
**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*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 27085 was prepared by the European Committee for Standardization Technical Committee CEN/TC 327, *Animal feeding stuffs* (as EN 15510:2008), and was adopted under a special “fast-track procedure”, by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 10, *Animal feeding stuffs*, in parallel with its approval by the ISO member bodies.

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

1 Scope

This International Standard specifies an inductively coupled plasma atomic emission spectroscopic (ICP-AES) method for the determination of:

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

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

NOTE This method can also be used for the determination of minerals in products with high mineral content (> 5 % mass fraction), 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.

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

ISO 6498, *Animal feeding stuffs — Guidelines for sample preparation*¹⁾

3 Terms and definitions

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

3.1

limit of detection

LOD

(animal feeding stuffs) 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 is the number of measures) performed under reproducibility conditions.

1) To be published. (Revision of ISO 6498:1998)