INTERNATIONAL STANDARD

Second edition 2009-06-01

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

Part 2: Block digestion and steam distillation method

Aliments des animaux — Dosage de l'azote et calcul de la teneur en protéines brutes —

Partie 2: Méthode de digestion en bloc et distillation à la vapeur



Reference number ISO 5983-2:2009(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below

Anis document is a preview denerated by Fig.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2009

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org Published in Switzerland

Contents

Forewo	prdi	v
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Principle	2
5	Reagents	2
6	Apparatus	4
7	Sampling	4
8	Preparation of test samale	5
9	Procedure	5
9.1	General	5
9.2	Test portion	5
9.3	Determination	5
9.4	Blank test	0 7
9.5		'
10	Calculation and expression of results	7
10.1	Calculation	7
10.2	Calculation of crude protein content	8
10.3	Expression of crude protein content results	5
11	Precision	8
11.1	Interlaboratory tests	8
11.2	Repeatability	9
11.3	Reproducibility	9
12	Test report	9
Annex	A (informative) Results of interlaboratory tests	0
Annex	B (informative) Results of a profiency test; comparison of the colorimetric and potentiometric endpoint determination of the titration	4
Bibliog	iranhy 1	5
Libilog	TZ K	5

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 Maison 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 orafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical convertues 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 applora 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 gentifying any or all such patent rights.

ISO 5983-2 was prepared by Technical Computie ISO/TC 34, Food products, Subcommittee SC 10, Animal feeding stuffs.

edition (ISO 5983-2:2005), which has been technically This second edition cancels and replaces the first 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: 0 4 generated by FLS

- Part 1: Kjeldahl method
- Part 2: Block digestion and steam distillation method

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

Part 2: Block digestion and steam distillation method

WARNING — The use of this method may involve the use of hazardous materials, operations and equipment. This part of SO 5983 does not purport to address all the safety risks associated with its use. It is the responsibility of the user of this method to establish appropriate health and safety practices and determine the applicability of local regulatory limitations prior to use.

1 Scope

0

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

It is suitable for use as a semi-micro rapid rootine method using block digestion, copper catalyst, and steam distillation into boric acid.

The method is applicable to the determination of **greater** than 0,5 % mass fraction Kjeldahl nitrogen in animal feeding stuffs, pet foods, and their raw materials.

The method does not measure oxidized forms of nitrogen nor heterocyclic nitrogen compounds.

The method does not distinguish between protein nitrogen and non-protein nitrogen.

NOTE If it is of importance to determine the content of non-protein trogen, an appropriate method can 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 referred document (including any amendments) applies.

ISO 1871, Food and feed products — General guidelines for the determination of nitrogen by the Kjeldahl method

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

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