Designation: D 1845 – 86 (Reapproved 2003)

Standard Test Methods for Chemical Analysis of Strontium Chromate Pigment[1]

This standard is issued under the fixed designation D 1845; 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 standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 These test methods cover the chemical analysis of strontium chromate pigment.

1.2 The analytical procedures appear in the following order:

	Sections
Strontium by the Strontium Sulfate Method	7to10
Chromium by the Thiosulfate Method	11to14
Chloride Content	15
Sulfate Content	16
Moisture and Other Volatile Matter	17
Coarse Particles	18
Mass Color and Tinting Strength	19

1.3 This values stated in SI units are to be considered the standard. The values given in parentheses are for information only.

1.4 *This standard does not purport to address the safety concerns 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:* [2]

D 185 Test Methods for Coarse Particles in Pigments

D 280 Test Methods for Hygroscopic Moisture (and Other Matter Volatile Under the Test Conditions) in Pigments

D 387 Test Method for Color and Strength of Chromatic Pigments with a Mechanical Muller

D 444 Test Methods for Chemical Analysis of Zinc Yellow Pigment (Zinc Chromate Yellow)

D 1193 Specification for Reagent Water

3. Significance and Use

3.1 These test methods may be used to confirm the stated strontium oxide and chromium oxide content of strontium chromate.

4. Apparatus

4.1 *Gooch crucible.*

4.2 *Electric Furnace*, capable of 800°C.

5. Purity of Reagents

5.1 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.[3] 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 Unless otherwise indicated, references to water shall be understood to mean Type II of Specification D 1193.

6. Preparation of Sample

6.1 Mix the sample thoroughly. Take a sufficient quantity for chemical analysis and pass it through a No. 325 (4-μm) sieve.

STRONTIUM BY THE STRONTIUM SULFATE METHOD

7. Reagents

7.1 *Acetic Acid (glacial).*

7.2 *Ammonium Hydroxide (1+3)*—Mix 1 volume of concentrated ammonium hydroxide (NH_4OH, sp gr 0.90) with 3 volumes of water.

[1] These test methods are under the jurisdiction of ASTM Committee Paint and Related Coatings, Materials, and Applications and are the direct responsibility of Subcommittee D01.31 on Pigment Specifications.

Current edition approved Dec. 1, 2003. Published December 2003. Originally approved in 1961. Last previous edition approved in 1986 as D 1845 – 86 (1999).

[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.

[3] *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.