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AMERICAN SOCIETY FOR TESTING AND MATERIALS

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Standard Test Methods of Sampling and Testing Shellac Varnish¹

This standard is issued under the fixed designation D 1650; 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 the sampling and testing of orange shellac and bleached lac varnishes.

1.2 The sampling procedures and methods of test appear in the following order:

	Sections
Sampling	5
General Requirements for Test Methods:	
Purity of Reagents	6
Preparation of Sample	7
Color	8 to 11
Drying Time	12 to 14
Nonvolatile Matter	15 to 17
Iodine Value	18 and 19
Insoluble Matter	20 to 23
Wax	24 to 27
Ash	28 and 29
Purity	30 to 34
Acid Value	35 to 37
Saponification Value	38 to 40

1.3 *This standard does not purport to address the safety problems 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:

- D 29 Test Methods of Sampling and Testing Lac Resins²
- D 1193 Specification for Reagent Water³

3. Terminology

3.1 Description of Terms Specific to This Standard:

3.1.1 *acid value*—the number of milligrams of potassium hydroxide required to neutralize 1 g of the nonvolatile portion of the lac varnish.

3.1.2 *lot*—For purpose of sampling, a lot shall consist of the entire amount of varnish manufactured as one batch and offered for delivery at one time.

3.1.3 *saponification value*—a measure of the alkali reactive groups in lac resins, it is expressed as the number of milligrams of potassium hydroxide that react with 1 g of the nonvolatile portion of the lac varnish.

4. Significance and Use

4.1 These test methods compile the common measure-

ments and procedures for characterizing shellac.

4.2 All shellac varnishes should be tested by the procedures contained in these test methods.

SAMPLING

5. Procedure

5.1 A single container shall be taken at random from each lot as representative of the whole.

5.2 In case the varnish is packaged in cans or drums of 5 gal (18.9 L) or more capacity, thoroughly mix the contents of the container and take a number of small samples from the top, bottom, and intermediate points by means of sampling tube. Mix these small samples to form a composite sample and transfer not less than 1 qt (0.94 L) to a clean, dry, glass bottle, securely stopper with a new clean cork or well-fitting cover or cap, seal, distinctly label, and transmit to the laboratory for test.

5.3 When the varnish is packaged in containers of 1 gal (3.8 L) or less capacity, send the original unopened container to the laboratory for test. When this cannot be done, thoroughly mix the contents of the container and transfer not less than 1 qt to a clean, dry, glass bottle, securely stopper with a new clean cork or well-fitting cover or cap, seal, distinctly label, and transmit to the laboratory for test.

5.4 Take precautions to ensure that the sampling apparatus and the samples themselves are neither contaminated with nor altered by any material not representative of the lot being sampled.

Test Methods

GENERAL REQUIREMENTS

6. Purity of Reagents

6.1 Reagent grade chemicals shall be used in all tests. Unless otherwise indicated, it is intended that all reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available.⁴ Other grades may be used, provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination.

6.2 Unless otherwise indicated, references to water shall be understood to mean reagent water conforming to Specification D 1193, Type IV.

¹ These test methods are under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings and Materials and are the direct responsibility of Subcommittee D01.33 on Polymers and Resins.

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² Annual Book of ASTM Standards, Vol 06.02.

³ Annual Book of ASTM Standards, Vols 06.03 and 11.01.

⁴ "Reagent Chemicals, American Chemical Society Specifications," Am. Chem. Soc., Washington, DC. For suggestions on the testing of reagents not listed by the American Chemical Society, see "Reagent Chemicals and Standards," by Joseph Rosin, D. Van Nostrand Co., Inc., New York, NY, and the "United States Pharmacopeia."