of chromate after extraction with water by photometry. This method can be used to determine Cr(VI)-mass fractions in solids higher than 1 mg/kg.

Method B specifies the determination of chromate by alkaline digestion and ion chromatography with spectrophotometric detection. This method can be used to determine Cr(VI)-mass fractions in solids higher than 0,1 mg/kg.

■^{A1} NOTE 1 ^{A1} In case of reducing or oxidizing fertilizer matrix, no valid Cr(VI) content can be reported.

■^{A1} NOTE 2 The term fertilizer is used throughout the body of this European Standard and includes liming materials unless otherwise indicated. ^{A1}

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

■^{A1} EN 12944-3:2001, *Fertilizers and liming materials — Vocabulary — Part 3: Terms relating to liming materials* ^{A1}

EN 15192:2006, *Characterisation of waste and soil — Determination of Chromium(VI) in solid material by alkaline digestion and ion chromatography with spectrophotometric detection*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696)*

3 Terms and definitions

■^{A1} For the purposes of this document, the terms and definitions given in EN 12944-1:1999, EN 12944-2:1999 and EN 12944-3:2001 apply. ^{A1}

4 Sampling and sample preparation

Sampling is not part of the methods specified in this European Standard. A recommended sampling method is given in EN 1482-1 [2].

Sample preparation shall be carried out in accordance with EN 1482-2.

Reasonable precautions have to be taken to prevent oxidation of chromate present in the sample. Samples shall be taken using appropriate devices and placed in containers that do not contain stainless steel (e.g. plastic, glass).

After digestion, the sample shall be analyzed as soon as possible.