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Standard Guide for Sensory Claim Substantiation¹

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INTRODUCTION

Formats or standards for testing related to sensory claim substantiation cannot be considered without a frame of reference of where that format or standard would fit within the legal framework that surrounds the topic. Product sensory claims tests are performed for three basic reasons: (1) *Comparison of Products*—Determines how one product compares to another, usually a competitor or earlier version of itself. (2) *Substantiation of Claims*—Enables marketing personnel to use positive references through advertising or packaging, or both, in the presentation of the product to the consumer. (3) *Test Performance*—Ascertains and establishes the tested product performance within the scope of its intended use.

The risk associated with each claim is assessed when considering claims substantiation. Compelling and aggressive claims are sure to be scrutinized closely by competitive firms, and if inconsistencies are found through competitive test data, the claims could be challenged in one or more of the following venues: (1) National Advertising Division (NAD) of the Advertising Self-Regulatory Council (ASRC), (2) one or more media, such as print, broadcast, or electronic media, (3) Consumer Advocacy Organizations, and (4) Civil or Federal courts. No single test design or standard test will prevent challenges. The criteria used by each of the potential forums are not identical and are constantly evolving. With the introduction of new technologies coupled with changing consumer demands, testing processes and protocols that were sufficient five or ten years ago may not hold up under today's criteria and scrutiny. Testing requirements of the future can only be a matter for speculation. The one constant is that, as advocates of their clients' positions, attorneys will defend their clients' testing processes and protocol while questioning with great detail every aspect of their competitor's protocol in the attempt to sway the arbiter to agree that their clients are in the right. Legal counsel should be part of any team developing claim substantiation.

This guide demonstrates what a group of professionals who are skilled in the science of testing consider appropriate from a scientific and technical standpoint, and represents an effective method for both defendant and challenger to determine the viability of a sensory claim. The key word is "appropriate." If a particular aspect of a test, or method, is not appropriate for a specific application, it should not be used. Care should be taken to clearly define the reasons and data supporting a deviation from the standard, as any departure invites scrutiny. Since departures are inevitable, the word "should" is used in this guide to indicate when other techniques may have applications in certain unusual circumstances. Whenever a test protocol has been completed, it should be critiqued for weaknesses, including whether experts in the relevant field would consider the research objectively designed, conducted, and analyzed, using procedures that give accurate and reliable results. If weaknesses are found, corrective action should be taken, since the competition may point out any weakness or discrepancy and challenge the study.

While the scientific and technical community identifies the appropriateness of a research method used to support a sensory claim, the legal community evaluates substantiation for legal claims using "reasonableness" as the criterion. With the importance of having a legal "reasonable basis" for a claim, the question remains, "What is reasonable?" Unfortunately, there is no specific answer to that legal question, as it will depend on the type of claim, product application and use, applicable regulations where the product is sold, and other factors. These considerations, market pressures (such as timing), and testing budgets can influence and impact the protocols to support a specific claim. This guide provides principles and considerations that need to be addressed for good sensory and consumer testing practices.

1. Scope

1.1 This guide covers reasonable practices for designing and implementing sensory tests that validate claims pertaining only to the sensory or perceptual attributes, or both, of a product. This guide was developed for use in the United States and must be adapted to the laws and regulations for advertisement claim substantiation for any other country. A claim is a statement about a product that highlights its advantages, sensory or perceptual attributes, or product changes or differences compared to other products in order to enhance its marketability. Attribute, performance, and hedonic claims, both comparative and non-comparative, are covered. This guide includes broad principles covering selecting and recruiting representative consumer samples, selecting and preparing products, constructing product rating forms, test execution, and statistical handling of data. The objective of this guide is to disseminate good sensory and consumer testing practices. Validation of claims should be made more defensible if the essence of this guide is followed.

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1.2 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

E253 Terminology Relating to Sensory Evaluation of Materials and Products

E1885 Test Method for Sensory Analysis—Triangle Test

E2164 Test Method for Directional Difference Test

2.2 ASTM Publications:³

MNL 13 Descriptive Analysis Testing for Sensory Evaluation

MNL 26 Sensory Testing Methods: Second Edition

STP913 Physical Requirement Guidelines for Sensory Evaluation Laboratories

3. Terminology

3.1 Definitions:

3.1.1 Terms used in this guide are in accordance with Terminology **E253**. Additional terms are listed below.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 α (alpha) risk, n —the probability of concluding that a sensory claim is supported when, in reality, the sensory claim is false.

3.2.1.1 *Discussion*— α risk also is known as Type I Error or significance level.

3.2.2 β (beta) risk, n —the probability of concluding that a sensory claim is not supported when, in reality, the sensory claim is true.

3.2.2.1 *Discussion*— β risk also is known as Type II Error.

3.2.3 *central location test (CLT)*, n —a test where stimuli are evaluated by consumers at a common designated location(s); the stimuli preparation and presentation are usually controlled.

3.2.3.1 *Discussion*—Examples of designated locations include market research facilities, academic laboratories, grocery stores, or hotel conference rooms.

¹ This guide is under the jurisdiction of ASTM Committee **E18** on Sensory Evaluation and is the direct responsibility of Subcommittee **E18.05** on Sensory Applications—General.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from ASTM International Headquarters, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.