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

Analyse sensorielle — Méthodologie — Lignes directrices générales pour la réalisation d'épreuves hédoniques effectuées avec des consommateurs dans un espace contrôlé

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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.

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*.

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

1 Scope

This International Standard describes approaches for measuring, within a controlled area, the degree to which consumers like or relatively like products.

It uses tests based on collecting consumers' responses to questions, generally on paper or via a keyboard or a touch screen. Tests of a behavioural nature (such as recording quantities consumed ad libitum by the consumers) do not fall within the scope of this International Standard.

The hedonic tests dealt with in this International Standard, can be used as a contribution to the following:

— comparing a product with competitor products;

— optimizing a product so that it obtains a high hedonic rating or is liked by a large number of consumers;

— helping to define a range of products to correspond to a particular consumer target population;

— helping to define a best-before date;

— assessing the impact of a product formulation change on the pleasure given by the product;

— studying the impact of sensory characteristics of a product on degree to which it is liked, independently of the product's extrinsic characteristics, such as brand, price, or advertising;

— studying the effect of a commercial or presentation variable, such as packaging.

The methods are effective for determining

— whether or not, a perceptible preference exists (difference in degree of liking), or

— whether or not, no perceptible preference (paired similarity test) exists.

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 4121, *Sensory analysis — Guidelines for the use of quantitative response scales*

ISO 5492, *Sensory analysis — Vocabulary*

ISO 5495, *Sensory analysis — Methodology — Paired comparison test*

ISO 8587, *Sensory analysis — Methodology — Ranking*

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

ISO 29842, *Sensory analysis — Methodology — Balanced incomplete block designs*

3 Terms and definitions

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

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3.1
access panel
sample database of potential respondents who declare that they will cooperate for future data collection if selected

[SOURCE: ISO 20252]

Note 1 to entry: Respondents can be drawn on a more or less regular basis.

3.2
closed-ended question
question requiring respondents to select from a predetermined list of possible answers

3.3
commissioning party
person, body, or service who commissions a third party to conduct a study

Note 1 to entry: The concept of commissioning party corresponds to that of purchaser or customer in quality control. It contrasts with that of the supplier, service provider, or laboratory

Note 2 to entry: Usually, the commissioning party and the service provider belong to different enterprises. Where they belong to two departments of the same enterprise, the respective responsibilities of the two departments shall be carefully differentiated and explicitly clarified in the study proposal

3.4
consumer
respondent
person who uses a product

Note 1 to entry: For the purposes of this International Standard, the meaning is restricted to a person who is neither an expert, an expert sensory assessor nor a selected assessor in conformity with ISO 5492.

3.5
consumer sample
group of consumers recruited on the basis of criteria specified by the nature of the target population

3.6
controlled area
location providing

— controlled preparation and presentation of the products,

— comfortable conditions for consuming the products and for questioning the consumers, and

— absence of communication (verbal and non-verbal) between the consumers, guaranteeing independent responses

3.7
hedonic perception
amount of pleasure given by the sensory properties of a product

3.8
hedonic test
test aimed at measuring the overall hedonic perception of a product by consumers

3.9
open-ended question
question that does not provide ready-made alternatives for respondents but asks them to answer in their own words

Note 1 to entry: It can concern each of the products presented to the consumers or only some of them (e.g. when the question asks why a particular product has appealed most, or least, to an consumer).

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