

Fertilizers and liming materials - Determination of arsenic by inductively coupled plasma-atomic emission spectrometry (ICP-AES) after aqua regia dissolution

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16317:2013+A1:2017 sisaldab Euroopa standardi EN 16317:2013+A1:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 16317:2013+A1:2017 consists of the English text of the European standard EN 16317:2013+A1:2017.
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ICS 65.080

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English Version

**Fertilizers and liming materials - Determination of arsenic
by inductively coupled plasma-atomic emission
spectrometry (ICP-AES) after aqua regia dissolution**

Engrais et amendements minéraux basiques -
Détermination de l'arsenic par spectrométrie
d'émission atomique avec plasma induit par haute
fréquence (ICP-AES) après digestion à l'eau régale

Düngemittel und Kalkdünger - Bestimmung von Arsen
mit Atomemissionsspektrometrie mit induktiv
gekoppeltem Plasma (ICP-AES) nach
Königswasserauflösung

This European Standard was approved by CEN on 29 August 2013 and includes Amendment 1 approved by CEN on 11 December 2016.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 16317:2013+A1:2017) 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of an identical text or by endorsement, at the latest by August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

This document includes Amendment 1 approved by CEN on 11 December 2016.

This document supersedes A1 EN 16317:2013 A1.

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

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1 Scope

Ⓐ This European Standard specifies a method for the determination of the content of arsenic in fertilizers and liming materials using inductively coupled plasma-atomic emission spectrometry (ICP-AES) after aqua regia dissolution. Ⓐ Limits of quantification are dependent on the sample matrix as well as on the instrument, but can roughly be expected to be 1,5 mg/kg for As.

Ⓐ NOTE The term fertilizer is used throughout the body of this European Standard and includes liming materials unless otherwise indicated. Ⓐ

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*

Ⓐ EN 12944-3:2001, *Fertilizers and liming materials and soil improvers — Vocabulary — Part 3: Terms relating to liming materials* Ⓐ

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

3 Terms and definitions

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.

4 Principle

Arsenic is extracted from the sample with aqua regia and conventional boiling. The concentration in the extract is measured by inductively coupled plasma-atomic emission spectrometry (ICP-AES) with axial or radial viewing.

5 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.

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