SLOVENSKI STANDARD
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Senzorična analiza - Metodologija - Splošne smernice za uvajanje senzoričnega profila (ISO 13299:2016)

Sensory analysis - Methodology - General guidance for establishing a sensory profile (ISO 13299:2016)

Sensorische Analyse - Prüfverfahren - Allgemeiner Leitfaden zur Erstellung eines sensorischen Profils (ISO 13299:2016)

Analyse sensorielle - Méthodologie - Directives générales pour l'établissement d'un profil sensoriel (ISO 13299:2016)

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Sensorische Analyse - Prüfverfahren - Allgemeiner Leitfaden zur Erstellung eines sensorischen Profils (ISO 13299:2016)

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Contents

Page

European foreword **3**

European foreword

This document (EN ISO 13299:2016) has been prepared by Technical Committee ISO/TC 34 "Food products"

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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Endorsement notice

The text of ISO 13299:2016 has been approved by CEN as EN ISO 13299:2016 without any modification.

INTERNATIONAL STANDARD

ISO 13299

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Sensory analysis — Methodology — General guidance for establishing a sensory profile

Analyse sensorielle — Méthodologie — Directives générales pour l'établissement d'un profil sensoriel

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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 General test conditions **3**
4.1 Equipment and test room 3
4.2 Assessors 3
4.3 Products 4
4.4 Samples 4
4.5 Preliminary discussion 4
5 Descriptive methods: principle and main characteristics **5**
5.1 Consensus profile 5
5.2 Deviation from reference profile (relative-to-reference scaling) 5
5.3 Free-choice profile 5
5.4 Flash profile 5
5.5 Quantitative descriptive profile 5
5.6 Qualitative sensory profile 5
5.7 Temporal Dominance of Sensations (TDS) 6
6 Procedure for establishing a sensory profile **6**
6.1 General 6
6.2 Prepare the test 6
6.2.1 Select products for training 6
6.2.2 Select assessors 6
6.2.3 Choose the optimal attributes 6
6.2.4 Determine the order of evaluation 7
6.2.5 Select an appropriate response scale 8
6.2.6 Train the assessors 8
6.3 Conduct the test 8
6.3.1 Scoresheets 8
6.3.2 Evaluate the samples 8
6.4 Statistical interpretation 8
6.5 Study report 9
Annex A (informative) **Consensus profile** **10**
Annex B (informative) **Deviation from reference method (or relative-to-reference rating)** **12**
Annex C (informative) **Free-choice profile** **14**
Annex D (informative) **Flash profile** **16**
Annex E (informative) **Qualitative sensory profile** **18**
Annex F (informative) **Quantitative descriptive profile** **20**
Annex G (informative) **Temporal Dominance of Sensation (TDS)** **26**
Annex H (informative) **Univariate analysis when one attribute is quantified by all the assessors of a panel** **30**
Bibliography **40**

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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 34, *Food products*, Subcommittee SC 12, *Sensory analysis*.

This second edition cancels and replaces the first edition (ISO 13299:2003), which has been technically revised by presenting the principles and methods in general, including some new ones, which are developed in the annexes.

Introduction

The purpose of this International Standard is to serve as guidance for establishing sensory profiles performed by trained assessors.

A sensory profile is the result of a descriptive analysis of a sample by a panel of assessors. The sample may be for example food, beverage, tobacco product, cosmetic, textile, paper, packaging, sample of air or water, etc. Profiling can be carried out in a number of ways. Over the years, a few of these have been formalized and codified as descriptive procedures by professional societies or by groups of producers and users for the aim of improving communication between themselves.

The purpose of this International Standard is to provide agreed guidelines for descriptive sensory procedures.

Sensory profiling is the description of sensory properties of a sample, usually consisting in the evaluation of sensory attributes with assignment of an intensity value for each attribute. The attributes are generally evaluated in the order of perception. Some sensory profiles take a view across all of the senses; others (partial profiles) concentrate in detail on particular senses.

Quality of results depends on the number of assessors and their ability to describe their perceptions. Training and development of a common language help to improve these abilities. Some methods have been used with untrained assessors, but it is out of the scope of this International Standard. Quality of results can also depend on the number of replications by an assessor.

Sensory analysis — Methodology — General guidance for establishing a sensory profile

1 Scope

This International Standard gives guidelines for the overall process for establishing a sensory profile. Sensory profiles can be established for all products or samples which can be evaluated by the senses of sight, odour, taste, touch, or hearing (e.g. food, beverage, tobacco product, cosmetic, textile, paper, packaging, sample of air or water). This International Standard can also be useful in studies of human cognition and behaviour.

Some applications of sensory profiling are as follows:

— to develop or change a product;

— to define a product, production standard, or trading standard in terms of its sensory attributes;

— to define a reference "fresh" product for shelf-life testing;

— to study and improve shelf-life of a product;

— to compare a product with a reference product or with other similar products on the market or under development;

— to map a product's perceived attributes for the purpose of relating them to factors such as instrumental, chemical or physical properties, and/or to consumer acceptability;

— to characterize by type and intensity the off-odours or off-tastes in a sample (e.g. in pollution studies).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 11035, *Sensory analysis — Identification and selection of descriptors for establishing a sensory profile by a multidimensional approach*

ISO 11136, *Sensory analysis — Methodology — General guidance for conducting hedonic tests with consumers in a controlled area*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5492 and the following apply.

3.1
attribute
perceptible characteristic attached to a product

[SOURCE: ISO 5492:2008, modified]

3.2
sensory profile
description of the sensory properties of a sample by means of sensory *attributes* (3.1), most often with their intensity values

3.3
partial sensory profile
profile comprising certain selected sensory *attributes* (3.1), most often with their intensity values

EXAMPLE Odour profile, flavour profile, texture profile.

3.4
quantitative descriptive profile
description of a sample consisting of both *attributes* (3.1) and their intensity values

[SOURCE: ISO 5492, modified]

3.5
qualitative sensory profile
description of the sensory attributes of a sample without intensity values

[SOURCE: ISO 5492, modified]

3.6
consensus sensory profile
profile derived from agreement after discussion in a group of assessors, who evaluated the product on various *attributes* (3.1)

3.7
deviation from reference method
relative-to-reference rating
procedure of quantitative descriptive *sensory profile* (3.2) in which all samples are evaluated against a reference sample

3.8
free-choice sensory profile
procedure in which each assessor chooses and scores his/her own *attributes* (3.1) to describe a group of samples

3.9
flash profile
procedure for characterizing products by having assessors choose their own descriptive terms and rank the products on each term

Note 1 to entry: This is a variant of sensory free-choice profiling distinguished by the use of ranking rather than rating.

[SOURCE: ISO 5492:2008/Amd.1:—[1)]]

3.10
temporal dominance of sensations
TDS
procedure in which each assessor is asked to successively indicate the dominant sensation over the time the product is being assessed

1) To be published.

3.11
sensory panel
group of assessors participating in a sensory test

[SOURCE: ISO 5492:2008, modified]

3.12
panel leader
person whose primary duties are to manage panel activities and recruit, train, and monitor the assessors

Note 1 to entry: This person may also design and conduct sensory tests, and analyse and interpret data.

[SOURCE: ISO 13300 (all parts), modified]

3.13
selected assessor
assessors chosen for their ability to perform a sensory test

[SOURCE: ISO 5492:2008, 1.6]

3.14
expert sensory assessor
selected assessors (3.13) with a demonstrated sensory sensitivity and with considerable training and experience in sensory testing, who are able to make consistent and repeatable sensory assessments of various products

[SOURCE: ISO 5492:2008, 1.8]

4 General test conditions

4.1 Equipment and test room

The laboratory shall have the appropriate equipment for sample preparation as specified in ISO 6658.

Sensory profiling shall be performed under the conditions specified in ISO 8589. When a discussion is needed (e.g. about results, products, reference substances, etc.), the room should be arranged in a manner that allows communication between assessors and the panel leader still ensuring appropriate conditions for evaluating products (for example, appropriate lights).

A panel leader shall be designated to perform sensory profiling. The panel leader shall

— train assessors,

— maintain the panel, and

— execute tests.

The panel leader should meet the required qualifications (e.g. steps for recruitment and training) as described in ISO 13300-1 and ISO 13300-2.

4.2 Assessors

This International Standard applies to profiling methods performed by either selected or expert assessors. Requirements for the selection, training, and monitoring of assessors can be found in ISO 8586.

The number of assessors and their training shall be adapted to the profiling method. Repeatability and reproducibility are improved with the selectivity level of the assessors and with training time. The interpretation of results and the highlighted differences between products are also dependent on the number of assessors and their training.