



Standard Guide for Assessing the Efficacy of Air Care Products in Reducing the Perception of Indoor Malodor¹

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1. Scope

1.1 This guide covers standard procedures for the quantitative sensory assessment of perceived olfactory intensity of indoor malodors for the purpose of assessing the deodorant efficacy of air care products. This guide is limited to static conditions only.

1.2 It is recognized that, though sometimes desirable, the use of actual “live” or formulated live malodors is often impractical due to the inherent variability of the malodor sources. A live malodor source may be used when practical. However, the use of a formulated odor source has several advantages, including consistency and availability.

1.3 The reader should be aware of good sensory practices when preparing the test environment or substrate, developing and training the panel.

1.4 The researcher is responsible for identifying the most appropriate test design and using the appropriate statistical tool to address the experimental design.

1.5 This guide is a compendium of information or series of options that does not recommend a specific course of action. This guide is not intended to support claims. If the research objective is claim related, then the researcher needs to refer to Guide E1958.

1.6 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.7 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* Specific precautionary statements are given in Section 6 and X3.6.3.7.

¹ This guide is under the jurisdiction of ASTM Committee E18 on Sensory Evaluation and is the direct responsibility of Subcommittee E18.07 on Personal Care and Household Evaluation.

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2. Referenced Documents

2.1 ASTM Standards:²

E253 Terminology Relating to Sensory Evaluation of Materials and Products

E544 Practices for Referencing Suprathreshold Odor Intensity

E1958 Guide for Sensory Claim Substantiation

3. Terminology

3.1 For other definitions, see Terminology E253.

3.2 Definitions:

3.2.1 *activation time*—the length of time that a product is permitted to be exposed in a chamber prior to evaluation by assessors.

3.2.2 *assessor*—a general term for any individual responding to a stimuli in a sensory test.

3.2.3 *malodor*—an olfactory stimulus that, when detected, is considered unpleasant or undesirable by the target population.

3.2.4 *malodor control*—a test sample or experimental treatment consisting of a chamber containing a malodor without any additional malodor reducing treatment.

3.2.5 *malodor reduction efficacy*—the degree to which a product treatment or process reduces perceived malodor intensity.

3.2.6 *masking*—the reduction or elimination of olfactory perception of a defined odor stimulus by means of another odorous substance without the physical removal or chemical alteration of the defined stimulus from the environment.

3.2.7 *panel*—a group of assessors chosen to participate in a sensory test.

3.2.8 *product control*—a treatment consisting of a chamber containing product only.

3.2.9 *spray time*—the length of time in seconds for which an air care product is sprayed with the actuator depressed fully.

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.