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Sensory analysis — Methodology — Sequential analysis

Analyse sensorielle — Méthodologie — Analyse séquentielle

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Foreword

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This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 12, *Sensory analysis*.

This second edition cancels and replaces the first edition (ISO 16820:2004), of which it constitutes a minor revision. Information on using the Thurstonian δ approach and a citation for a new Reference [7] has been added in 5.1.

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Sensory analysis — Methodology — Sequential analysis

1 Scope

This document specifies a procedure for statistically analysing data from forced-choice sensory discrimination tests, such as the triangle, duo-trio, 3-AFC, 2-AFC, in which after every trial of the discrimination test the decision can be made to stop testing and declare a difference, to stop testing and declare no difference, or to continue testing.

The sequential method often allows for a decision to be made after fewer trials of the discrimination test than would be required by conventional approaches that use predetermined numbers of assessments.

The method is effective for:

a) determining that either:

   1) a perceptible difference results; or

   2) a perceptible difference does not result when, for example, a change is made in ingredients, processing, packaging, handling or storage;

b) selecting, training and monitoring assessors.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 5492, *Sensory analysis — Vocabulary*

3 Terms, definitions and symbols

3.1 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1.1
alpha-risk
α-risk
probability of concluding that a perceptible difference exists when one does not

Note 1 to entry: This is also known as Type I error, significance level or false positive rate.

3.1.2
beta-risk
β-risk
probability of concluding that no perceptible difference exists when one does

Note 1 to entry: This is also known as Type II error or false negative rate.

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