Designation: ~~D5349 – 95 (Reapproved 2012)~~ D5349 – 19

Standard Test Method for Determination of the Moisture and Volatile Content of ~~Sulfonated and~~ Sulfonated, Sulfated Oils and Fatliquors by ~~Hot-Plate~~Oven Method[1]

This standard is issued under the fixed designation D5349; 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 This test method covers the determination of ~~the percentage of water~~ moisture and other ~~compounds volatile at about 100°C existing in a sample of sulfonated or sulfated oil, or both, by rapid evaporation. This test method is applicable only to sulfonated and sulfated oils that do not contain the following: mineral acids, free sulfonic acids or free sulfuric acid esters, ammonia, acetic acid or similar volatile acids, alkali hydroxides, carbonates, acetates or similar salts that may react with oleic acid at elevated temperatures liberating volatile acids, or glycerin, diethylene glycol, xylene, or other compounds of similar volatility. This test method was derived from Test Methods~~ volatile material under conditions of the test. It is applicable to sulfonated, sulfated oils, fats, oils, fatliquors, and softening compounds.~~D500, Sections 10 through 14.~~

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 *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~~ safety, health, and ~~health~~environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *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]

D500 Test Methods of Chemical Analysis of Sulfonated and Sulfated Oils

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

3. Significance and Use

3.1 This test method is intended to determine the moisture and volatile content of sulfonated, sulfated oil, fats, oils, ~~and fatliquors used in the softening and stuffing of leather.~~fatliquors, and softening compounds.

4. Apparatus

4.1 *Oven,* ~~The apparatus required consists of a glass-stoppered weighing flask, a glass beaker, and a suitable thermometer.~~mechanical-convection draft capable of setting at 100 – 105 °C with a thermoregulatory system,

~~4.1.1 *Weighing Flasks,* any suitable glass-stoppered weighing flask of 10 to 15-mL capacity.~~

~~4.1.2 *Beaker,* Griffin low-form glass beaker with an approximate capacity of 150 mL and a diameter of about 5 cm.~~

~~4.1.3 *Heat Source*—The source of heat may be either an electric hot plate with or without asbestos paper or board cover, or an open flame under a suitable asbestos board and a wire gauze (to spread the heat).~~

~~4.1.4 *Thermometer,* graduated from 90 to 150°C, about 3 in. in length, and substantially constructed.~~

[1] This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of Subcommittee D31.08 on Fats and OilsThis test method was developed in cooperation with the American Leather Chemists Assn. (Method H 41–1957).

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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.