SLOVENSKI STANDARD
SIST EN ISO 5983-1:2005

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Krma - Določ evanje dušika in izrač un vsebnosti surovih beljakovin - 1. del: Kjeldahlova metoda (ISO 5983-1:2005)

Animal feeding stuffs - Determination of nitrogen content and calculation of crude protein content - Part 1: Kjeldahl method (ISO 5983-1:2005)

Futtermittel - Bestimmung des Stickstoffgehaltes und Berechnung des Rohproteingahaltes - Teil 1: Kjeldahl-Verfahren (ISO 5983-1:2005)

Aliments des animaux - Détermination de la teneur en azote et calcul de la teneur en protéines brutes - Partie 1: Méthode Kjeldahl (ISO 5983-1:2005)

Ta slovenski standard je istoveten z: **EN ISO 5983-1:2005**

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65.120	Krmila	Animal feeding stuffs

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English Version

Animal feeding stuffs - Determination of nitrogen content and calculation of crude protein content - Part 1: Kjeldahl method (ISO 5983-1:2005)

Aliments des animaux - Détermination de la teneur en azote et calcul de la teneur en protéines brutes - Partie 1: Méthode Kjeldahl (ISO 5983-1:2005)

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This European Standard was approved by CEN on 27 June 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

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Foreword

This document (EN ISO 5983-1:2005) has been prepared by Technical Committee ISO/TC 34 "Agricultural food products" in collaboration with 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 January 2006, and conflicting national standards shall be withdrawn at the latest by January 2006.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 5983-1:2005 has been approved by CEN as EN ISO 5983-1:2005 without any modifications.

INTERNATIONAL STANDARD

ISO 5983-1

First edition
2005-07-01

Animal feeding stuffs — Determination of nitrogen content and calculation of crude protein content —

Part 1: Kjeldahl method

Aliments des animaux — Détermination de la teneur en azote et calcul de la teneur en protéines brutes —
Partie 1: Méthode Kjeldahl

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 5983-1 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 10, *Animal feeding stuffs*.

This first edition of ISO 5983-1, together with ISO 5983-2:2005, cancels and replaces ISO 5983:1997, which has been technically revised.

ISO 5983 consists of the following parts, under the general title *Animal feeding stuffs — Determination of nitrogen content and calculation of crude protein content*:

— *Part 1: Kjeldahl method*

— *Part 2: Block digestion/steam distillation method*

Animal feeding stuffs — Determination of nitrogen content and calculation of crude protein content —

Part 1: Kjeldahl method

1 Scope

This part of ISO 5983 specifies a method for the determination of the nitrogen content of animal feeding stuffs by the Kjeldahl process, and a method for the calculation of the crude protein content.

The method does not measure oxidized forms of nitrogen or heterocyclic nitrogen compounds.

This method does not distinguish between protein nitrogen and non-protein nitrogen. If it is important to determine the content of non-protein nitrogen, an appropriate method should be used.

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 6498, *Animal feeding stuffs — Preparation of test samples*

3 Principle

The organic matter is digested by sulfuric acid in the presence of a catalyst. The reaction product is rendered alkaline, then the liberated ammonia is distilled and titrated. The nitrogen content is calculated and the result is multiplied by the conventional factor to obtain the crude protein content.

4 Reagents and materials

Use only reagents of recognized analytical grade, unless otherwise specified, and distilled or deionized water or water of equivalent purity.

The reagents [except the standard materials (4.6)] shall be practically free from nitrogenous compounds.

4.1 Potassium sulfate.

4.2 Catalyst, either 4.2.1 or 4.2.2.

4.2.1 Copper(II) oxide (CuO).

4.2.2 Copper(II) sulfate pentahydrate ($CuSO_4 \cdot 5H_2O$).

4.3 Sulfuric acid, $c(H_2SO_4) = 18$ mol/l, $\rho_{20}(H_2SO_4) = 1{,}84$ g/ml.