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Milk and milk products — General guidance for the preparation of test samples, initial suspensions and decimal dilutions for microbiological examination

Lait et produits laitiers — Lignes directrices générales pour la préparation des échantillons pour essai, de la suspension mère et des dilutions décimales en vue de l'examen microbiologique

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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.

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 identifying any or all such patent rights.

International Standard ISO 8261 | IDF 122 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, and the International Dairy Federation (IDF), in collaboration with AOAC International. It is being published jointly by ISO and IDF and separately by AOAC International.

This edition cancels and replaces the first edition (ISO 8261:1989), which has been technically revised.

Foreword

IDF (the International Dairy Federation) is a worldwide federation of the dairy sector with a National Committee in every member country. Every National Committee has the right to be represented on the IDF Standing Committees carrying out the technical work. IDF collaborates with ISO and AOAC International in the development of standard methods of analysis and sampling for milk and milk products.

Draft International Standards adopted by the Action Teams and Standing Committees are circulated to the National Committees for voting. Publication as an International Standard requires approval by at least 50 % of National Committees casting a vote.

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All work was carried out by the Joint ISO/IDF/AOAC Action Team, *Preparations of samples and dilutions for microbiological examinations*, of the Standing Committee on *Microbiological methods of analysis*, under the aegis of its project leader, Mr L.J.M. Maturin (US).

This edition cancels and replaces the third edition (IDF 122C:1996).

Introduction

This International Standard is mainly based on ISO 6887-1. The necessary adaptations to microbiological laboratory practice in the dairy industry and instructions specific to dairy products, especially in relation to sample preparation, have been introduced.

The question of which diluent or diluents to specify has been the subject of discussion for some time. In this International Standard the peptone/saline solution, as well as the buffered peptone water solution as used in ISO 6887-1, is specified. Three other diluents which are commonly used in dairy microbiological laboratories are also specified for general use. Furthermore, six diluents are specified for special purposes in dairy microbiological laboratories.

Milk and milk products — General guidance for the preparation of test samples, initial suspensions and decimal dilutions for microbiological examination

1 Scope

This International Standard describes general guidelines for the preparation of test samples, initial suspensions and decimal dilutions for the microbiological examination of milk and milk products, including milk-based infant foods.

2 Normative references

The following normative documents contain 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 editions of the normative documents 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 6887-1, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 1: General rules for the preparation of the initial suspension and decimal dilutions*.

ISO 7218, *Microbiology of food and animal feeding stuffs — General rules for microbiological examinations*.

3 Terms and definitions

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

3.1
initial suspension
primary dilution
suspension, solution or emulsion obtained after a weighed or measured quantity of the product under examination (or of a test sample prepared from the product) has been mixed, if necessary, using a blender and observing appropriate precautions, with a nine-fold quantity of dilution fluid (diluent), allowing large particles, if present, to settle

NOTE 1 In certain cases and in particular for products giving an initial 1 + 9 suspension which is too viscous or too thick, it may be necessary to add more diluent. On the other hand, a more concentrated primary dilution than 1 + 9 may be required for results of tests to relate to certain specification criteria. These factors should be taken into account for subsequent operations and/or in the expression of results.

NOTE 2 The use of the first dilution is the most appropriate for fitting the requirement of less than 10 microorganisms per gram. If it is desirable for some enumerations in some products to fall below this threshold, it is possible to use less diluent for the suspension. However, inoculation of this suspension may result in an unbalanced inoculum/medium ratio.