INTERNATIONAL STANDARD

ISO 5985

Second edition
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Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid

Aliments des animaux — Détermination des cendres insolubles dans l'acide chlorhydrique

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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.ch
Web www.iso.ch

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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identiying any or all such patent rights.

ISO 5985 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 10, *Animal feeding stuffs*.

This second edition cancels and replaces the first edition (ISO 5985:1978), of which it constitutes a minor revision.

Annex A of this International Standard is for information only.

Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid

1 Scope

This International Standard specifies two procedures for animal feeding stuffs for the determination of the ash which is insoluble in hydrochloric acid.

The applicable procedure depends on the nature of the sample.

a) Procedure A is applicable to simple organic animal feeding stuffs and to compound feeding stuffs (except those mentioned under procedure B).

b) Procedure B is applicable to minerals, mineral mixtures and compound feeding stuffs of which the ash insoluble in hydrochloric acid exceeds 1 % (mass fraction), as determined by procedure A.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

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

3 Term and definition

For the purposes of this International Standard, the following term and definition applies.

3.1
ash insoluble in hydrochloric acid
that part of the ash which is insoluble in dilute hydrochloric acid under the conditions specified in this International Standard

NOTE It is expressed as a mass fraction of the sample in percent.

4 Principle

4.1 Procedure A

The organic matter in a test portion is decomposed by incineration.

The ash obtained is treated with hydrochloric acid. The mixture is filtered, followed by drying, incineration and weighing of the residue.

4.2 Procedure B

A test portion is treated with hydrochloric acid. The mixture is filtered, followed by drying and incineration.

The ash is treated as in 4.1.

5 Reagents

Use only reagents of analytical quality, and distilled or demineralized water or water of at least equivalent purity.

5.1 Dilute hydrochloric acid, 3 mol/l.

5.2 Trichloroacetic acid solution, 200 g/l.

5.3 Trichloroacetic acid solution, 10 g/l.

6 Apparatus

Usual laboratory apparatus and, in particular, the following.

6.1 Analytical balance, capable of weighing to the nearest 0,001 g.

6.2 Muffle furnace, electrically heated, thermostatically controlled, and provided with a pyrometer.

The furnace, when set at 550 °C, shall be capable of being controlled in such a way that the temperature in the places where the incineration dishes will be placed will not differ by more than 20 °C from this set temperature.

6.3 Drying oven, capable of being controlled at (103 ± 2) °C.

6.4 Hot-plate or **gas burner**

6.5 Boiling water bath

6.6 Incineration dishes, of platinum or platinum-gold alloy (e.g. 10 % Pt, 90 % Au) or of other material unaffected by the conditions of the test, preferably rectangular, with a surface area of about 20 cm^2 and a height of about 2,5 cm.

For samples which are inclined to swell on carbonization, use dishes with a surface area of about 30 cm^2 and a height of about 3 cm.

6.7 Desiccator, provided with an effective desiccant.

7 Sampling

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

Store the sample in such a way that deterioration and change in composition are prevented.

Sampling is not part of the method specified in this International Standard. A recommended sampling method is given in ISO 6497.