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# Sensory analysis - Methodology - Duo-trio test (ISO 10399:2004)

## I.S. EN ISO 10399:2010

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English Version

**Sensory analysis - Methodology - Duo-trio test (ISO  
10399:2004)**

Analyse sensorielle - Méthodologie - Essai duo-trio (ISO  
10399:2004)

Sensorische Analyse - Prüfverfahren - Duo-Trio-Prüfung  
(ISO 10399:2004)

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## **Foreword**

The text of ISO 10399:2004 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 10399:2010.

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of an identical text or by endorsement, at the latest by August 2010, and conflicting national standards shall be withdrawn at the latest by August 2010.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

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I.S. EN ISO 10399:2010

# INTERNATIONAL STANDARD

# ISO 10399

Second edition  
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## Sensory analysis — Methodology — Duo-trio test

*Analyse sensorielle — Méthodologie — Essai duo-trio*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 10399 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 10399:1991), which has been technically revised.

# Sensory analysis — Methodology — Duo-trio test

## 1 Scope

This International Standard describes a procedure for determining whether a perceptible sensory difference or similarity exists between samples of two products. The method is a forced-choice procedure. The method is applicable whether a difference exists in a single sensory attribute or in several attributes.

The method is statistically less efficient than the triangle test (described in ISO 4120) but is easier to perform by the assessors.

The method is applicable even when the nature of the difference is unknown [i.e. it determines neither the size nor the direction of difference between samples, nor is there any indication of the attribute(s) responsible for the difference]. The method is applicable only if the products are fairly homogeneous.

The method is effective for

a) determining that

- either a perceptible difference results (duo-trio testing for difference), or
- a perceptible difference does not result (duo-trio testing for similarity) when, for example, a change is made in ingredients, processing, packaging, handling or storage;

b) or for selecting, training and monitoring assessors.

Two forms of the method are described:

- the constant-reference technique, used when one product is familiar to the assessors (e.g. a sample from regular production), and
- the balanced-reference technique, used when one product is not more familiar than the other.

## 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 5492:1992, *Sensory analysis — Vocabulary*

ISO 8589:1988, *Sensory analysis — General guidance for the design of test rooms*

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