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Sensory analysis - Methodology - Balanced incomplete block designs

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1.Structure and Drafting Rules of Standardization Documents"

Drafting.

The translation method used in this document is equivalent to ISO 29842.2011 "Sensory Analysis Methodology Balanced Incomplete Block Design".

The Chinese documents that have consistent correspondence with the normatively cited international documents in this document are as follows.

---GB/T 10221-2012 Sensory Analysis Terms (ISO 5492.2008, MOD);

---GB/T 3358.1-2009 Statistics vocabulary and symbols Part 1.General statistical terms and terms used in probability

(ISO 3534-1.2006, IDT).

This document has made the following editorial changes.

---Incorporated the amendments of ISO 29842.2011/Amd.1.2015, and the outer margins of the clauses involved are vertical

The double line (||) is marked;

--- In Chapter 4 "Basic Features of Incompletely Balanced Block Design", the second paragraph and the fifth paragraph are repeated for the sake of conciseness and clarity.

, Merged these two paragraphs;

--- In Chapter 4 "Basic Features of Incompletely Balanced Block Design", the definition of "lambda" is corrected to "a sample pair composed of two different samples"

The number of times of being evaluated";

--- In Table 2, the content in the "Mean Square (MS)" column is corrected to "MSS=SS/nuS" and "MSE=SE/nuE".

This document was proposed and managed by the National Sensory Analysis Standardization Technical Committee (SAC/TC566).

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Company, Beijing Technology and Business University, Southwest Tobacco Leaf Sample Center of China National Tobacco Corporation.

1 Scope

This document specifies the method of applying balanced incomplete block design in sensory description analysis and preference testing.

This document applies to situations where the number of tested samples exceeds the number of samples evaluated by the evaluator that can give reliable results in a single experiment.

This document also specifies the basic characteristics of balanced incomplete block design and establishes its application guidelines in sensory evaluation.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations

Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.

ISO 3534-1 Statistics vocabulary and symbols Part 1.General statistical terms and terms used for probability (Statistics-

Vocabularyandsymbols-Part 1.Generalstatisticaltermsandtermsusedinprobability)

ISO 5492 Sensory Analysis-Vocabulary

3 Terms and definitions

The following terms and definitions defined in ISO 5492 and ISO 3534-1 apply to this document.

3.1

Blockdesign

An experimental design for sensory analysis of multiple samples. The design requires the evaluator to evaluate all or part of the samples in a single experiment.

3.2

Repeat repetition

Implement an experimental design.

4 Basic features of incompletely balanced block design

The incomplete balance block (BIB) design is suitable for the total number of samples in the sensory evaluation is greater than the evaluator can before the sensory and psychological fatigue

The maximum number of samples evaluated. In the incompletely balanced block design, each evaluator in a single experiment only evaluates part of the sample of the total sample set.

set. Examples of incompletely balanced block designs are shown in Table 1.