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Sensory analysis — Methodology — General guidance for establishing a sensory profile

Analyse sensorielle — Méthodologie — Directives générales pour l'établissement d'un profil sensoriel



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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.

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Introduction

The purpose of this International Standard is to serve as guidance on those steps that are common to all sensory profiling. Reference is given in Clause 4 to existing and planned International Standards describing a part of the process (e.g. the choice of descriptors or of scales) or describing specific types of sensory profiling (e.g. texture or flavour profiles).

A sensory profile is a descriptive analysis of a sample by a panel. The sample may be a product (e.g. a food, beverage, tobacco product, cosmetic, textile or paper). It could also be a sample of air or water being tested for pollutants. Profiling can be carried out in a number of ways. Over the years, a few of these have been formalized and codified as descriptive procedures by professional societies or by groups of producers and users for the purpose of improving communication between themselves. The purpose of this International Standard is to provide agreed guidelines for such descriptive procedures.

Sensory profiling is based on the concept that the sensory impression made by the sample consists of a number of identifiable sensory attributes (descriptors), each of which is present to a larger or smaller degree. The list of all relevant sensory descriptors, each with its intensity value, is the sensory profile. Some sensory profiles take a view across all of the senses; others (partial profiles) concentrate in detail on particular senses. Two samples may be different yet have the same partial profile. Usually the attributes are listed in the order of perception.

Three factors need particular attention when establishing a profile:

- that assessors differ in their sensitivity and thresholds by which they sense individual attributes;
- that assessors may lack awareness or cognizance of certain attributes of a sample; and
- that in most samples there exists a "complex" or "background" of attributes that are not easily identified or separated.

The impact of these factors can be greatly reduced, but not entirely eliminated, by putting more effort into the selection of descriptors, and by using larger numbers of repeat tests by larger numbers of sensitive and highly trained assessors.