T 527 om-19
SUGGESTED METHOD – 1972
CLASSICAL METHOD – 1992
OFFICIAL METHOD – 1994
REVISED – 2002
CORRECTED – 2002
REVISED – 2007
REVISED – 2013
REAFFIRMED – 2019

CAUTION:
This Test Method may include safety precautions which are believed to be appropriate at the time of publication of the method. The intent of these is to alert the user of the method to safety issues related to such use. The user is responsible for determining that the safety precautions are complete and are appropriate to their use of the method, and for ensuring that suitable safety practices have not changed since publication of the method. This method may require the use, disposal, or both, of chemicals which may present serious health hazards to humans. Procedures for the handling of such substances are set forth on Material Safety Data Sheets which must be developed by all manufacturers and importers of potentially hazardous chemicals and maintained by all distributors of potentially hazardous chemicals. Prior to the use of this method, the user must determine whether any of the chemicals to be used or disposed of are potentially hazardous and, if so, must follow strictly the procedures specified by both the manufacturer, as well as local, state, and federal authorities for safe use and disposal of these chemicals.

Color of paper and paperboard (*d*/0, *C*/2)

1. Scope

1.1 This method specifies a procedure for measuring the color of paper or paperboard with tristimulus filter colorimeters or spectrophotometers incorporating diffuse/0 geometry and CIE (International Commission on Illumination) illuminant *C*.

NOTE 1: TAPPI T 524 "Color of Paper and Paperboard (45/0, C/2)" describes a similar procedure using directional illumination and normal viewing.

1.2 In the method, tristimulus values *X* (red), *Y* (green), and *Z* (blue), appropriate to the CIE-1931 (2°) standard observer, are calculated from reflectance measurements R_x, R_y, and R_z or from R (λ) data. Color can then be expressed in various color space systems:

1. Hunter *L, a, b*
2. CIE *L**, *a**, *b**
3. *L**, *C**, *h*
4. Dominant wavelength, purity, luminosity
5. Color difference, [Δ*E*, Δ*E**, Δ*E**94, Δ*E* (CMC)]

1.3 Instruments equipped with microprocessors which give direct information relating to different color scale systems conform to this method only if the means of measurements and calculation conform to the descriptions herein.

Approved by the Standard Specific Interest Group for this Test Method
TAPPI