Sensory Quality Control

Procedures: Scoring and scales.

SENSORISK KVALITET
(Beskriver 5 poengs vare)

specification

Helvekt:

Etter 7 – 9 uker:

Vekt/form:	ca. 5,0 kg:	350 x 140 x (100 – 105) mm
	ca. 10,0 kg:	350 x 280 x (100 – 105) mm
	ca. 20,6 kg:	350 x 560 x (100 – 105) mm
Ytre:	Overflaten skal være lukket og tørr.	
Indre:	Jevnt fordelte runde hull. Størrelse: 15 – 30 mm. Antall på lengdesnitt: 15 – 20. Antall på tverrsnitt: 15 – 20 (gjelder 20 kg's ost). Litt pipet rand aksepteres.	
Konsistens:	Halvfast, smidig og lett skivbar med ostehøvel.	
Lukt og smak:	Ren, fyldig, litt søtlig og nøtteaktig. Svakt syrlig.	

agreement

TINE Quality Control system – sensory

TINE must have uniform sensory quality in our products, independent on production site and assessors.

To achieve this, our production plants use a common set of methods, product specifications and nomenclature of defect terms.

We also have a programme for training and authorization of assessors, and systems for coordination of assessors and panels throughout the company.

Based on ISO22935 / IDF99 standards – but adapted to our needs.

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INTERNATIONAL STANDARD

ISO 22935-3

IDF 99-3

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2023-04

Milk and milk products — Sensory analysis —

Part 3: Method for evaluation of compliance with product specifications for sensory properties by scoring

Hilde Kraggerud 22.06.2026

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5.6.3 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 (see ISO 13299) 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.

5.6.4 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 99-2:2023, Annex A, for recommended terms for specific product groups.

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 can 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.

9 Procedures

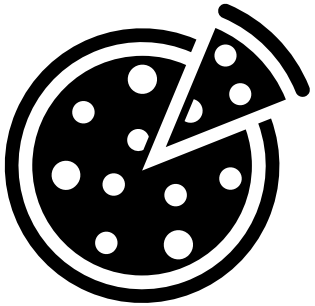
9.1 Evaluate the overall appearance, overall consistency and/or overall odour/flavour of each test sample separately. One total score across attributes can also be used.

See ISO 22935-2 | IDF 99-2 for recommended methods for the sensory evaluation of specific milk and milk products.

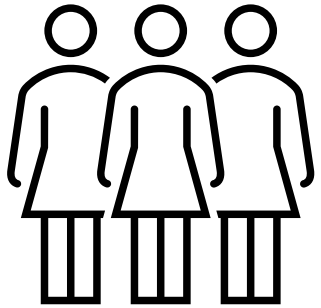
9.2 In scoring, use a scale which represents the magnitude of the deviation in a product from the pre-established sensory specification. ISO 20613 presents some alternative scales to be used The number of points and direction of the scale can vary, but it shall always follow the principle of deviation from specification. An example of a recommended scale is given in Table 1.

Table 1 — Numerical discrete interval scale giving the magnitude of deviation in the scoring

Points	Verbal description
5	No deviation from the pre-established sensory specification
4	Minimal deviation from the pre-established sensory specification
3	Noticeable deviation from the pre-established sensory specification
2	Considerable deviation from the pre-established sensory specification
1	Very considerable deviation from the pre-established sensory specification



Procedures (cont.)



9.3 Each of the assessors shall score the test samples of a specific milk or milk product in a random order. In regular process or quality control situations (e.g. at processing dairy plants) it is, however, sufficient that all the assessors score the test samples of a specific milk or milk product in the same order.

9.4 Serve highly flavoured types of specific milk and milk products and/or products with a high fat content after less highly flavoured products and/or products with lower fat content.

9.5 Adjust the maximum number of test samples for each assessment to the type of product to be assessed, so that the assessment is carried out consistently for each sample. If necessary, carry out the assessment at adequate intervals.

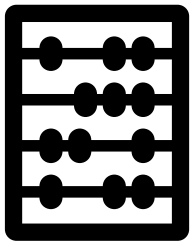
9.6 Present the test samples in such a way that assessors cannot mix them up.

c**9.7** Instruct assessors to do the technical performance of the sensory evaluation in an appropriate and repeatable way (size of the sample in the mouth, time of chewing, etc.).

9.8 Use a suitable cleanser (e.g. mouth rinse with pure, room-temperature water; heated water for products with high fat content to be able to melt the fat) to prevent carry-over of any stimuli that can affect the score of the next sample.

9.9 In order to calibrate and coordinate assessors, assess at least two samples for each type of product and discuss the results obtained before starting the assessment of a product. Preferably, at least one of the calibration samples shall be expected to conform to the sensory specification (a control sample). Calibration samples shall be available during the assessment.

Procedures (cont.)



9.10 Individual assessors shall analyse test samples independently of each other, without intercommunication, and only utilize whole points.

9.11 If an assessor scores a significant difference, a description of the deviation shall be given. In doing so, the assessor shall use the nomenclature of terms (5.6.4) for the specific milk or milk product and list the terms according to the significance of the magnitude of deviation from the product specification.

9.12 When the scoring by the assessors for a particular property is spread over adjacent points only, the mean value for the panel shall be calculated to one decimal place.

9.13 If the differences between the individual scoring for a property are wider than adjacent points (e.g. wider than 3 and 4), perform a reassessment of this property. Individual assessors shall reassess independently of each other, preferably without knowing which test sample and property they are reassessing. The results from the reassessment are final and the mean value for the panel shall be calculated to one decimal place based on these results.

9.14 If the mean value for the panel represents a significant difference, list the description of the deviation from the product specification. Assessors in the panel may, if necessary, discuss and agree on the terms to be stated.

9.15 The mean value of the panel, supplemented with the representative deviation term(s) gives the result of the method. The decision criteria depend on the established quality control requirement in the company.

Make your own nomenclature of defect terms

Especially useful for quality improvement work

Table A.2 — International table of odour and flavour attributes for specific dairy products

English	French	German	Spanish	Butter	Milk powder	Cheese	Liquid milk	Cream	Fermented milk	Ice cream
acid	acide	sauer	acido	X	X	X	X	X	X	X
ammoniacal	ammoniacal	ammoniakalisch	amoníaco			X				
animal	animal	tierisch, animalisch	a animal	X	X	X	X	X	X	X
apple	pomme	Apfel	a manzana			X				
apricot	abricot	Aprikose	damasco			X				
astringent	astringent	astringierend	astringente			X		X	X	X
bitter	amer	bitter	amargo	X	X	X	X	X	X	X
boiled milk	lait bouilli	gekochte Milch	a leche hervida			X				
burnt	brûlé	verbrannt, brandig	a quemado	X	X	X	X	X	X	X
buttery	de beurre	buttrig	a manteca		X	X				
caramel	caramel	Karamel	caramelo		X	X	X	X		X
cardboard	de carton	kartonartig	a cartón	X	X	X	X	X	X	X
cereal	de céréale	getreidig	cereal		X		X			
chalky	crayeux	kreidig	a tiza		X		X			
cheesy	de fromage	käsig	a queso	X				X	X	X

Company decisions: Classification

- Classifications are based on sensory results, as well as chemical and microbiological results
- Score 3-5: Ordinary market
- Score 4-5: Export markets
- Score 1-2: Depending on which defects
    - Grated cheese
    - Processed cheese

    - Animal feed
- These decisions are NOT taken by assessors, but by leaders