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

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 13299:2010 sisaldab Euroopa standardi EN ISO 13299:2010 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 13299:2010 consists of the English text of the European standard EN ISO 13299:2010.
Standard on kinnitatud Eesti Standardikeskuse 31.03.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.03.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 24.02.2010.	Date of Availability of the European standard text 24.02.2010.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 67.240

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 13299

February 2010

ICS 67.240

English Version

Sensory analysis - Methodology - General guidance for establishing a sensory profile (ISO 13299:2003)

Analyse sensorielle - Méthodologie - Directives générales pour l'établissement d'un profil sensoriel (ISO 13299:2003)

Sensorische Analyse - Prüfverfahren - Allgemeiner Leitfaden zur Erstellung eines sensorischen Profils (ISO 13299:2003)

This European Standard was approved by CEN on 31 January 2010.

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Foreword

The text of ISO 13299:2003 has been prepared by Technical Committee ISO/TC 34 “Food products” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13299:2010.

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of an identical text or by endorsement, at the latest by August 2010, and conflicting national standards shall be withdrawn at the latest by August 2010.

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Endorsement notice

The text of ISO 13299:2003 has been approved by CEN as a EN ISO 13299:2010 without any modification.

Contents

Page

Introduction

The purpose of this International Standard is to serve as guidance on those steps that are common to all sensory profiling. Reference is given in Clause 4 to existing and planned International Standards describing a part of the process (e.g. the choice of descriptors or of scales) or describing specific types of sensory profiling (e.g. texture or flavour profiles).

A sensory profile is a descriptive analysis of a sample by a panel. The sample may be a product (e.g. a food, beverage, tobacco product, cosmetic, textile or paper). It could also be a sample of air or water being tested for pollutants. 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 purpose of improving communication between themselves. The purpose of this International Standard is to provide agreed guidelines for such descriptive procedures.

Sensory profiling is based on the concept that the sensory impression made by the sample consists of a number of identifiable sensory attributes (descriptors), each of which is present to a larger or smaller degree. The list of all relevant sensory descriptors, each with its intensity value, is the sensory profile. Some sensory profiles take a view across all of the senses; others (partial profiles) concentrate in detail on particular senses. Two samples may be different yet have the same partial profile. Usually the attributes are listed in the order of perception.

Three factors need particular attention when establishing a profile:

— that assessors differ in their sensitivity and thresholds by which they sense individual attributes;

— that assessors may lack awareness or cognizance of certain attributes of a sample; and

— that in most samples there exists a “complex” or “background” of attributes that are not easily identified or separated.

The impact of these factors can be greatly reduced, but not entirely eliminated, by putting more effort into the selection of descriptors, and by using larger numbers of repeat tests by larger numbers of sensitive and highly trained assessors.

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

1 Scope

This International Standard describes the overall process for developing a sensory profile. Sensory profiles can be established for products such as foods and beverages, and 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 study and improve shelf-life;

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

— to compare a product with a standard 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 of air or water (e.g. in pollution studies).

NOTE 1 Sensory profiles can also be established for non-alimentary products or samples which are evaluated by the senses of sight, odour, taste, touch or hearing.

NOTE 2 Some International Standards dealing with aspects of establishing a sensory profile are given in Clauses 2 and 4.

2 Normative references

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 — Methodology — Evaluation of food products by methods using scales*

ISO 5492, *Sensory analysis — Vocabulary*

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

ISO 6564, *Sensory analysis — Methodology — Flavour profile methods*

ISO 6658:1985, *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: Experts*

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 11036, *Sensory analysis — Methodology — Texture profile*

ISO 11056, *Sensory analysis — Methodology — Magnitude estimation method*

3 Terms and definitions

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

3.1
sensory profile
description of the sensory properties of a sample, comprising the sensory attributes in the order of perception, and with assignment of an intensity value for each attribute

NOTE This is a generic term for any type of profile, whether full or partial, trademarked or not.

3.2
partial sensory profile
profile comprising certain selected attributes, with their intensity values

EXAMPLES Odour profile, flavour profile and texture profile.

3.3
conventional sensory profile
profile obtained by statistical treatment of data issued from several assessors using a single list of attributes

3.4
consensus sensory profile
profile obtained by consensus after discussion by a group of assessors, each of them having assessed the product according to his/her own criteria before the discussion

3.5
free-choice sensory profile
profile in which each assessor chooses his/her own attributes to describe a group of samples and in which consensus space is derived statistically, for example by generalized Procrustes analysis

3.6
time-intensity sensory profile
profile that describes the intensity of a given attribute as it changes over a period of time, following a single application of the stimulus