

Tentative Method of Test for
LUMINOUS REFLECTANCE AND TRANSMISSION CHARACTERISTICS AND COLOR OF PLASTIC MATERIALS¹



A.S.T.M. Designation: D 791 - 44 T

ISSUED, 1944.²

This Tentative Method has been approved by the sponsoring committee and accepted by the Society in accordance with established procedures, for use pending adoption as standard. Suggestions for revisions should be addressed to the Society at 1916 Race St., Philadelphia 3, Pa.

Scope

1. (a) This method is intended as a basic, or referee test for determining luminous reflectance and transmission and color properties of substantially non-fluorescent plastics.³ Less accurate means which are simpler, or more rapid, or make use of less expensive apparatus will be considered satisfactory to the degree that equivalent values are obtainable by the two methods.

(b) This method serves as a detailed supplement to the Standard Method of Test for Spectral Characteristics and Color of Objects and Materials (A.S.T.M. Designation: D 307)⁴ which shall be considered as a part of this method to the extent that its instructions are applicable.

¹ Under the standardization procedure of the Society, this method is under the jurisdiction of the A.S.T.M. Committee D-20 on Plastics.

² Accepted by the Society at annual meeting, June, 1944.

³ Plastics, as specified in this method, shall include those materials implied in the scope of A.S.T.M. Committee D-20 on Plastics.

⁴ Appears in this publication, see Contents in Numeric Sequence of A.S.T.M. Designations at front of book.

Apparatus

2. The apparatus shall conform to the requirements prescribed in Section 3 of A.S.T.M. Method D 307 with the exception of the following restrictions which shall be imposed upon the geometry of illuminating and viewing:

(a) The specimen shall be illuminated by a substantially unidirectional beam whose axis is normal to the specimen surface.⁵

(b) The maximum angle which any element of the beam makes with the direction of the axis, shall not exceed 3 deg.

(c) The beam shall be so regulated that its wave length spread in any portion of the visible spectrum shall not exceed 100 Å (Note 1).

NOTE 1.—Where spectral reflectance or transmission changes rapidly, it may be desirable to reduce the wave length spread until further re-

⁵ For purposes of measuring total luminous reflectance, it may be necessary to tilt the specimen slightly. See Note 2 in Section 2.