



Designation: D5383 – 16 (Reapproved 2021)

Standard Practice for Visual Determination of the Lightfastness of Art Materials by Artists and Art Technologists¹

This standard is issued under the fixed designation D5383; 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 practice covers a method for exposing specimens of colored art materials indoors to sunlight coming through a closed window. A card containing eight Blue Wool References² is exposed simultaneously. Blue Wool References² 3, 6, and 7, are used as controls in determining when to remove test specimens from exposure and rate them. Test specimens are rated by assigning each specimen the number of the Blue Wool Reference that shows the same amount of color change.

1.2 This practice may be used to indicate art materials that will change color within a few months or years in normal indoor exposure and those that will remain unchanged for a period of years. It is not rigorous enough to verify that materials will remain unchanged for more than fifty years in a home or office environment. A major consideration in developing this method was to keep it simple and short enough to be preformed without instrumentation in a comparatively short length of time.

1.3 This practice shall be used to evaluate the lightfastness of art materials only when it is not feasible to use Test Methods [D4303](#).

1.4 This practice is not suitable for evaluating materials with a high oil content such as artists' oil, resin oil or alkyd paints.

1.5 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.6 *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.*

1.7 *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:*³

[D4303](#) Test Methods for Lightfastness of Colorants Used in Artists' Materials

[E284](#) Terminology of Appearance

2.2 *Other Standards:*

[ISO/R 105-B](#) Textiles Tests for Colour Fastness Part B: Colour Fastness to Light and Weathering⁴

[British Standard 1006](#) Group B Methods for Colour Fastness of Textiles and Leathers⁵

3. Terminology

3.1 The definitions included in Terminology [E284](#) are applicable to this practice.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *bloom, n*—a cloudy exudation on the surface of colored pencil due to wax migration.

3.2.2 *fugitive color, n*—colorant that changes color in a few days or weeks, or that bleaches white in less than 18 months, when exposed behind glass to sunlight.

3.2.3 *glazing, n*—the transparent glass or plastic sheet placed in front of a picture when it is framed.

3.2.4 *substrate, n*—the white, pH neutral (pH 6 to 8) paper or board on which the art materials are applied.

¹ This practice is under the jurisdiction of ASTM Committee [D01](#) on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee [D01.57](#) on Artist Paints and Related Materials.

Current edition approved Nov. 1, 2021. Published November 2021. Originally approved in 1993. Last previous edition approved in 2016 as D5383 – 16. DOI: 10.1520/D5383-16R21.

² The Blue Wool Reference Card is available from Talas, Division Technical Library Service, 213 W. 35th St. New York, NY 10001-1992.

³ 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.

⁴ International Organization for Standardization, ISO/R 105-B is available from the American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁵ British Standard 1006 can be obtained from British Standards Institute (BSI), 389 Chiswick High Rd., London W4 4AL, U.K., <http://www.bsi-global.com>.