
International Standard 5497

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Sensory analysis — Methodology — Guidelines for the preparation of samples for which direct sensory analysis is not feasible

Analyse sensorielle — Méthodologie — Directives pour la préparation d'échantillons pour lesquels l'analyse sensorielle directe n'est pas possible

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5497 was developed by Technical Committee ISO/TC 34, *Agricultural food products*, and was circulated to the member bodies in October 1979.

It has been approved by the member bodies of the following countries :

Australia	France	Portugal
Austria	Germany, F. R.	Romania
Brazil	Hungary	South Africa, Rep. of
Bulgaria	Israel	Thailand
Canada	Kenya	Turkey
Chile	Korea, Rep. of	United Kingdom
Cyprus	Netherlands	USA
Czechoslovakia	New Zealand	Yugoslavia
Egypt, Arab Rep. of	Peru	
Ethiopia	Poland	

The member body of the following country expressed disapproval of the document on technical grounds :

India

Sensory analysis — Methodology — Guidelines for the preparation of samples for which direct sensory analysis is not feasible

1 Scope and field of application

This International Standard lays down guidelines for the preparation of samples of foodstuffs for which direct sensory analysis is not feasible, either because of the intensity of their flavour, or because of their physical state (viscosity, colour, powderiness, etc.).

It is applicable, in particular, to samples of intensely flavoured products (such as spices and condiments) and to samples of very concentrated products (syrops, extracts, etc.).

It does not apply to samples of products traditionally consumed in the form of macerations, infusions or decoctions (for example tea, coffee, medicinal herbs).

2 Reference

ISO 5492, *Sensory analysis — Vocabulary*.

3 Definitions

For the purpose of this International Standard, the definitions given in ISO 5492 apply.

4 Principle

Making a preparation which allows direct assessment of the organoleptic properties of a sample of a product, according to the analyses required, as follows :

- for assessment of the properties of the sample itself : mixing the sample with a chemically defined substance or addition to a food medium considered to be neutral;
- for assessment of the effects of the sample in a food preparation : adding the sample to the food preparation for which it is intended.

5 Methods of preparation

5.1 Preparations for assessment of the properties of the sample itself

5.1.1 Mixing with a chemically defined substance

Determine the most desirable temperature of the dilution medium according to the purpose of the test.

Dilute a uniform, representative sample of the product quantitatively with a chemically defined substance (for example water, lactose, dextrose, etc.) or disperse the sample quantitatively in the substance. Use the same degree of dilution or dispersion for each sample tested in a given series of tests.

Since dilutions of this kind may change the original flavour of the sample, care shall be taken to avoid dilutions which alter the attribute under study.

The use of increasing degrees of dilution or dispersion for the same sample is sometimes recommended when establishing the flavour profile.¹⁾

5.1.2 Addition to a food medium considered to be neutral

Choose a combination of sample and medium which avoids any antagonism or synergism.

Quantitatively mix a sample of the product into the medium chosen or place it on the medium (for example milk, oil, semolina, rice, pasta, puree, bread, emulsifying agents, cream).

Use the same quantitative sample/medium ratio for each of the samples evaluated in a given series of tests.

The temperature of the preparation shall be chosen according to the samples to be analysed and the purpose of the test, but the temperature of assessment shall be the same for a given series of tests.

1) Methods for establishing the flavour profile will form the subject of ISO 6564.

5.1.2 Addition to a food medium considered to be neutral

In general, a more or less complex preparation, in which the sample to be analysed is usually incorporated, is used. In this case, the sample will enter into competition with the other flavours.

Use the same quantitative sample/medium ratio for each of the samples evaluated in a given series of tests.

The temperature of the preparation shall be chosen according to the normal temperature of assessment (for example, in the frozen state in the case of ice cream), but shall be the same for a given series of tests.

6 Examples of preparations

An extract of vanilla may, according to the intended use of the product :

- a) be diluted in aqueous solution (see 5.1.1);
- b) be diluted in hot or cold milk (see 5.1.2);
- c) be incorporated in an ice cream or chocolate-flavoured milk (see 5.2).

7 Evaluation of sample

7.1 Method of sensory analysis

When the samples have been prepared in accordance with 5.1 or 5.2, analyse them by means of any suitable method enabling the problem under study to be resolved.¹⁾

7.2 Clearing the mouth of flavours

The assessor shall rinse or cleanse his mouth with an auxiliary substance (see 7.2.1) before each new assessment.

7.2.1 Auxiliary substances suitable for clearing the mouth

The auxiliary substance used for rinsing or cleansing the mouth shall be selected according to its effectiveness in relation to the samples being examined.

Recommended auxiliary substances are :

- water (tasteless, still, odourless, and not affecting the results);
- unsalted biscuits (crackers);
- rice cooked in water;
- fresh white bread, preferably unsalted;

and, more particularly for samples of products having a strong taste or leaving an aftertaste :

- diluted lemon or lime juice;
- apple or unsweetened apple puree;

etc.

7.2.2 Aftertaste

If the assessor performs several assessments, he shall not perform a new assessment while an aftertaste persists. If an aftertaste does persist, the assessor shall rinse and/or cleanse his mouth thoroughly and shall wait until the aftertaste disappears before making a new assessment.

8 Test report

All conditions relating to the preparation of the samples shall be noted for inclusion in the test report of the method of sensory analysis used.

1) See ISO 6658, *Sensory analysis — Methodology — General guidance* (at present at the stage of draft).