Designation: D 2079 – 92 (Reapproved 1998)

Standard Test Method for Nonvolatile Matter (Solids) in Fatty Quaternary Ammonium Chlorides[1]

This standard is issued under the fixed designation D 2079; 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.

This method was prepared jointly by the American Society for Testing and Materials and the American Oil Chemists' Society.

1. Scope

1.1 This method covers the determination of nonvolatile matter (solids) in fatty quaternary ammonium chlorides.

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. Summary of Test Method

2.1 Volatile matter is evaporated under heat and vacuum and the nonvolatile matter determined.

3. Apparatus

3.1 *Vacuum Oven*, with suitable controls for maintaining a temperature of 105 ± 2°C.

3.2 *Air Oven*, with suitable controls for maintaining a temperature of 105 ± 2°C.

4. Procedure

4.1 If not a liquid, melt the sample using a water bath. Mix the sample thoroughly and accurately weigh 0.7 to 1.0 g to 0.1 mg into a 50-mL narrow-mouth Erlenmeyer flask. Place the flask in the air oven for 1 h at 105 ± 2°C. After about 15 min of oven time, rotate the flask gently to coat the specimen over the entire bottom of the flask. Place the flask in a vacuum oven for 8 h at 105 ± 2°C and a vacuum (negative gage pressure) of 27 to 29 in. Hg (absolute pressure of 25 to 35 mm Hg). Cool in a desiccator for ½ h and reweigh.

5. Calculation

5.1 Calculate the percent of nonvolatile matter (solids) as follows:

$$\text{Nonvolatile matter (solids), \%} = (R \times 100)/S \quad (1)$$

where:

R = grams of residue, and
S = specimen weight used, g.

6. Precision and Bias

6.1 Precision and bias were not established at the time this test method was written. An effort is being made to obtain the precision and, if obtainable, it will be published in future revisons. This test method has been in use for many years, and its usefulness has been well established.

7. Keywords

7.1 nonvolatile matter; quaternary ammonium chlorides; solids content

[1] This test method is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.32 on Drying Oils.

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