Second edition
2021-09

Sensory analysis — Methodology — Guidelines for the measurement of the performance of a quantitative descriptive sensory panel

Analyse sensorielle — Méthodologie — Lignes directrices pour le mesurage de la performance d'un jury descriptif quantitatif

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 12, *Sensory analysis*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/SS C01, *Food Products*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 11132:2012), which has been technically revised. The main changes compared with the previous edition are as follows:

— the title has been changed to specify that the document is applicable to descriptive sensory panels;

— the Scope has been revised:

  — in order to provide a distinction of application for validation and monitoring, with improved wording to clarify;

  — it has been reduced to measure repeatability only, and reproducibility has been stated to be out of scope;

  — the type of quantitative descriptive sensory panels for which the document is applicable to has been specified;

— the definitions have been revised and new terminological entries have been added;

— the process for the dedicated procedure has been improved;

— experimental designs have been reviewed and augmented;

— statistical analyses related to analysis of variance have been reviewed and augmented to include more models, especially regarding sessions and panellists (fixed or random) effects and interactions;

— the subclauses (specifically the original 6.4.4 and 7.4) and Annexes B and C related to reproducibility have been removed to align with the changes to the Scope.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

A panel of assessors can be used as an instrument to identify products' sensory attributes and to assess the magnitude of sensory attributes.

Performance is the measure of the ability of a panel or an assessor to make reliable and valid attribute assessments across the products being evaluated. It can be assessed at a given time point, typically after a training period (validation) or tracked over time (monitoring). Performance comprises the ability of a panel to detect, identify and measure an attribute, use attributes in a similar way to other panels or between assessors within a panel, discriminate between stimuli, use a scale properly, repeat their own results, and reproduce results in comparison to other panels or assessors.

Measuring performance enables the panel leader to improve panel and assessor output, to identify issues and retraining needs or to identify assessors who are not performing well enough to continue participating.