
**Meat and meat products —
Determination of nitrogen content —
Reference method**

*Viandes et produits à base de viande — Détermination de la teneur en
azote — Méthode de référence*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 6, *Meat, poultry, fish, eggs and their products*.

This second edition cancels and replaces the first edition (ISO 937:1978), which has been technically revised.

The main changes are as follows:

- the automatic Kjeldahl method has been added;
- the order of the clauses of the document has been rearranged.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Meat and meat products — Determination of nitrogen content — Reference method

1 Scope

This document specifies a reference method for the determination of the nitrogen content of meat and meat products by the Kjeldahl principle.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 385, *Laboratory glassware — Burettes*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

nitrogen content

quantity of nitrogen corresponding to the ammonia produced

Note 1 to entry: As determined using the conditions specified in this document.

4 Principle

Digestion of a test portion with concentrated sulfuric acid, using copper(II) sulfate as a catalyst, to convert organic nitrogen to ammonium ions; alkalization, distillation of the liberated ammonia into an excess of boric acid solution, titration with hydrochloric acid or sulfuric acid to determine the ammonia bound by the boric acid, and calculation of the nitrogen content of the sample from the amount of ammonia produced.

5 Sampling

Sampling is not part of the method specified in this document. A recommended sampling method is given in CAC/GL 50-2004.

It is important that the laboratory receive a sample which is truly representative and has not been damaged or changed during transport or storage.

Start from a representative sample of at least 200 g.

Store the sample in such a way that deterioration and change in composition are prevented. Preservatives, if any, should not contain nitrogen compounds in measurable amounts.