



SLOVENSKI STANDARD
SIST EN 16318:2013/oprA1:2015
01-julij-2015

Gnojila - Določevanje elementov v sledovih - Določevanje kroma (VI) s fotometrijo (metoda A) in z ionsko kromatografijo s spektrofotometrijsko detekcijo (metoda B)

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

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

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

Ta slovenski standard je istoveten z: EN 16318:2013/prA1

ICS:

65.080	Gnojila	Fertilizers
71.040.50	Fizikalnokemijske analitske metode	Physicochemical methods of analysis

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EUROPEAN STANDARD
NORME EUROPÉENNE
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ICS 65.080

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 draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 260.

This draft amendment A1, if approved, will modify the European Standard EN 16318:2013. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Foreword

This document (EN 16318:2013/prA1:2015) has been prepared by Technical Committee CEN/TC 260 "Fertilizers and liming materials", the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

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

EN 16318:2013/prA1:2015 (E)**1 Modification of the Foreword**

Insert after the last paragraph the following WARNING:

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

2 Modification to the Title

Delete "Determination of trace elements" and insert "liming materials" after fertilizers to read the title as follows:

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

3 Modifications to Clause 1, Scope

Replace the first sentence by the following sentence:

"This European Standard specifies two methods for the determination of the content of soluble chromate in fertilizers and liming materials."

Insert the following NOTE 2 after NOTE 1:

"NOTE 2 The term fertilizer is used throughout the body of this European Standard and includes liming materials unless otherwise indicated."

4 Modification to Clause 2

Insert the following reference after EN 12944-2:1999:

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

5 Modification to Clause 3, Terms and definitions

Modify the 1st sentence as follows:

"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."

6 Modifications to Clause 7, Precision

Modify Clause 7 to read as follows:

"7.1 Inter-laboratory tests

Details of inter-laboratory tests on the precision of the method are summarized in Annex A. Repeatability and reproducibility were calculated according to ISO 5725-1 and ISO 5725-2 [4].

Inter-laboratory tests on the precision of the method analysing different mineral fertilizer matrices have been performed in 2009, 2010 and 2011 and in 2013 analysing different matrices of liming materials using method A and method B. In all samples analysed, the element Cr(VI) could not be detected. Inter-laboratory tests on the precision of method A performed in 2005 by the Technical Group Fertilizers of the German VDLUFA resulted in the statistical data given in Annex A."

7 Modification to Annex B

Replace Table B.1 by the following table:

"Table B.1 — Results of determination of Cr(VI) content in spiked water samples

Mass concentration ρ_{Ca}	Calibration	$y = a \times x + c$		
mg/l	a	c	R^2	
0	0,157 4	0,001 6	0,999 7	
10	0,157 4	0,001 6	0,999 7	
100	0,159 1	0,002 4	0,999 9	
1 000	0,159 0	0,002 3	0,999 9	
Cr(VI) added mg/l	Mass concentration of Cr(VI) found in water mg/l	Mass concentration of Cr(VI) found in water + Ca 10 mg/l	Mass concentration of Cr(VI) found in water + Ca 100 mg/l	Mass concentration of Cr(VI) found in water + Ca 1 000 mg/l
0,05	0,038	0,044	0,048	0,032
0,25	0,241	0,26	0,239	0,243
1	1,023	1,029	1,022	1,009
3	3,069	3,078	2,996	2,983
4	4,095	4,116	4,004	3,854