



Standard Guide for Quantitative Attribute Evaluation of Fragrance/Odors for Shampoos and Hair Conditioners by Trained Assessors¹

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1. Scope

1.1 This guide covers standardized procedures for the quantitative sensory assessment of fragrance/odor intensity or attribute intensity of fragrances in shampoo or hair conditioner base through all stages of use (point of purchase, lather, in use, wet hair after rinse, and dry hair) under laboratory conditions with trained assessors.

1.2 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.

1.3 *This standard addresses the use of hair products and the equipment needed to use these products. 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.*

2. Referenced Documents

2.1 *ASTM Standards:*²

E253 Terminology Relating to Sensory Evaluation of Materials and Products

E1207 Guide for Sensory Evaluation of Axillary Deodorancy

E1593 Guide for Assessing the Efficacy of Air Care Products in Reducing the Perception of Indoor Malodor

E2082 Guide for Descriptive Analysis of Shampoo Performance

3. Terminology

3.1 *Definitions:*

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 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.

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

3.1.2 *subject, n*—an individual recruited to participate in a study to serve as a sample carrier, and to use, consume, or experience the test sample. The sample evaluation is completed by an assessor.

3.1.3 *hair swatches, n*—sample tresses of human hair that serve as sample carriers.

4. Equipment

4.1 The following equipment may be used during the preparation or evaluation processes, or both:

4.1.1 *Hair Swatches*, prepared as described in **12.2**,

4.1.2 *Aluminum Foil Sheets*,

4.1.3 *Beakers*, 1000 mL,

4.1.4 *Blow Dryer*, specifications should be documented (for example, wattage, voltage power level, air velocity, temperature),

4.1.5 *Combs*,

4.1.6 *Glass or Plastic Bottles*, 4 oz (120 mL),

4.1.7 *Pipets*,

4.1.8 *Scale*,

4.1.9 *Towels*, cloth or paper, or both,

4.1.10 *Unfragranced Shampoo Base or Detergent*,

4.1.11 *Vinyl or Plastic Gloves*, and

4.1.12 *Water* (temperature and hardness should be consistent).

5. Summary of Guide

5.1 This guide provides a methodology for the identification, selection, and training of assessors for the evaluation of the intensity and duration of the odor/fragrance attributes of shampoos or hair conditioners, or both. This guide describes sample preparation and evaluation techniques from containers (point of purchase), hair swatches, and whole heads. (Related materials include Terminology **E253**, Guide **E1593**, Guide **E2082**, and MNL 26.³)

³ *ASTM MNL 26, Sensory Testing Methods: Second Edition*, ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.