

STANDARD

11035

First edition
1994-12-15

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

Analyse sensorielle — Recherche et sélection de descripteurs pour l'élaboration d'un profil sensoriel, par approche multidimensionnelle



Reference number
ISO 11035:1994(E)

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Foreword

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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.

International Standard ISO 11035 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee SC 12, *Sensory analysis*.

Annexes A, B and C of this International Standard are for information only.

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Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

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Introduction

An overall sensory profile describes the sensory attributes of a product.

A "product" is characterized by several parameters. Some of these have a single dimension (e.g. the diameter of a ball, the weight of a sachet, etc.) and others have several dimensions (e.g. the shape of a product, the texture of meat, etc.); a sensory profile requires monodimensional quantities to lead to a measurement of intensity.

Consequently, the evaluation of a complex sensory quantity needs methodology which is founded on identification of appropriate descriptors. This work is given to a trained panel who describe their perceptions both qualitatively (nature of the stimulus) and quantitatively (intensity of each stimulus).

If the aim is to appreciate all the attributes, an "overall sensory profile" is built; if it concerns the evaluation of only flavour, odour, texture or appearance, a "partial sensory profile" is then elaborated.

In both cases, the choice of descriptors is the preliminary phase which determines the quality of the sensory profile.

There are several ways to establish a list of descriptors, for example:

- a) leave each assessor to choose and use, for the final profile, his/her own descriptors (free-choice profile);
- b) use descriptors common to all the members of the panel, either
 - 1) by suggesting existing descriptors, on condition that the relevance of the descriptors for the product has been checked and that the assessors have been trained on these descriptors (generally with the help of reference products), or
 - 2) by the creation of descriptors by all the members of the panel after individual or collective work.

This can be done by a consensus method (see, for example, ISO 6564) or by the method described in this International Standard, which is characterized by the elaboration of a list of descriptors convenient for the product studied and which guarantees, as far as possible, the exhaustivity of this list, and allows verification of the relevance and independence of each descriptor, and if they are monodimensional.

NOTES

1 Drawing up a sensory profile of a product is a complex procedure and the user of this International Standard needs to know that although this method gives satisfactory results, it requires a large investment in preparation time, calculation and number of training sessions.

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2 This International Standard requires a basic knowledge of multidimensional analysis [in particular, a minimal knowledge of Principal Components Analysis (PCA) and Hierarchic Ascending Classification (HAC)].

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1 Scope

This International Standard describes a method for identifying and selecting descriptors which can then be used for drawing up the sensory profile of a product.

It describes the different stages in the process for setting up tests through which a complete description of the sensory attributes of a product can be obtained:

- from a qualitative point of view, by defining by means of descriptors all the perceptions for distinguishing one product from others of the same type;
- from a quantitative point of view, by evaluating the intensity of each descriptor (stronger or weaker impression analysed by an assessor on one element of the overall perception).

The so-called "sensory profile" method can be used:

- to define a production standard; identification of the nature of the differences makes it easier to grasp the issue;
- to improve or develop products;
- to study the influence of the ageing of products and also of the conditions of storage and preservation; it is thus possible to determine those characteristics which vary and to what extent;
- to compare a product with those of the same type already on the market; it is therefore possible to

tell the nature of the differences in terms of sensory perception.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4121:1987, *Sensory analysis — Methodology — Evaluation of food products by methods using scales.*

ISO 5492:1992, *Sensory analysis — Vocabulary.*

ISO 6564:1985, *Sensory analysis — Methodology — Flavour profile methods.*

ISO 6658:1985, *Sensory analysis — Methodology — General guidance.*

ISO 8586-1:1993, *Sensory analysis — General guidance for the selection, training and monitoring of assessors — Part 1: Selected assessors.*

ISO 8586-2:1994, *Sensory analysis — General guidance for the selection, training and monitoring of assessors — Part 2: Experts.*