
**Milk and milk products — Sensory
analysis —**

Part 3:

**Guidance on a method for evaluation of
compliance with product specifications
for sensory properties by scoring**

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Lait et produits laitiers — Analyse sensorielle —

*Partie 3: Lignes directrices pour une méthode d'évaluation de la
conformité aux spécifications de produit pour les propriétés sensorielles
par notation*

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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 2.

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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 22935-3|IDF 99-3 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, and the International Dairy Federation (IDF). It being published jointly by ISO and IDF.

ISO 22935|IDF 99 consists of the following parts, under the general title *Milk and milk products — Sensory analysis*:

- *Part 1: General guidance for the recruitment, selection, training and monitoring of assessors*
- *Part 2: Recommended methods for sensory evaluation*
- *Part 3: Guidance on a method for evaluation of compliance with product specifications for sensory properties by scoring*

Foreword

IDF (the International Dairy Federation) is a non-profit organization representing the dairy sector worldwide. IDF membership comprises National Committees in every member country as well as regional dairy associations having signed a formal agreement on cooperation with IDF. All members of IDF have the right to be represented on the IDF Standing Committees carrying out the technical work. IDF collaborates with ISO 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 the IDF National Committees casting a vote.

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ISO 22935-3|IDF 99-3 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.

All work was carried out by the Joint ISO-IDF Action Team on *Statistics and sampling* of the Standing Committee on *Quality assurance, statistics of analytical data & sampling* under the aegis of its project leader: Mr. S. Solem (NO).

ISO 22935|IDF 99 consists of the following parts, under the general title *Milk and milk products — Sensory analysis*:

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This edition of ISO 22935-3|IDF 99-3, together with ISO 22935-1|IDF 99-1 and ISO 22935-2|IDF 99-2, cancels and replaces IDF 99C:1997, which has been technically revised.

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.

ISO 22935|IDF 99 is divided into the three parts listed in the forewords.

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

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

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Milk and milk products — Sensory analysis —

Part 3:

Guidance on a method for evaluation of compliance with product specifications for sensory properties by scoring

1 Scope

This part of ISO 22935|IDF 99 gives guidance on a general method for evaluation of compliance with product specifications for sensory properties based on sensory scoring and the use of a common nomenclature of terms.

The method is especially applicable in process and quality control performed regularly on a larger number of samples and/or with some time pressure and/or with a limited number of expert assessors available.

The results from the method may be part of product classification systems for domestic and international trade. Classification systems are not covered by this part of ISO 22935|IDF 99.

2 Normative references

[ISO 22935-3:2009](https://standards.iteh.ai/catalog/standards/sist/230d7eb5-cf29-42d9-8123-49e8b285b684/iso-22935-3-2009)

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 referenced document (including any amendments) applies.

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 8586-1, *Sensory analysis — General guidance for the selection, training and monitoring of assessors — Part 1: Selected assessors*

ISO 8586-2, *Sensory analysis — General guidance for the selection, training and monitoring of assessors — Part 2: Expert sensory assessors*

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

ISO 13300-1, *Sensory analysis — General guidance for the staff of a sensory evaluation laboratory — Part 1: Staff responsibilities*

ISO 13300-2, *Sensory analysis — General guidance for the staff of a sensory evaluation laboratory — Part 2: Recruitment and training of panel leaders*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

ISO 22935-1|IDF 99-1, *Milk and milk products — Sensory analysis — General guidance for the recruitment, selection, training and monitoring of assessors*

ISO 22935-2|IDF 99-2, *Milk and milk products — Sensory analysis — 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 8586-1, ISO 8586-2, ISO 8589, ISO 22935-1|IDF 99-1 and the following apply.

3.1

property

(sensory analysis of milk products) overall appearance, consistency or odour/flavour of a sample

4 Principle

Sensory properties of individual samples of milk and milk products are analysed under standardized conditions by a panel of expert milk and milk product assessors. Each assessor evaluates the samples independently of the other assessors and uses a discrete five point interval scale to estimate the magnitude of a possible deviation in a product from a pre-established sensory product specification. When the score of each assessor is 3 or lower, then the score is supplemented by common terms which describe the character of the sensory deviation. The mean values of the panel, supplemented with the representative terms when the mean values are lower than 3,6, gives the result of the method.

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5 General test requirements

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The method shall be used in conjunction with ISO 22935-1|IDF 99-1 and ISO 22935-2|IDF 99-2. Follow also the general guidance on the methodology of sensory analysis given in ISO 6658. When relevant, it is also recommended that the general requirements for the competence to carry out tests given in ISO/IEC 17025 with supplemental documents specific for sensory testing laboratories (such as EA-4/09 ^[5]) be followed.

5.1 Test room

Conduct the sensory analysis in a special test room with standardized conditions which are monitored regularly when testing. See ISO 22935-2|IDF 99-2 and ISO 8589 for the characteristics of the room in which the tests are to be performed.

5.2 Assessors

Assessors shall be recruited, selected, trained and monitored to satisfy the criteria for expert milk and milk product assessors. See ISO 22935-1|IDF 99-1, ISO 8586-1, ISO 8586-2, and ISO 5496 for general guidance.

5.3 Panel

The number of assessors in the panel shall be at least three. See also ISO 22935-1|IDF 99-1 for additional requirements for assessors in the panel and ISO 22935-2|IDF 99-2 for general guidelines for the preparation of a panel.

5.4 Panel leader

A panel leader familiar with sensory evaluation of the products shall be responsible for the entire procedure and shall normally not participate in the panel. The panel leader may, however, be a panel member in regular process or quality control situations (e.g. at processing dairy plants), if the number of assessors at the site is limited and the panel leader satisfies the criteria for expert milk and milk product assessors. See also ISO 22935-2|IDF 99-2, ISO 13300-1, and ISO 13300-2 for additional requirements for the panel leader.

5.5 Documents

Necessary documents for the sensory evaluation of the various products shall be available. The documents shall be standardized and common to all comparable sensory evaluations utilizing this method, e.g. in a specific process or quality control in a company or region.

5.5.1 Specific methods for specific milk and milk products

Specific methods shall supplement this part of ISO 22935|IDF 99 and shall specify in detail necessary apparatus, sampling procedure, the preparation of samples for sensory analysis, and the sensory evaluation of specific milk and milk products. See also ISO 22935-2|IDF 99-2 for recommended methods.

5.5.2 Product specifications

A pre-established sensory product specification shall describe the sensory requirements to be fulfilled to establish the fitness of the product for purpose in a specific market. For example, the description may be a sensory profile (ISO 13299 [4]) obtained by profiling products that have been found fit for purpose by consumer testing. A control sample may, if available, supplement the sensory product specification.

5.5.3 Nomenclature of terms

A nomenclature of terms shall include all terms relevant for objectively describing the character of sensory deviations in a specific milk or milk product from the description in the sensory product specification. See also ISO 22935-2|IDF 99-2 for recommended terms for specific milk and milk products.

In some cases, where the character of the deviation is described by a term which is also a part of the sensory product specification, and it is difficult to find an alternative objective description which covers the actual deviation, it may be necessary to add "low intensity" or "high intensity" to the term in the nomenclature of the specific product (e.g. "low intensity of sweetness" or "high intensity of sweetness").

The nomenclature may include guidelines for the assessors to give information regarding the significance of the specific terms, and their combinations, for estimating the magnitude of the deviation from the sensory product specification.

6 Apparatus

Select the apparatus according to the nature of the milk or milk products to be analysed. The selected apparatus shall not affect the test samples or the assessors in an undesired manner and the functioning and use shall, when relevant, be monitored regularly when testing. See also ISO 22935-2|IDF 99-2 for recommended apparatus for sensory evaluation of specific milk and milk products.

7 Sampling

Sampling is not part of the method specified in this part of ISO 22935|IDF 99. Unless special requirements are given for the sampling, a recommended sampling method is given in ISO 707|IDF 50 [1] (see also ISO 22935-2|IDF 99-2 for sampling of specific milk and milk products).