INTERNATIONAL STANDARD

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Meat and meat products — Enumeration of yeasts and moulds — Colony-count technique

Viandes et produits à base de viande — Dénombrement des levures et moisissures — Technique par comptage des colonies

Reference number
ISO 13681:1995(E)

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.

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.

International Standard ISO 13681 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee SC 6, *Meat and meat products*.

Annex A forms an integral part of this International Standard. Annex B is for information only.

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Meat and meat products — Enumeration of yeasts and moulds — Colony-count technique

1 Scope

This International Standard specifies a method for the enumeration of yeasts and moulds in all kinds of meat and meat products, including poultry, by means of a colony-count technique at between 20 °C and 25 °C.

IMPORTANT — ISO 7954[1] recommends chloramphenicol or oxytetracycline as antibiotic. These recommended antibiotics do not, however, sufficiently inhibit Gram-negative microorganisms occurring in meat, especially raw meat. To obtain sufficient inhibition in cases of heavy bacterial contamination, the addition of gentamicin is necessary. Since a combination of chloramphenicol and gentamicin inhibits certain types of yeasts, the alternatively specified antibiotic oxytetracycline is the antibiotic of choice.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3100-2:1988, *Meat and meat products — Sampling and preparation of test samples — Part 2: Preparation of test samples for microbiological examination.*

ISO 6887:1983, *Microbiology — General guidance for the preparation of dilutions for microbiological examination.*

ISO 7218:—[1)], *Microbiology of food and animal feeding stuffs — General rules for microbiological examinations.*

3 Definition

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

3.1 yeasts and moulds: Microorganisms that form colonies within 5 days at between 20 °C and 25 °C under the conditions specified in this International Standard.

4 Principle

4.1 Deep inoculation of poured plates, using a specified selective culture medium contained in Petri dishes, with a specified quantity of the test sample if the initial product is liquid, or with a specified quantity of the initial suspension in the case of other products.

Inoculation of other plates, under the same conditions, using decimal dilutions of the initial suspension.

NOTE 1 To distinguish, if necessary, between yeasts and moulds, the use of a surface plate is advisable. Surface plates are also recommended when heat-sensitive yeasts or moulds are expected.

4.2 Aerobic incubation of the plates at between 20 °C and 25 °C for 3, 4 or 5 days.

4.3 Calculation of the number of yeasts and moulds per gram or per millilitre of sample from the number of colonies obtained on plates chosen at dilution levels so as to give a significant result.

1) To be published. (Revision of ISO 7218:1985)