



Designation: D1570 – 95 (Reapproved 2023)

Standard Test Methods for Sampling and Chemical Analysis of Fatty Alkyl Sulfates¹

This standard is issued under the fixed designation D1570; 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 the sampling and chemical analysis of paste, powder, or liquid detergent fatty alkyl sulfates.

1.2 The procedures for sampling and analysis appear in the following order:

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1.3 The values stated in either inch-pound or SI units are to be regarded separately as the standard. The values given in parentheses are for information only.

1.4 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* Material Safety Data Sheets are available for reagents and materials. Review them for hazards prior to usage.

1.5 *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

- D216 Method for Distillation of Natural Gasoline
- D1172 Guide for pH of Aqueous Solutions of Soaps and Detergents
- D1193 Specification for Reagent Water

¹ These test methods are under the jurisdiction of ASTM Committee D12 on Soaps and Other Detergents and are the direct responsibility of Subcommittee D12.12 on Analysis and Specifications of Soaps, Synthetics, Detergents and their Components.

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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.

SAMPLING

3. General Requirement

3.1 The seller shall have the option of being represented at the time of sampling and when he so requests, shall be furnished with a duplicate sample.

4. Powders and Flakes Packed in Cans or Cartons

4.1 Take one can or carton at random from not less than 1 % of the seller's shipping containers, provided each package contains not less than 50 lb (22.7 kg). In the case of smaller containers, take a can or carton at random from each lot of containers totaling not more than 5000 lb (2268 kg) or fraction thereof. The gross sample shall in all cases consist of not less than three cans or cartons taken at random from separate containers. In the case of very large lots where the sample drawn as above will amount to more than 20 lb (9.1 kg), reduce the percentage of packages sampled so that the amount drawn will not exceed 20 lb (9.1 kg). Tightly wrap the individual cans or cartons at once in paraffined paper and seal by rubbing the edges with a heated iron. The inspector shall accurately weigh each wrapped can or carton and record its weight and the date of weighing on the wrapper. Place the wrapped cans or cartons in an airtight container, which should be nearly filled, and which shall then be sealed, marked, and sent to the laboratory for test. Samples shall be kept cool until tested.

5. Powders and Flakes in Bulk

5.1 Take a grab sample of not less than 0.5 lb (227 g) at random from not less than 1 % of the seller's shipping containers, provided each package contains not less than 100 lb (45.4 kg). In the case of smaller containers, take a grab sample of not less than 0.5 lb (227 g) at random from each lot of containers totaling not more than 10 000 lb (4536 kg) or fraction thereof. The gross sample shall in all cases consist of not less than three grab samples of 0.5 lb (227 g) each taken at random from separate containers. In the case of very large lots where the sample drawn as above will amount to more than 20 lb (9.1 kg), reduce the percentage of packages sampled so that the amount drawn shall not exceed 20 lb (9.1 kg). The inspector shall rapidly mix the gross sample and place it in an airtight container, which shall be filled, sealed, marked, accurately weighed, with its weight and the date of weighing recorded on the package, and be sent to the laboratory for test. Samples shall be kept cool until tested.

6. Liquids

6.1 Take a sample of not less than 0.5 pt (236.6 mL) at random from not less than 1 % of the seller's shipping containers, provided each package contains not less than 10 gal (37.9 L). In the case of smaller containers, take a sample of not less than 0.5 pt (236.6 mL) at random from each lot of containers totaling not more than 1000 gal (3785.4 L) or fraction thereof. The gross sample shall in all cases consist of not less than three samples of 0.5 pt (236.6 mL) each taken at random from separate containers. Before drawing the sample from the container selected, thoroughly agitate the contents of

the container. The inspector shall thoroughly mix the gross sample, place it in clean, dry cans or bottles, which shall be completely filled and securely stoppered with clean corks or caps, then sealed, marked, and sent to the laboratory for test.

7. Pastes

7.1 *Pastes Packed in Cans or Cartons of 5 lb (2.27 kg) or Less*—Take one can or carton at random from not less than 1 % of the seller's shipping containers, provided each package contains not less than 50 lb (22.7 kg). In the case of smaller containers, take a can or carton at random from each lot of containers totaling not more than 5000 lb (2268 kg) or fraction thereof. The gross sample shall in all cases consist of not less than three cans or cartons taken at random from separate containers. In the case of very large lots where the sample drawn as above will amount to more than 20 lb (9.1 kg), reduce the percentage of packages sampled so that the amount drawn shall not exceed 20 lb (9.1 kg). The samples shall be wrapped, sealed, marked, and sent to the laboratory for test.

7.2 *Pastes Packed in Bulk*—Take a “trier” sample (**Note 1**) of not less than 0.5 lb (227 g) at random from not less than 1 % of the seller's shipping containers, provided each package contains not less than 50 lb (22.7 kg). In the case of smaller containers, take a “trier” sample of not less than 0.5 lb (227 g) at random from each lot of containers totaling not more than 5000 lb (2268 kg) or fraction thereof. The gross sample shall in all cases consist of not less than three 0.5 lb (227 g) samples, each taken at random from separate containers. With very large lots where the sample drawn as above will amount to more than 10 lb (4.5 kg), reduce the percentage of packages sampled so that the amount drawn shall not exceed 10 lb (4.5 kg). The inspector shall promptly place the gross sample in a clean, dry, airtight and watertight container, which shall be filled, sealed, marked, and sent to the laboratory for test.

NOTE 1—A trier sample is obtained by inserting a “trier” into the material. A trier is a half-round steel cylinder $\frac{1}{2}$ in. to $\frac{3}{4}$ in. (12.7 mm to 19 mm) in diameter, 6 in. to 36 in. (152 mm to 914 mm) in length, pointed on one end and having a grip handle on the other end. After insertion, the trier is turned two or three times, and upon removal a core of the material being sampled is obtained.

8. Preparation of Sample

8.1 *Powders and Flakes*—Minimizing exposure to air, rapidly disintegrate and mix the sample of powdered, flake, or chip product. If desired, quarter down to about 1 lb (453.6 g). Weigh at once all portions for analysis, preserving the remainder in an airtight container in a cool place.

8.2 *Liquids*—No preparation of the sample of liquid, other than a thorough mixing, is necessary unless it is received during very cold weather, when it should be allowed to stand at least 1 h after it has warmed to room temperature (20 °C to 30 °C) before it is tested, particularly for its lathering qualities (**Note 2**).

8.3 *Pastes*—Store preferably in glass. If crystals separate, melt on water bath.