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Milk and milk products — Sensory analysis —

Part 1:

General guidance for the recruitment, selection, training and monitoring of assessors

*Lait et produits laitiers — Analyse sensorielle —**Partie 1: Lignes directrices générales pour le recrutement, la sélection, l'entraînement et le contrôle des sujets*

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Contents

Page

Foreword.....	iv
Introduction.....	vi
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Recruitment.....	3
5 Screening.....	3
5.1 Screening form and requirements.....	3
5.1.1 General.....	3
5.1.2 Session 1 – Basic odour and taste recognition.....	4
5.1.3 Session 2 – Milk powder and cream products.....	4
5.1.4 Session 3 – Cheese.....	4
5.2 Preparation of test samples for screening.....	4
5.3 Screening tests, materials and methods.....	4
5.3.1 Odour recognition.....	5
5.3.2 Basic taste recognition.....	5
5.3.3 Ranking tests.....	6
5.3.4 Difference testing.....	7
5.3.5 Descriptive ability and group discussion.....	9
5.3.6 Marking schedule summary.....	11
6 Selection.....	12
7 Requirements for assessors in the panel.....	13
8 Training and monitoring of assessors for dairy products.....	13
8.1 General.....	13
8.2 References.....	13
9 Performance.....	16
Bibliography.....	18

ISO/DIS 22935-1:2022(E)
IDF 99-1:2022(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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, and the International Dairy Federation (IDF). It is being published jointly by ISO and IDF.

This second edition cancels and replaces the first edition (ISO 22935-1|IDF 99-1:2009), which has been technically revised.

The main changes compared to the previous edition are as follows:

- corrections in normative references
- a few changes in reference materials

A list of all parts in the ISO 22935 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

IDF (the International Dairy Federation) is a non-profit private sector organization representing the interests of various stakeholders in dairying at the global level. IDF members are organized in National Committees, which are national associations composed of representatives of dairy-related national interest groups including dairy farmers, dairy processing industry, dairy suppliers, academics and governments/food control authorities.

ISO and IDF collaborate closely on all matters of standardization relating to methods of analysis and sampling for milk and milk products. Since 2001, ISO and IDF jointly publish their International Standards using the logos and reference numbers of both organizations.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. IDF shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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This document was prepared by the IDF *Standing Committee on Statistics and Automation* and ISO Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*. It is being published jointly by ISO and IDF.

The work was carried out by the IDF/ISO Action Team S17 of the *Standing Committee on Statistics and Automation* under the aegis of its project leader Dr H. Kraggerud (NO).

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IDF 99-1:2022(E)

Introduction

The purpose of ISO 22935|IDF 99 (all parts) is to give guidance on methodology for sensory analysis and the use of a common nomenclature of terms for milk and milk products.

To achieve that, ISO 22935|IDF 99 has been divided into three parts.

ISO 6658 should be consulted for an overview of sensory methods other than the one provided in ISO 22935-3|IDF 99-3.

Evaluation of labelling and packaging is not covered by ISO 22935|IDF 99 (all parts).

The principles described are largely derived from various International Standards on the topic.

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Milk and milk products — Sensory analysis —

Part 1:

General guidance for the recruitment, selection, training and monitoring of assessors

1 Scope

This part of ISO 22935|IDF 99 gives general guidance for the recruitment, selection, training, and monitoring of assessors for sensory analysis of milk and milk products.

It specifies criteria for the selection, and procedures for the training and monitoring, of selected assessors and expert sensory assessors for milk and milk products. It supplements the information given in ISO 8586 that deals with expert assessors.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 4120, *Sensory analysis — Methodology — Triangle test*

ISO 4121, *Sensory analysis — Guidelines for the use of quantitative response scales*

ISO 5492, *Sensory analysis — Vocabulary*

ISO 5496, *Sensory analysis — Methodology — Initiation and training of assessors in the detection and recognition of odours*

ISO 6658, *Sensory analysis — Methodology — General guidance*

ISO 8586, *Sensory analysis — General guidelines for the selection, training and monitoring of selected assessors and expert sensory assessors*

ISO 8587, *Sensory analysis — Methodology — Ranking*

ISO 8589, *Sensory analysis — General guidance for the design of test rooms*

ISO 22935-2, *IDF 99-2, Milk and milk products — Sensory analysis: Part 2: Recommended methods for sensory evaluation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4121, ISO 5492, ISO 5496, ISO 6658, ISO 8586 and ISO 8589 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

ISO/DIS 22935-1:2022(E)
IDF 99-1:2022(E)

- 3.1**
sensory analysis
science involved with the assessment of the sensory attributes of a product by the senses
[SOURCE: ISO 5492:2008, 1.1]
- 3.2**
selected assessor
assessor chosen for his/her ability to perform a sensory test
[SOURCE: ISO 5492:2008, 1.6]
- 3.3**
expert sensory assessor
selected assessor with a demonstrated sensory sensitivity and with considerable training and experience in sensory testing, who is able to make consistent and repeatable sensory assessments of various products
[SOURCE: ISO 5492:2008, 1.8]
- Note 1 to entry: Examples of “various products” are “dairy products”.
- 3.4**
sensory panel
group of assessors participating in a sensory test
[SOURCE: ISO 5492:2008, 1.9]
- 3.5**
scoring
evaluation of a product (or of attributes of a product) by assigning numbers that have some mathematical relationship to the product or attributes being evaluated
[SOURCE: ISO 5492:2008, 4.7]
- 3.6**
product specification
document stating requirements of a product
Note 1 to entry: Adapted from ISO 9000:2005 [2].
- 3.7**
classification
method of sorting into categories
[SOURCE: ISO 5492:2008, 4.5]
- 3.8**
attribute
perceptible characteristic
[SOURCE: ISO 5492:2008, 1.3]
- 3.9**
appearance
all the visible attributes of a substance or object
[SOURCE: ISO 5492:2008, 3.1]

Note 1 to entry: For a dairy product, the visual attributes are both internal and external, and include shape, colour, loose liquid, phase separation, wanted or unwanted particles, and openings.

3.10**consistency**

mechanical attribute detected by stimulation of the tactile or visual receptors

[SOURCE: ISO 5492:2008, 3.49]

3.11**mouthfeel**

mixed experience derived from sensations in the mouth that relate to physical or chemical properties of a stimulus

[SOURCE: ISO 5492:2008, 3.62]

3.12**fingerfeel**

mixed experience derived from sensations on the fingers that relate to physical properties of a stimulus

3.13**flavour**

complex combination of the olfactory, gustatory and trigeminal sensations perceived during tasting

[SOURCE: ISO 5492:2008, 3.20]

3.14**odour**

sensation perceived by means of the olfactory organ in sniffing certain volatile substances

[SOURCE: ISO 5492:2008, 3.18]

4 Recruitment

Assessors can be recruited from within a company (laboratory staff, production staff, administration staff, etc.), who are not involved with project work, or from outside a company. Outside assessors can be recruited by advertisement or by word of mouth. The panel candidates should have an understanding of the amount of time that will be required for the screening process and for actual panel work. A large enough pool of available candidates should be screened in order to have enough assessors available to select from when forming a panel. The trainee assessor should have satisfactory personal qualifications for assessments and should be pre-selected by:

- a) the use of screening tests to assess the ability of candidates to perceive, discriminate, and describe sensory attributes;
- b) a general understanding of the concepts of sensory evaluation;
- c) a general liking or interest in dairy products..

5 Screening

5.1 Screening form and requirements

5.1.1 General

Potential applicants should go through two forms of screening via an interview and sensory screening tests. During the interview, the applicants should fill out a pre-screening form which indicates the times that they are available for panels and any health issues they may have: arthritis which could interfere with the evaluation of product texture in-hand (fingerfeel), lactose intolerance, wearing of dentures, smoking status, and any other issues of concern.