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First edition  
2003-08-01

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## **Sensory analysis — Methods for assessing modifications to the flavour of foodstuffs due to packaging**

*Analyse sensorielle — Méthodes pour évaluer les modifications de la  
flaveur des aliments causées par l'emballage*



Reference number  
ISO 13302:2003(E)

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Published in Switzerland

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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 13302 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 12, *Sensory analysis*.

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## Introduction

It is necessary to prevent materials intended for the packaging of foodstuffs from being the cause of unwanted alterations in odour or flavour. Likewise, it is necessary to take into account the storage conditions of the foodstuffs once they are packed since this can also be one of the causes of modifications to odour or flavour.

Certain types of foodstuff are particularly susceptible to flavour modifications due to packaging materials (e.g. fatty or powdered products having a large area in contact with the packaging). In particular, the packaging material can contaminate the product by transfer. This transfer can occur by direct contact with the packaging material or, indirectly, by means of the atmosphere created between the packaging and the product. Foreign odours or flavours can also come from the inner or outer layers of the packaging material.

The packaging material can also absorb compounds from foodstuffs and cause modifications of flavours.

Food industries should ensure that the packaging they use is the best possible choice with respect to their products. This is why they must have at their disposal methods which allow them to ascertain that the flavour of the foodstuffs is not significantly modified under certain storage conditions.

Compounds transferred from packaging materials and responsible for undesired effects on the flavour of food products are usually in very low quantities, often below the detection limits of the analytical techniques, or simply the compounds responsible for the changes in flavour have not been identified. Thus, it is necessary to evaluate the sensory properties of packaging materials.

This International Standard describes two complementary tests which are not mutually exclusive:

- assessment of the inherent odour of the packaging material under test (odour test);
- assessment of the change of flavour of a foodstuff after direct or indirect contact with the packaging material under test in actual conditions or in simulated conditions (contact test).

This International Standard was developed by a group composed of sensory analysis experts and experts from the packaging sector and is based on their experience.