

Animal feeding stuffs - Determination of calcium, sodium, phosphorus, magnesium, potassium, iron, zinc, copper, manganese, cobalt, molybdenum, arsenic, lead and cadmium by ICP-AES

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 15510:2007 sisaldab Euroopa standardi EN 15510:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 30.10.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 15510:2007 consists of the English text of the European standard EN 15510:2007.</p> <p>This document is endorsed on 30.10.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This European Standard specifies an ICP-AES method for the determination of: - minerals calcium, sodium, phosphorus, magnesium and potassium and the elements iron, zinc, copper, manganese, cobalt, molybdenum in animal feeding stuffs, - elements arsenic, lead and cadmium in minerals on their own, in pre-mixtures or mixtures for use in animal nutrition. The method detection limit for each element is dependent on the sample matrix as well as of the instrument. The method is not applicable for determination of low concentrations of elements. The limit of quantification should be 3 mg/kg or lower.</p>	<p>Scope:</p> <p>This European Standard specifies an ICP-AES method for the determination of: - minerals calcium, sodium, phosphorus, magnesium and potassium and the elements iron, zinc, copper, manganese, cobalt, molybdenum in animal feeding stuffs, - elements arsenic, lead and cadmium in minerals on their own, in pre-mixtures or mixtures for use in animal nutrition. The method detection limit for each element is dependent on the sample matrix as well as of the instrument. The method is not applicable for determination of low concentrations of elements. The limit of quantification should be 3 mg/kg or lower.</p>
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ICS 65.120

Võtmesõnad:

ICS 65.120

English Version

Animal feeding stuffs - Determination of calcium, sodium,
phosphorus, magnesium, potassium, iron, zinc, copper,
manganese, cobalt, molybdenum, arsenic, lead and cadmium by
ICP-AES

Aliments des animaux - Détermination des teneurs en
calcium, sodium, phosphore, magnésium, potassium, fer,
zinc, cuivre, manganèse, cobalt, molybdène, arsenic,
plomb et cadmium par ICP-AES

Futtermittel - Bestimmung von Calcium, Natrium,
Phosphor, Magnesium, Kalium, Eisen, Zink, Kupfer,
Mangan, Cobalt, Molybdän, Arsen, Blei und Cadmium
mittels ICP-AES

This European Standard was approved by CEN on 30 June 2007.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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Foreword

This document (EN 15510:2007) has been prepared by Technical Committee CEN/TC 327 “Animal feeding stuffs – Methods of sampling and analysis”, the secretariat of which is held by NEN.

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 February 2008, and conflicting national standards shall be withdrawn at the latest by February 2008.

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, 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 United Kingdom.

1 Scope

This European Standard specifies inductively coupled plasma atomic emission spectroscopy (ICP-AES) method for the determination of:

- minerals calcium, sodium, phosphorus, magnesium and potassium and the elements iron, zinc, copper, manganese, cobalt, molybdenum in animal feeding stuffs,
- elements arsenic, lead and cadmium in minerals on their own, in pre-mixtures or mixtures for use in animal nutrition.

The method detection limit for each element is dependent on the sample matrix as well as of the instrument. The method is not applicable for determination of low concentrations of elements. The limit of quantification should be 3 mg/kg or lower.

NOTE This method can also be used for the determination of minerals in products with high mineral content (> 5%), yet for this purpose, other more precise analytical techniques are available.

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 ISO 3696, *Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)*

ISO 6498, *Animal feeding stuffs – Preparation of test samples*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

limit of detection (LOD)

smallest measured content from which it is possible to deduce the presence of the analyte with reasonable statistical certainty

NOTE The limit of detection is numerically equal to three times the standard deviation of the mean of blank determinations ($n \geq 10$, where n = number of measures) performed under reproducibility conditions.

3.2

limit of quantification (LOQ)

lowest content of the analyte that can be measured with reasonable statistical certainty

NOTE If both trueness and precision are constant over a concentration range around the limit of detection, then the limit of quantification is numerically equal to ten times the standard deviation of the mean of blank determinations ($n \geq 10$, where n = number of measures) performed under reproducibility conditions.

3.3

feed additives

substances are feed additives when they comply with the definition of feed additives given in regulation EU 1831/2003'

3.4

animal feeding stuffs

substances that comply with the definition of animal feeding stuffs given in regulation EU 178/2002'