



Standard Test Methods for Odor of Ethylene Glycol, Diethylene Glycol, Triethylene Glycol, Propylene Glycol, and Dipropylene Glycol and Taste of Propylene Glycol¹

This standard is issued under the fixed designation E 1075; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 These test methods cover procedures for observing odors of glycols and estimating their odor acceptability. These test methods apply to ethylene, diethylene, triethylene, propylene, and dipropylene glycols. A method for observing the taste and estimating the intensity of the taste of propylene glycol is also included.

1.2 *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: Manual:*

STP 758 Selection and Training of Sensory Evaluation Panels²

3. Significance and Use

3.1 These test methods can be used to characterize the odors of ethylene, diethylene, triethylene, propylene, and dipropylene glycol and estimating the intensity of the odor. The products are compared to previously established standards. The acceptability of the product for a specific end use can be determined with this information.

3.2 A procedure which can be used to characterize the taste of propylene glycol and establish the intensity of this taste relative to a previously established standard is delineated. The acceptability of the product for a specific end use can be determined with this information.

3.3 These tests may be used to qualify the suitability of these products for use in a customer-producer relationship.

4. Panel

4.1 A panel of at least five trained judges led by a qualified supervisor or coordinator is recommended for these evaluations.

4.2 The panel may be selected and trained in accordance with the methods outlined in ASTM STP 758. Since discrimination tests are involved, panel members must have a complete understanding of the nature of the judgments required, the test procedures, and test controls required. During the training period panelists should examine both acceptable and unacceptable products to become familiar with the range of acceptability.

5. Reference Samples

5.1 Reference samples of the products to be tested, having odor and taste (propylene glycol only) characteristics satisfactory to the customer and producer, are required.

5.2 The standards must be examined periodically to assure their continued quality and acceptability, and replaced when necessary.

6. Test Unit

6.1 The tests described may be performed in a single panel session on a single sample.

7. Procedure A—Odor Character by Filter Paper

7.1 *Apparatus:*

7.1.1 *Rapid Qualitative Filter Paper*, 2.5 by 7.5-cm strips, odor free.

NOTE 1—Perfumer's blotters may replace filter paper, if desired. The primary consideration is that the paper be odor-free.

7.1.2 *Glass Containers*, odor-free, with fitted closures.

7.2 *Sample Preparation*—Each panelist pours a few millilitres of the sample on a piece of clean odor-free filter paper.

7.3 *Sample Evaluation:*

7.3.1 For characterization, panelists should observe the odor of the filter paper immediately.

7.3.2 Panel members should record individual results as outlined in 13.1.

8. Procedure B—Odor Character Intensity, Undiluted

8.1 *Apparatus:*

8.1.1 *Glass Containers*, odor-free 250 mL with fitted closures.

8.2 *Sample Preparation*—Pour 50 mL of the sample into a clean, odor-free 250-mL flask and cover with an appropriate

¹ These test methods are under the jurisdiction of ASTM Committee E-18 on Sensory Evaluation of Materials and Products and are the direct responsibility of Subcommittee E18.06 on Food, Beverage, and Tobacco Evaluation.

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² Available from ASTM Headquarters, 1916 Race St., Phila., PA 19103.