Association of Textile, Apparel & Materials Professionals

AATCC takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this test method. Users of this test method are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This test method is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reaffirmed or withdrawn. Your comments are invited either for revision of this test method or for additional procedures and should be addressed to the AATCC Technical Center. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing, you should make your views known to Diana A. Wyman, Technical Director, at the address shown below.

This test method is copyrighted by AATCC, PO Box 12215, Research Triangle Park, NC 27709 USA. Individual reprints (single or multiple copies) of this method may be obtained by contacting AATCC at the above address or tel: 919-549-3526; fax: 919-549-8933, or e-mail: orders@aatcc.org.

AATCC License Agreement: This test method is copyrighted by the American Association of Textile Chemists and Colorists (AATCC), PO Box 12215, 1 Davis Drive, Research Triangle Park, NC USA. All rights reserved.

AATCC grants you a license as follows: The right to download one electronic file of this AATCC test method for temporary storage on one computer for purposes of viewing, and/or printing one copy of the AATCC test method for individual use. Neither the electronic file nor the hard copy print may be reproduced in any way. In addition, the electronic file may not be distributed elsewhere over computer networks or otherwise. The hard copy print may only be distributed to other employees for their internal use within your organization.

This test method is not for resale.

Documents
Document Sharing Hub

Copyright The American Association of Textile Chemists and Colorists
Provided by IHS Markit under license with AATCC
No reproduction or networking permitted without license from IHS
Full document details: AATCC M12 2018

Licensee=Hong Kong Polytechnic University/9976803100, User=ERIKSSON, Anna Pernil
Not for Resale, 02/28/2020 02:12:54 MST

AATCC Style Guide for Writing Test Methods

Developed by AATCC Committee RA99; revised January 2018; numbered July 2018; editorially revised 2019.

1. Introduction

1.1 AATCC test methods are used in many different ways, and by many different types of users. Hence, it is important that they be written in a precise manner.

1.2 AATCC policy prohibits endorsement of fabric or product specifications for commerce. The results obtained by the methods should not be construed as specifications.

2. Organization of Test Methods

2.1 Scope

2.1.1 All AATCC test methods are required to contain the sections identified in the list below by an asterisk. Test methods may also contain the additional sections shown in the list. However, in order to promote uniform style, the additional sections may only be used in the sequence shown. Titles or headings of the sections may not be replaced with other terms.

2.2 Subdivisions

2.2.1 The following is the prescribed order for the text of AATCC test methods:

*Title
*Activity History
Foreword
*Purpose and Scope
*Principle
Referenced Documents
*Terminology
*Safety Precautions
Uses and Limitations
Apparatus, Reagents, Materials**
Verification, Calibration**
Sampling
*Specimens
Conditioning
Preparation of Apparatus, Specimens, Reagents**
*Procedure
*Calculations, Interpretation, Evaluation**
Report
*Precision and Bias
Additional References
Notes
Appendices

*Required for all test methods.
**Use appropriate heading.

2.3 Numbering of Sections

2.3.1 Using the modified decimal system, number each series of sections and subdivisions serially and set off these numbers by periods (decimal points) to indicate the particular part of the method from the largest division or section, down to the individual paragraphs. For example: "2." indicates the second principal section of a method; "2.3 and 2.14" designate respectively the third and fourteenth subdivisions of primary division 2.; similarly, "2.14.10" designates the tenth paragraph or subdivision of the fourteenth division of the second section of the method.

2.3.2 Use no longer than three-place numbers. For example: A two-place number means 2.14; a three-place number means a symbol such as 2.14.1 or 2.14.10. This numbering not only shows at a glance the arrangement of the written material, but also permits simple and specific cross referencing. Numbers with more than three places defeat the purpose of simplicity. The need for more than three places can usually be avoided by making more primary and secondary subdivisions of the subject or by using fewer subdivisions.

2.4 Title

2.4.1 Name the property to be measured, not some quality to be inferred. Keep the title explicit and terse. For example: "Loss of Strength in Rayon Cloth by Exposure to Sulfurous Acid"; not "Resistance of Fabric to Acid Damage." "Biological Oxygen Demand in Textile Mill Effluents" not "Stream Sanitation."

2.4.2 In order to simplify finding methods in alphabetical listing, key words that describe the general nature of the test should be used in the beginning of the title followed by more specific descriptive terms. For example, AATCC TM162, Test Method for Colorfastness to Water: Chlorinated Pool.

2.5 Activity History

2.5.1 State briefly the history of the test method including the number of the committee which developed it, the first year of publication and the year of all subsequent reaffirmations, editorial revisions and technical revisions. Also list any similar test methods of other organizations such as ISO.

2.6 Foreword

2.6.1 A history of the rationale for the development of the method may be included to help clarify the need for the method, particularly if similar methods exist. Keep the source of all methods anonymous; individual companies should not be credited for AATCC methods.

2.7 Purpose and Scope

2.7.1 Name the properties to be tested (including any characteristics that may be related to those properties), and the material(s) to which the test is applicable. If the method tests several properties (or related characteristics), list all of them.

2.7.2 Name the material(s) to which the test is applicable.

2.8 Principle

2.8.1 Briefly state the testing technique covered in the test method, outlining the fundamental physical and chemical concepts involved. Provide the metric or scale for reporting results, (e.g., Results are reported as a Gray Scale for Color Change grade of 5 to 1, with 5 representing no color change and 1 representing the most color change.)

2.9 Referenced Documents

2.9.1 List any AATCC, ASTM, ISO or other test method cited in the test method, by numerical designation, and title.

2.9.2 To cite references, use the ACS format.

2.10 Terminology

2.10.1 Define all terms not found in the ordinary desk dictionary, and all terms used in some specialized sense. Define terms that are used only in one restricted branch of the textile industry. If a definition is taken from some other publication, quote it in full and give due credit by complete attribution.

2.10.2 Define all key terms in titles to ensure that all persons referring to or using the test method understand its intent.

2.11 Safety Precautions

2.11.1 A generic caveat on precautions shall appear in all test methods.

2.11.2 This generic caveat shall appear in the Safety Precautions section of the appropriate test methods.

2.11.3 The generic caveat shall be: NOTE: These safety precautions are for information purposes only. The precautions are ancillary to the testing procedures and are not intended to be all inclu-

Copyright The American Association of Textile Chemists and Colorists
Provided by IHS Markit under license with AATCC
No reproduction or networking permitted without license from IHS
Full document details: AATCC M12 2018
Copyright © 2019 American Association of Textile Chemists and Colorists
Licensee=Hong Kong Polytechnic University/9970803100, User=ERIKSSON, Anna Pernil
Not for Resale, 02/28/2020 02:12:54 MST
IHS Markit Document Sourcing Hub

sive. It is the user's responsibility to use safe and proper techniques in handling materials in this test method. Manufacturers MUST be consulted for specific details such as material safety data sheets and other manufacturer's recommendations. All OSHA standards and rules must also be consulted and followed.

2.11.4 Where the test method does not involve the use of hazardous materials, operations and equipment, an exception to the inclusion of the generic caveat may be presented to AATCC Committee RA100 on Global Sustainability Technology.

2.11.5 Specific precautionary statement(s), where appropriate, shall be included in the body of the test method. These statements shall not prescribe specific remedial measures and actions. However, reference may be made to authoritative sources where reliable information concerning remedial measures can be obtained.

2.11.6 When a specific precautionary statement(s) exists in a test method, reference to the appropriate section(s) shall be made following the generic caveat.

2.12 Uses and Limitations

2.12.1 State how the test method results may best be used and inferences that may legitimately be drawn from the data.

2.12.2 State where the results are not useful and where they might be misleading.

2.12.3 If applicable, list similar test methods and state whether results may or may not be used interchangeably.

2.13 Apparatus, Reagents, Materials

2.13.1 Separate the subject into two or three separate sections if there will be more than 10 items per section. A text note may indicate where an item may be procured if it is available directly from AATCC or *if there is only one known sourc*e. If multiple sources exist, refer to the AATCC Buyer's Guide, www.aatcc.org/BG.

2.13.2 List general name of each apparatus, reagent or material. Include descriptive details following a comma, or in an Appendix. For example: "Bell jar, 4 L, with a glass plate base."

2.13.3 Do not include preparation of reagents or calibration of apparatus in this section.

2.13.4 Include as apparatus only special equipment that is not in the catalogs of laboratory supply houses, or apparatus that is rarely used. Include spectrophotometers and projection microscopes. Do not include such ordinary items as scissors. Common glassware, such as beakers, burettes, and flasks, need not be listed, but may be listed, if it is felt test method efficacy is enhanced.

2.13.4 List all reagents—acids, bases, salts, etc.—using chemical names not trade names; for example, sodium hydroxide, not caustic soda. Include chemical formulae for all reagents. If a complex organic compound is used the formula may be omitted but the proper name as accepted by the Geneva Convention should be used. List all dyes using CI numbers.

2.13.5 Unless otherwise stipulated, assume all chemical reagents are of ACS Reagent quality.

2.13.6 Include as materials, specialty items like multifiber fabric, standard color swatches, standard photographs of defects and reference spectra.

2.14 Verification, Calibration

2.14.1 Instruments and equipment must be periodically verified to protect against any drift due to time, wear or accident. Such checks may be made by the operator every time a test is performed, or perhaps daily, like checking the zero point of analytical balances. The check may be rarely performed, as when installing new apparatus or setting up after a major relocation; or the check may be part of good laboratory management that is performed as weekly or monthly routine. Include day-to-day verification in PROCEDURE. Infrequent checks belong in a separate appendix. Include verifications that are part of laboratory routine and which should be put on a regular schedule.

2.14.2 Besides mechanical adjustments, include calibration curves, standard curves and verification of normality (or molarity) of standard solutions.

2.14.3 Describe the preparation of standard reagents; also standard curves or tables relating the quantity of an unknown with reference to color transmission, conductance, pH or other property of a standard solution.

2.15 Sampling

2.15.1 Test results are valid only when the samples are statistically representative.

2.15.2 Sampling must be random. Every unit of product must have a mathematically equal chance of becoming a sample; and every portion of each sample must be equally likely to become a test specimen.

2.15.3 All specimens must be alike within the variations due to pure chance. There must be no differences within samples assignable to known causes. If test results are not in a normal or other recognizable distribution, the test method is not in control.

2.15.4 Include in each method a brief sampling plan. State either the number of specimens to test per sample and the number of samples per product, or else state the required coefficient of variation of the mean, and permit the operator to determine the number of specimens.

2.15.5 If the number of tests is stipulated in a method, state the expected precision of the mean and the probability. If the operator is to compute the number of tests, to meet a stipulated precision of a mean, provide an expected coefficient of variation (CV) from background experience. If (CV) is unknown, provide for its estimation by methods in any standard test on statistics, or consult ASTM D2905, Statements on Number of Specimens Required to Determine the Average Quality of Textiles.

2.16 Specimens

2.16.1 Describe the size, shape and weight of specimens. Include any limitations on the location or choice of test material; but put details of trimming, mounting and conditioning in other sections.

2.17 Conditioning

2.17.1 Specify the atmospheres in which the specimens must be pre-conditioned and conditioned for testing.

2.17.2 If the samples or specimens must reach moisture equilibrium, state it something like: "Let specimens reach moisture equilibrium with atmosphere at [(a) ± (b)] C, [(x) ± (y)] F, and [(m) ± (n)]% Relative Humidity. Approach equilibrium from the dry side (but not oven-dry)." If the final moisture regain is critical, stipulate also the preconditioning time, temperature and relative humidity.

2.17.3 Define moisture equilibrium as having been attained when the progressive gain in weight does not exceed (k)% of conditioned weight per hour of exposure.

2.18 Preparation of Apparatus, Specimens and Reagents

2.18.1 Include here all preparatory or preliminary steps. Include trimming edges of specimens, pulling threads to trace weave patterns, leveling and adjusting equipment, etc.

2.19 Procedure

2.19.1 Procedures are operating instructions for technicians and must permit trained technicians, working in separate laboratories, to obtain results that are comparable within agreed limits, with little or no other guidance.

2.19.2 State all operating instructions clearly, simply and unequivocally. Leave no room for differing techniques. Recite every needed detail in proper sequence.

2.19.3 If the container is a critical item, name it, such as "a 250-mL wide-

Documents
Document Sharing Hub
Copyright The American Association of Textile Chemists and Colorists
Provided by IHS Markit under license with AATCC
No reproduction or networking permitted without license from IHS
Full document details: AATCC M12 2018
Copyright © 2019 American Association of Textile Chemists and Colorists
Licensee=Hong Kong Polytechnic University/9970803100, User=ERIKSSON, Anna Pernil
Not for Resale, 02/28/2020 02:12:54 MST