



Designation: D 2082 – 92 (Reapproved 1998)

## Standard Test Method for Percent of Non-Amines in Fatty Nitrogen Compounds<sup>1</sup>

This standard is issued under the fixed designation D 2082; 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 ( $\epsilon$ ) 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 the percentage of non-amine components in fatty amines and diamines.

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:*  
D 1193 Specification for Reagent Water<sup>2</sup>

### 3. Summary of Test Method

3.1 A specimen of the fatty amine compound is dissolved in alcohol and passed through an ion exchange column. The amine components of the specimen are retained on the column and the nonamine components pass through the column and are collected and weighed. A correction factor is applied to correct for any amine components that pass through the column.

### 4. Apparatus

4.1 *Chromatographic Columns*, made by attaching 500-mL bulbs with 24/40 joints to chromatographic tubes and with attached fritted-glass disks inside a 19/22 joint (Fig. 1).

### 5. Reagents

5.1 *Purity of Reagents*—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<sup>3</sup>,

<sup>1</sup> This 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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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 11.01.

<sup>3</sup> *Reagent Chemicals, American Chemical Society Specifications*, American Chemical Society, Washington, DC. For suggestions on the testing of reagents not listed by the American Chemical Society, see *Analar Standards for Laboratory Chemicals*, BDH Ltd., Poole, Dorset, U.K., and the *United States Pharmacopeia and National Formulary*, U.S. Pharmacopeial Convention, Inc. (USPC), Rockville, MD.

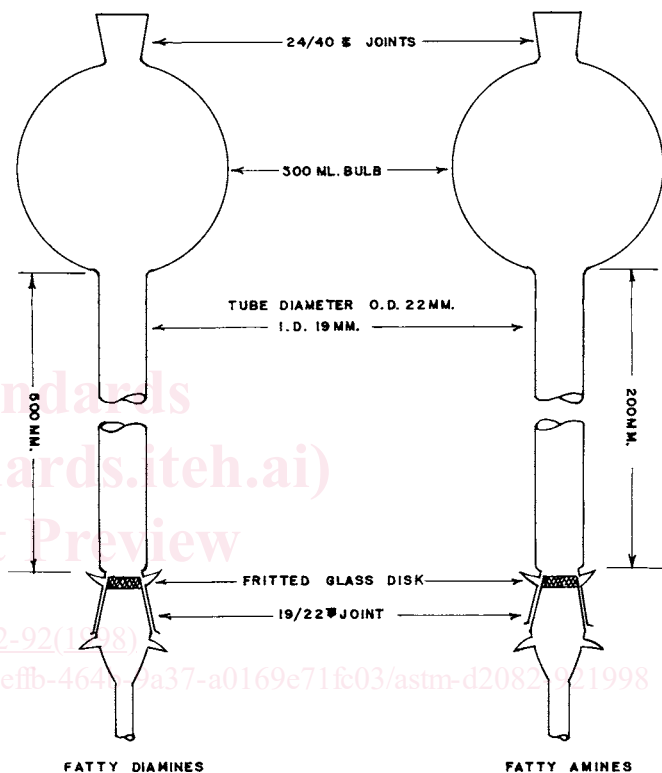


FIG. 1 Diagram of Chromatographic Columns

where such specifications are available. 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.

5.2 *Purity of Water*—Unless otherwise indicated, references to water shall be understood to mean reagent water conforming to Type II of Specification D 1193.

5.3 *Bromphenol Blue Indicator Solution*—Dissolve 0.2 g of bromphenol blue in 100 mL of methanol, ethanol, or isopropanol.

5.4 *Hydrochloric Acid, Standard Solution (0.2N)*—Add 34 mL of concentrated HCl (sp gr 1.19) to 1000 mL of isopropanol in a 2-L volumetric flask. Make up to volume after cooling to room temperature. Standardize against sodium carbonate using bromcresol green as the indicator.