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Sensory analysis — General guidance for the staff of a sensory evaluation laboratory —

Part 2:
Recruitment and training of panel leaders

Analyse sensorielle — Guide général à l'attention du personnel des laboratoires d'analyse sensorielle —

Partie 2: Recrutement et formation des animateurs de jury

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Foreword

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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 13300-2 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 12, *Sensory analysis*.

ISO 13300 consists of the following parts, under the general title *Sensory analysis — General guidance for the staff of a sensory evaluation laboratory*:

— *Part 1: Staff responsibilities*

— *Part 2: Recruitment and training of panel leaders*

Sensory analysis — General guidance for the staff of a sensory evaluation laboratory —

Part 2:
Recruitment and training of panel leaders

1   Scope

This part of ISO 13300 gives guidelines for the recruitment and training of panel leaders. In addition, it describes the principal activities and responsibilities of a panel leader for sensory analysis.

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, *Sensory analysis — Vocabulary*

ISO 13300-1, *Sensory analysis — General guidance for the staff of a sensory evaluation laboratory — Part 1: Staff responsibilities*

3   Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5492 and ISO 13300-1 and the following apply.

3.1
panel leader
person whose primary duties are to manage panel activities, and recruit, train and monitor the assessors

NOTE 1   This person may also design and conduct sensory tests, and analyse and interpret data.

NOTE 2   This person may be assisted by one or more panel technicians.

3.2
sensory analyst
person who fulfils scientific professional functions, who may supervise one or more panel leaders, design and conduct sensory studies, and who analyses and interprets the resulting data

3.3
sensory project
organized study, usually in an industrial or academic setting, consisting of a series of steps, for example agreeing on a project objective with the test requestor, preparing a set of samples, conducting a number of sensory tests, analysing the data, and formulating a conclusion

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4 Principle

A person is recruited for the position of panel leader and is trained to develop knowledge, skills and abilities to be able to select, train, maintain and operate a sensory panel and to evaluate and report its findings. The candidate should have experience or knowledge of sensory test methodology and statistics.

A college degree in an associated area such as psychology, psychophysics, a product science (e.g. food technology, food science), chemistry and biology may be helpful and provides some assurance that the individual understands basic scientific principles.

5 Responsibilities and functions of a panel leader

The general responsibilities of a panel leader are

— training and orientation of assessors,

— panel maintenance, and

— execution of tests.

A detailed description of the activities is covered in Clause 9.

6 Required qualifications

6.1 Sensory methodology

A panel leader needs basic knowledge in sensory evaluation principles to facilitate his/her job as panel leader. If the panel leader lacks this knowledge, training should start with a course in basic sensory evaluation.

6.2 Leadership and personality

Candidates are leaders. They should be confident, friendly, capable of maintaining authority and control of the group, and command respect. They should have the ability to lead discussions, meet session objectives and complete session activities in a timely and effective manner. Furthermore, they should be able to anticipate and meet the needs of each panel member and the panel as a whole, technically and psychologically.

The panel leader should be able to inspire the assessors, keep them motivated, and tactfully solve problems within the panel. For the panel to be effective, the panel leader needs to be patient, fair, honest, and non-judgmental.

6.3 Group dynamic skills

The ability to lead and interact with the assessors is important. As such, candidates should have experience or gain experience in leading groups and understanding group interactions. The panel leader should be able to guide, motivate and maintain control of the panel in a manner that ensures that the panel arrives at sound, adequate conclusions that address the project objectives. The panel leader should give appropriate attention to all assessors and should ensure that no assessor overshadows others or is too reticent. The panel leader should also be able to resolve conflicts among the assessors without alienating any individual assessors.

6.4 Communication skills

The panel leader is the primary link between the test requestor and the assessors and should be able to explain information to both technical and non-technical individuals. The panel leader should be able to explain the panel's capabilities to management and new clients. This requires clear, concise writing and speaking skills. Listening and speaking skills are equally important in communicating with assessors.

6.5   Analytical thinking

Analytical thinking is an important requirement for a good panel leader. The panel leader should be able to interpret the assessor's comments or responses suitably and concisely. When appropriate, the leader should convey these in data analysis and interpretation of results, and in making conclusions and recommendations.

6.6   Organizational skills

Good organizational skills are essential for

⎯ training assessors,

⎯ collecting, preparing and presenting products,

⎯ conducting panel evaluations,

⎯ compiling, analysing and interpreting data,

⎯ writing reports,

⎯ meeting established time frames, and

⎯ planning multiple priorities.

The panel leader needs to be detail-oriented during the training of the assessors and when conducting panel sessions.

7   Recruitment of a panel leader

7.1   Recruiting an experienced panel leader

Ideally, an institution or company seeking a panel leader should recruit an experienced panel leader.

NOTE   The primary advantage is that an experienced panel leader is familiar with all phases of panel testing and does not require training other than that necessary to understand new product categories. In addition, an experienced panel leader is able to train or administer, or both, an existing panel when hired.

In organizations where a sensory analyst serves in the role of panel leader, or where the panel leader takes on tasks of a sensory analyst (such as data analysis and reporting), recruiting should take into account the dual roles the person will perform.

7.2   Recruiting an inexperienced panel leader

Primary sources for panel leaders are the company's sensory group or new graduates of educational programmes. An employee from the company's sensory group is not only familiar with the sensory characteristics of the company's products but also should be knowledgeable about the company's sensory procedures. College graduates with sound technical skills in sensory analysis should be used whenever the panel leader is also performing some or all of the duties of a sensory analyst.

Panel members may also be recruited to be panel leaders. A panel member has experience from panel training and familiarity with the routine and the group dynamics of the panel. The individual will need to be taught basic sensory methods as well as company procedures. Close supervision by a sensory analyst is required.

8   Training to become panel leader

8.1   Form of training

8.1.1   General

Two methods may be used to train a panel leader: an experienced panel leader does the training, or the new panel leader learns through personal experience and short courses while working in a sensory department (i.e. on-the-job training). A brief description of these two methods is given in 8.1.2 and 8.1.3. The skills and knowledge to be acquired through these two methods of training are discussed in Clause 6. Where the role of sensory analyst and panel leader are carried out by the same individual, training should be provided for both positions (see ISO 13300-1).

8.1.2   Training by experienced panel leader

Candidates for panel leaders demonstrating the fundamental qualifications (see Clause 6) may be trained by an experienced panel leader who is either working with the organization or who has been hired on a contractual consulting basis. It is recommended to interact with a knowledgeable professional. When specific methodology is used, special care should be given in the selection of an experienced panel leader/consultant (hereafter referred to as "experienced leader") with expertise in the methodology to be implemented.

The candidate is first trained in basic sensory methodology by the experienced leader, or by attending introductory sensory course(s), or both. It is recommended that the candidate also has access to texts, guides and journals on sensory test design and methodologies, data analysis, and reporting guidelines as additional resources.

After learning the basics of the methodology to be used, the candidate is trained by the experienced panel leader through either

— a panel training programme where the candidate is trained to develop skills as a panel leader and for descriptive panels as a selected assessor, or

— one-on-one training sessions.

Typically, the candidate leads the panel sessions, reports on group and individual assessor's progress to the experienced leader, and refers questions to the experienced leader for help. The experienced leader may offer suggestions on resolving conflicts among assessors, suggest training to help illustrate a critical concept, offer advice on dealing with specific assessors or assessor types, and provide support, encouragement and direction as the candidate gains experience and confidence.

The candidate learns to plan panel sessions, organize sample preparation, set up test controls, evaluate assessors' performance, conduct basic analysis and data interpretation, and how to report test results. The experienced leader continues to monitor the progress of the candidate and the group until sensory skills and interactive patterns are well developed.

The candidate should be encouraged to establish a personal network of experienced panel leaders and sensory professionals via organizations, affiliates or professional organizations, as there is a vast pool of experience and information that can be shared among practicing panel leaders.

8.1.3   On-the-job training

8.1.3.1   General

In some cases, a candidate may only become an experienced professional in this area by practice obtained on the job, interaction with an existing panel, and gathering information from other sources, such as short courses or workshops.

8.1.3.2 Interaction with an existing panel

Inexperienced panel leaders hired to manage an existing panel (such as a descriptive panel) learn valuable information from the panel and the panel interactions. The new panel leader needs to have an amicable personality and the ability to project authority while learning from the assessors and acknowledging their experience.

Interacting with an existing panel allows the new panel leader to learn the processes used in the organization's panels, describing and quantifying sensory properties, evaluating samples, becoming familiar with reference samples, and obtaining experience in moderating or working with a group. The new panel leader begins by observing the process and dynamics and gradually takes a leadership role with the panel.

These skills should be supplemented by study and practical experience (see 8.1.3.3).

8.1.3.3 Study and practical experience

Necessary skills may be learned through study.

Study and practical experience should include the following:

a) understanding the sensory fundamentals involved in the test type;

b) participating in a group dynamics course, or involvement with social groups to develop these skills;

c) attending courses and technical meetings that focus on sensory methodology and panel leadership;

d) visiting panels and panel leaders in other facilities (universities or other divisions of the company), when possible;

e) reading technical journals and books.

8.2 Acquisition of basic knowledge

8.2.1 General

The background knowledge needed by a panel leader can be divided into the knowledge of sensory methodology and knowledge about sensory properties.

8.2.2 Basic sensory methodology

A panel leader needs to have a good understanding of the principal sensory methods and test controls. Knowledge of sensory methods allows the panel leader to better design tests, interpret data in the context of the completed project, and request or design other sensory tests needed to complete a project.

As a minimum, a panel leader

— needs to be familiar with the characteristics and applications of discrimination tests (difference and similarity), descriptive tests and consumer tests (quantitative and qualitative); the panel leader should be very familiar with principles, procedures and issues associated with the specific type of panels that is to be led;

— needs to understand the impact of test controls (including environment, equipment, sample storage, preparation and serving) on the integrity of products and their evaluation.