Glossary of AATCC Standard Terminology

Legend:

EP = Evaluation Procedure
LP = Laboratory Procedure
M = Monograph
RA = Research Committee
TM = Test Method

AATCC Blue Wool Lightfastness Standard, n.—one of a group of dyed wool fabrics distributed by AATCC for use in determining the amount of light exposure of specimens during lightfastness testing. *Source:* TM16.1, 16.2, 16.3, 111, 192.

AATCC fading unit (AFU), n.—a specific amount of exposure made under the conditions specified in various test methods where one AFU is one-twentieth (1/20) of the light-on exposure required to produce a color change equal to Step 4 on the Gray Scale for Color Change or 1.7 ± 0.3 CIELAB units of color difference on AATCC Blue Wool Lightfastness Standard L4. *Source:* TM16.1, 16.2, 16.3.

abrasion, n.—the wearing away of any part of a material by rubbing against another surface. *Source:* LP3, TM93, 119, 120.

absorbance, n.—the logarithm to the base 10 of the reciprocal of transmittance.

NOTE: Absorbance is proportional to the mass of absorbing material in the path length of a spectrophotometer cell (syn: *absorbance value*). *Source:* TM182.

absorbency, n.—the propensity of a material to take in and retain a liquid, usually water, in the pores and interstices of the material. *Source:* TM70, 79.

absorbent capacity, n.—the maximum amount of liquid a material can hold; dependent on the specific test method used. *Source:* TM200.

absorption, n.—a process in which one material (the absorbent) takes in or incorporates another material (the absorbate) within itself; such as the absorption of moisture by fibers. *Source:* RA99.

absorption rate (AR_T) (top surface) and (AR_B) (bottom surface), n.—the average speed of liquid moisture absorption for the top and bottom surfaces of the specimen during the initial change of water content during a test. *Source:* TM195.

accelerated ageing, n.—*in textile processing and testing*, use of controlled environmental conditions to promote rapid physical and/or chemical change in a textile material. *Source:* TM26.

accumulative one-way transport capability (R), n.—the difference between the area of the liquid moisture content curves of the top and bottom surfaces of a specimen with respect to time. *Source:* TM195.

acid dye, n.—an anionic dye having substantivity for fibers which contain cationic groups usually in acidic or neutral aqueous dyebaths. *Source:* TM159.

activated oxygen bleach, n.—a bleaching system comprising an oxygen bleach and a bleach activator. *Source:* TM190.

activity, n.—*of an antibacterial agent*, a measure of effectiveness of the agent. *Source:* TM90, 100, 147, 174.

activity, n.—*of an anti-dust mite agent*, a measure of the effectiveness of the agent. *Source:* TM194.

add-on, n.—*in textile processing*, the amount of any material, chemical finish, coating, sizing, etc. that is applied to a textile (see also *wet pick-up*).

NOTE: Add-on is usually determined as a percentage of either the dry or conditioned weight of the textile prior to processing. *Source:* RA99.

ageing, accelerated, n.—see *accelerated ageing*.

anionic dye, n.—a dye that dissociates in aqueous solution to give a negatively charged colored ion. *Source:* RA87.

antibacterial agent, n.—any chemical material which kills bacteria (bactericide) or interferes with the multiplication, growth or activity of bacteria (bacteriostat). *Source:* TM90, 100, 147, 174.

antifungal agent, n.—any chemical material which kills or inhibits the growth of fungi. *Source:* TM174.

anti-house dust mite agent, n.—any chemical which kills (acaricide) or repels house dust mites. *Source:* TM194.

antimicrobial agent, n.—*in textiles*, any chemical material which kills or inhibits the growth of microorganisms. *Source:* TM174.

appearance of creases, n.—see *crease retention*.

appearance of textile end products, n.—the overall visual impression of a textile end product quantified by comparison of individual components with appropriate reference standards. *Source:* TM143.

aqueous repellency, n.—*in textiles*, the characteristic of a fiber, yarn or fabric whereby it resists wetting by aqueous liquids. *Source:* TM193.

area-of-view, n.—o*f color measuring instrument*, the dimensions of the surface area that a color measuring instrument is capable of covering in a single color measurement. *Source:* EP6.

azoic composition, n.—a physical mixture of an azoic coupling component and a stabilized azoic diazo component which produces, *in situ*, an insoluble azo colorant in both cellulosic and synthetic substrates. *Source:* RA87.

azoic diazo component, n.—a stabilized diazonium salt of a primary acrylamine or derivative thereof which is capable of reacting with an azoic coupling component. *Source:* RA87.

azoic dye, n.—an insoluble azo compound developed, *in situ*, on a substrate by chemically reacting an azoic diazo component (diazotized amine) with an azoic coupling component. *Source:* RA87.

Bacterial Amylase Unit (BAU), n.—a measure of starch degradation as shown by the quantity of an enzyme that will dextrinize one milligram of starch per minute under the specified experimental conditions. *Source:* TM103.

bacterial resistance, n.—*in textiles*, resistance to the development of visible bacterial growth and accompanying odors, resulting from bacterial degradation of fibers or soil on them, as distinguished from musty fungal odors. *Source:* TM174.

ballast, n.—*in procedures for processing or testing of textiles*, material that is used to bring the total weight or volume of the textiles to an amount specified in the procedure. *Source:* TM88B, 88C, 124, 143.

barré, n.—an unintentional, usually repetitive, pattern of continuous bars or stripes parallel to the courses of circular knit fabric. *Source:* M10.

basic dye, n.—a dye that dissociates in an aqueous medium to give a positively charged colored ion (cation) with affinity for fibers containing acidic groups. *Source:* TM141.

black panel thermometer, n.—a temperature measuring device, the sensing unit of which is coated with black designed to absorb most of the radiant energy encountered in lightfastness testing. *Source:* TM16.2, 16.3, 111, 192.

black standard thermometer, n.—a temperature measuring device, the sensing unit of which is coated with a black material designed to absorb most of the radiant energy encountered in lightfastness testing and is thermally insulated by means of a plastic plate. *Source:* TM16.2, 16.3.

bleach, n.—*in home laundering*, a product that will clean, whiten, brighten and aid in the removal of soils and stains from textile materials by oxidation that is inclusive of chlorine and non-chlorine products. *Source:* TM172, 188.

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bleach activator, n.—a bleach agent precursor, which converts a less potent bleaching species into a more powerful one. *Source:* TM190.

bleaching, n.—elimination of unwanted coloring matter from a textile substrate by oxidative or reductive chemical treatment. *Source:* TM81, 98, 102, 144, 209.

blotting paper, n.—any absorbent cloth-like material that is white in color, and will readily absorb small droplets of liquid. *Source:* TM205.

bottom surface (B), n.—*for testing purposes*, the side of the specimen placed down against the lower electrical sensor which is the side of the fabric that would be the outer exposed surface of a garment when it is worn or product when it is used. *Source:* TM195.

breaking strength, n.—the maximum force applied to a specimen in a tensile test carried to rupture. *Source:* TM111, 169, 186, 192.

breathing resistance, n.—the differential pressure required to draw air through a measured surface area at a constant air flow rate. *Source:* EN 14683, an FDA-recognized consensus method for surgical masks. NOTE: The term "breathability" is also associated with this definition, but due to possible confusion with vapor permeability, it is not used in this document. Fabrics designed to specifically allow escape of perspiration in the form of vapor are not typically suitable for face coverings. *Source: M14*.

broad bandpass radiometer, n.—a relative term applied to radiometers that have a bandpass width of more than 20 nm at 50% of maximum transmittance and can be used to measure irradiance at wavelengths such as 300-400 nm or 300-800 nm. *Source:* TM16.1, 16.2, 16.3, 111.

burnt gas fumes, n.—atmospheric oxides of nitrogen as derived from the combustion of illuminating or heating gas. *Source:* TM23.

bursting strength, n.—the force or pressure required to rupture a textile by distending it with a force, applied at right angles to the plane of the fabric, under specified conditions. *Source:* TM111, 169, 186, 192.

calibration procedure, n.—a method for adjusting certain parameters in an instrument so that different instruments from the same or different manufacturers produce the same results in a test for a given property. *Source:* EP11.

carbonizing, n.—a chemical process for eliminating cellulosic matter from a mixture with animal fibers by degrading the cellulosic material to an easily friable condition. *Source:* RA99.

care instructions, n.—*in textiles*, a series of directions describing which care practices should refurbish a product without adverse effects and warning of those care practices expected to have a harmful effect. *Source:* TM188.

carpet, n.—all textile floor coverings not designated as rugs. *Source:* TM121, 122, 138, 165, 171.

carpet backing, n.—materials (fabrics, yarns or chemical compounds) in the carpet other than the face yarns. *Source:* TM205.

carpet composite, n.—the finished carpet product, including: face fibers, primary backing, adhesive coating, and secondary backing (if applicable). *Source:* TM205.

carpet pile brush, n.—a hand operated brush having long, semi-rigid bristles intended specifically for erecting the pile of small areas of carpet (see also *pile lifter*). *Source:* TM171.

cationic dye, n.—a dye that dissociates in an acidified, aqueous solution to give a positively charged colored ion. *Source:* RA87.

cellulase enzyme, n.—an enzyme that attacks cellulose. *Source:* TM191.

center wavelength, n.—the specified wavelength for a bandpass filter; the wavelength midway between the half power points, for example, 340 nm ± 2 nm. *Source:* TM111.

chelating agent, n.—*in textile chemistry*, a chemical capable of deactivating metal ions by formation of a water soluble complex. SYN: *sequestering agent*. *Source:* TM149, 161, 168, 185.

chemical finish, n.—chemical material other than colorants and residual processing chemicals added to textiles to impart desired functional or aesthetic properties to the textile product. *Source:* TM94.

chemical finishing, n.—the process of applying chemicals, other than colorants, to textiles to impart desired functional and/or aesthetic characteristics which may or may not be durable in normal use. *Source:* RA99.

chroma, n.—the proportion of spectrally pure color that expresses the degree of departure from the gray of the same lightness. *Source:* EP9.

chrome dye, n.—a mordant dye capable of forming a chelate complex with a chromium ion. *Source:* RA87.

CIE 1976 L*a*b* equation, n.—a commonly used equation which transforms CIE tristimulus values into a three-dimensional opponent color space. Generally abbreviated as CIELAB. *Source:* TM173.

CIE chromaticity coordinates, n.—the ratio of each of the tristimulus values of a psychophysical color to the sum of the tristimulus values (ASTM E284). *Source:* TM110.

CIE tristimulus values, n.—amounts of three non-real reference color stimuli required to give a color match with the color stimulus considered, and defined by the CIE for the CIE 1931 standard observer and the CIE 1964 standard colorimetric observer and for a particular illumination condition. *Source:* TM110.

CIE Whiteness Index (CIE WI), n.—an index predicting the apparent degree of whiteness of a material based on tristimulus values determined according to one of the CIE standard methods, proposed by the Commission Internationale de l'Éclairage (CIE). *Source:* EP11.

clean-fiber content, n.—the amount of fiber after removal of nonfibrous content. *Source:* TM20A.

cleaning head, n.—a vacuum head modified with spray nozzles for cleaning solution application. Some types include a powered brush unit to facilitate wetting and soil release. *Source:* TM171.

cleanness, n.—*in carpet soiling tests*, the absence of change in appearance due to soil, specifically the degree to which the specimen approaches the original clean, unsoiled condition.

NOTE: Cleanness is independent of changes of physical structure which may be present because of exposure to traffic or action of cleaning procedures. *Source:* TM121.

CMC unit, n.—*in color difference evaluation*, a measure of acceptability expressed in terms of the boundary for the CMC acceptability ellipsoid of $\Delta E_{cmc} = 1.0$.

NOTE: CMC is an acronym for the Colour Measurement Committee (of the Society of Dyers and Colourists) which was largely responsible for the development of the CMC (ℓ:c) equation. *Source:* TM173.

coated fabrics, n.—a flexible material composed of a textile fabric and an adherent polymeric or other material applied to one or both surfaces. *Source:* RA99.

color change, n.—*as used in colorfastness testing*, a change in color of any kind (whether a change in hue, chroma or lightness) *Source:* TM192.

color change, n.—*as used in colorfastness testing*, a change in color of any kind whether in lightness, hue or chroma or any combination of these, discernible by comparing the test specimen with a corresponding untested specimen. *Source:* EP1, 7, TM16.1, 16.2, 16.3, 111, 161, 196.

color measurement, n.—a numerical representation of the color stimulus of an object obtained by use of a color measuring instrument. A single measurement may represent an average of multiple readings of a specimen. *Source:* EP6.

color measuring instrument, n.—any device, such as a colorimeter or spectrophotometer, used to measure the relative amounts of energy reflected from (or transmitted through) a specimen in the visible region of the energy spectrum (comprising the wavelengths from 360 to 780 nm, and including as a minimum the

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region from 400 to 700 nm). *Source:* EP6.

color strength, n.—a measure of the ability of a dye to impart color to other materials.

NOTE: Color strength is evaluated by light absorption in the visible region of the spectrum. *Source:* TM182.

colorant, n.—a material which is applied to a substrate for the express purpose of changing the transmittance or reflectance of visible light.

NOTE: Dyes, pigments, tints and optical brighteners are examples of colorants; soils are not colorants. *Source:* TM140.

colorant bleeding, n.—the loss of colorant from a textile substrate during contact with a liquid medium (such as water, drycleaning solvent or condensed vapors) with consequent coloring of the medium. *Source:* RA93.

colorant staining, n.—the unintended pickup of colorant by a substrate due to a transfer from another material. *Source:* EP2.

colorant staining, n.—the unintended pickup of colorant by a substrate due to (1) exposure to a colored or contaminated liquid medium, or (2) direct contact with dyed or pigmented material from which colorant transfers by sublimation or mechanical action (as in crocking). *Source:* EP8, 12, TM137.

colorfastness, n.—the resistance of a material to change in any of its color characteristics, to transfer of its colorant(s) to adjacent materials or both, as a result of the exposure of the material to any environment that might be encountered during the processing, testing, storage or use of the material. *Source:* EP1, 2, 8, 12, TM6, 8, 15, 16.1, 16.2, 16.3, 23, 61, 101, 104, 106, 107, 109, 116, 117, 125, 129, 131, 132, 133, 157, 162, 163, 164, 165, 169, 172, 188, 190, 196.

colorfastness to light, n.—the resistance of a material to a change in its color characteristics as a result of exposure of the material to sunlight or an artificial light source. *Source:* TM16.1, 16.2, 16.3.

colorist, n.—*in textile coloration*, a person experienced in developing color formulas, evaluating samples for color and producing colored samples to meet standards. *Source:* RA99.

commercial factor (cf), n.—*in color difference evaluation*, a tolerance (specified in terms of ΔE_{cmc} units) which adjusts all axes of the unit CMC volume equally to create a volume of acceptance for commercial use. *Source:* TM173.

commercial laundering, n.—a process by which textile products or specimens may be washed, rinsed, bleached, dried and pressed in commercial laundering equipment, typically at higher temperatures, higher pHs and longer times than used for home laundering. *Source:* TM96.

compatibility, n.—*in textile dyeing*, propensity of individual dye components in a combination shade to exhaust at similar rates resulting in a buildup of shade that is constant, or nearly constant, in hue throughout the dyeing process. *Source:* TM141.

condensed dye, n.—a dye which, during or after application, reacts covalently with itself or other compounds, other than the substrate, to form a molecule of greatly increased size. *Source:* RA87.

constituent elements of hand, n.—those components, qualities, attributes, dimensions, properties or impressions which make the sensation of touching one fabric different from that of touching another. *Source:* EP5.

control paper, n.—*for liquid moisture management testing*, a standard filter paper able to transmit a consistent volume of water vapor under controlled conditions. *Source:* TM204.

copper chelation value (CuCV), n.—the milligrams of copper sulfate pentahydrate chelated by one gram of a chelating agent or product containing a chelating agent. *Source:* TM185.

crease retention, n.—*in fabrics*, the visual impression of an inserted crease quantified by comparison with a set of reference standards. *Source:* TM88C, 143.

crocking, n.—a transfer of colorant from the surface of a colored yarn or fabric to another surface or to an adjacent area of the same fabric principally by rubbing. *Source:* TM8, 116, 165.

cross dyeing, n.—a process of dyeing textiles containing fibers having different dye affinities to achieve a multicolored effect (see also *union dyeing*). *Source:* RA99.

ΔE_{cmc}**,** n.—*in color difference evaluation*, a single number defining the total color difference in CMC units of a trial from a standard. *Source:* EP14.

ΔE_{00}**,** n.—*in color difference evaluation*, a single number defining the mean total color difference in CIEDE2000 units of a specimen from a reference and vice versa. *Source:* TM173, EP14.

depth, n.—departure of a colored object from white and frequently associated with either concentration or efficiency of a colorant. *Source:* RA36.

detergent, n.—a cleaning agent containing one or more surfactants as the active ingredient(s). *Source:* RA88.

differential wear—see *frosting*.

diffuse transmission, n.—process by which incident light, while being transmitted through an object, is redirected or scattered over a range of angles. *Source:* TM148, 203.

dimensional change, n.—a generic term for variation in length or width of a garment or fabric specimen subjected to specified conditions. *Source:* TM96, 158.

dimensional change, n.—a generic term for changes in length or width of a fabric specimen subjected to specified conditions. The change is usually expressed as a percentage of the initial dimension of the specimen. *Source:* TM135, 150, 187.

direct dye, n.—an anionic dye having substantivity for cellulosic fibers, normally applied from an aqueous dyebath containing an electrolyte. *Source:* RA87.

disperse dye, n.—an essentially water insoluble dye having affinity, when properly dispersed, for polyester, polyamide and some other manufactured polymeric fibers. *Source:* TM146, 154, 176.

dispersibility, n.—the degree to which particles can be broken down to some minimum size such that they will pass through the interstices of a standard filter paper. *Source:* TM146.

dispersion, n.—*in textile wet processing*, a suspension of very fine particles in a liquid phase. *Source:* TM176.

drycleaning, n.—the cleaning of fabrics with organic solvents such as petroleum solvent, perchloroethylene or fluorocarbon.

NOTE: The process also includes adding detergent and moisture to the solvent, up to 75% relative humidity, and hot tumble drying to 71°C (160°F). *Source:* TM86, 132, 142, 158.

drying rate, n.—the change in volume per unit time a liquid evaporates from a textile.

NOTE: Drying rate is dependent upon textile construction, fiber content, apparel construction, finishes, the atmospheres in which the test is performed, and the volume challenge of the liquid. *Source:* TM199, 200, 201.

drying time, n.—the time it takes for a specified amount of liquid to evaporate from a textile under controlled testing conditions. *Source:* TM199, 200, 201.

dummy load, n.—see *ballast*.

durable press, adj.—having the ability to retain substantially the initial shape, flat seams, pressed-in creases and unwrinkled appearance during use and after laundering or drycleaning. *Source:* TM88B, 88C, 124, 143.

dust, n.—fine particles of solid material dispersed in a gas. *Source:* TM184.

dusting, n.—the tendency of particles of sufficiently low mass to become airborne when a powder material is handled or agitated. *Source:* TM170.

dye, n.—a colorant applied to or formed in a substrate, via the molecularly dispersed state, which exhibits some degree of permanence.

NOTE: Definitions for individual classes of dyes may be found under their particular class name; i.e., reactive dye. *Source:* TM140, 163, 170.

dyeing, n.—*in textile manufacturing*, application of a dye to a substrate nor-

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