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ACT Test Method 1-2020: Assessing Resistance to Liquid Cleaners, Sanitizers and Disinfectants

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PART 1:

Woven and Knit Fabrics

SECTION 1.1

Applicability

This test method applies to woven and knit fabrics used on upholstered furniture and subject to cleaning, sanitizing and/or disinfection. This test does not represent a “real world” scenario; there is no way to control the use (or misuse) of cleaners, sanitizers and/or disinfectants when applied in an actual field setting.

SECTION 1.2

Purpose of Test

The test is intended to be used as a starting point for assessing potential effects of liquid cleaners, sanitizers and/or disinfectants when properly diluted in accordance with the manufacturer’s instructions. This evaluation of a woven or knit fabric’s relative resistance to or compatibility with cleaners, sanitizers and/or disinfectant chemistries is not an approval or recommendation of said cleaners, sanitizers and/or disinfectants.

SECTION 1.3

Test Setup

This test method is designed to be conducted in a non-laboratory setting using ambient temperature and humidity.

- a. Flat non-absorbent chemical-resistant surface.
- b. Test specimen(s) cut to 8" x 8". (Samples can be cut larger or smaller based on observed wicking.)
- c. An untested sample maintained as a control master.
- d. Dropper, syringe or pipette that will be able to accurately dispense 1 ml.
- e. White cotton terry cloth purchased from any source and preconditioned by washing and drying.
- f. A consistent light source (i.e., light booth, fluorescent light, etc.). This light should be used to conduct visual evaluations after each cycle of the test.

SECTION 1.4

Testing Chemical Management

- a. Chemicals should not be used past their recommended shelf life. Ask the manufacturer of the cleaning, sanitizing or disinfecting product for information regarding the shelf life of their product unopened and after opening.
- b. All testing chemicals must be mixed daily and have a born-on date as close as possible to the testing date.
- c. All testing chemicals should be kept in a dark place until testing begins and between tests.



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SECTION 1.5

Test Procedure

1.5.1

Place an 8" x 8" fabric specimen flat on a non-absorbent chemical-resistant surface.
(Samples can be cut larger or smaller based on observed wicking.)

1.5.2

Prepare test chemicals to their proper dilution daily.

1.5.3

Apply 1 ml test solution to the center of the specimen.

1.5.4

Let stand for 2 hours.

1.5.5

Blot or pat with a clean white terry cloth to remove any remaining test liquid. Be sure to blot both sides (face and back).

1.5.6

Repeat for a total of 10 exposures. Testing should be conducted on consecutive days with 4 tests on day one, 4 tests on day two, and 2 tests on day three with evaluation occurring at the end of the third day.

1.5.7

Two (2) hours after the 10th application, add 3 ml of water and blot with a clean white terry cloth and allow to dry completely. If chemical residue remains, repeat this step.

Note: If at any point during the procedure, color transfers onto the blotting cloth or physical damage to the specimen (face or back) occurs, the fabric specimen has failed and the test is over.



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SECTION 1.6

Acceptance Level

After each of the 10 applications, the test specimen should be compared to the control sample for visual color and appearance differences.

1.6.1

Evaluate using the AATCC Gray Scale for Color Change (Figure 1).

Grade 4 or higher = Acceptable

If a Gray Scale is not available, use the following visual assessment for color and general appearance:

- a. No effect – no change.
- b. Slight effect – change in color only visible at certain angles or directions.
- c. Moderate effect – change in color visible from all angles and directions but does not appreciably alter the original condition of the specimen.
- d. Severe effect – a change in color and marked alteration of the original condition of the specimen.

No effect or slight effect = Acceptable

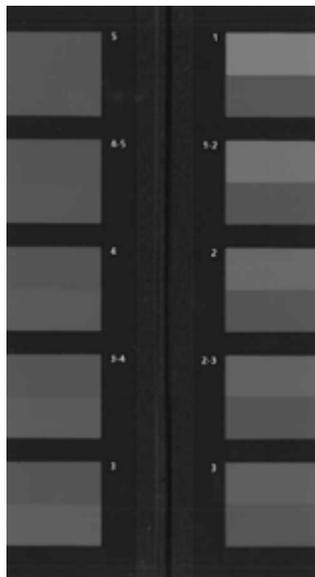


Figure 1 (This image is for reference only and not to be used for actual evaluation.)

PART 2:

Coated Fabrics

SECTION 2.1

Applicability

This test method applies to coated fabrics used on upholstered furniture and subject to cleaning, sanitizing and/or disinfection. This test does not represent a “real world” scenario; there is no way to control the use (or misuse) of cleaners, sanitizers and/or disinfectants when applied in an actual field setting.

SECTION 2.2

Purpose of Test

This test is intended to be used as a starting point for assessing potential effects of liquid cleaners, sanitizers and/or disinfectants when properly diluted in accordance with the manufacturer’s instructions. This evaluation of a coated fabric’s relative resistance to or compatibility with cleaners, sanitizers and/or disinfectant chemistries is not an approval or recommendation of said cleaners, sanitizers and/or disinfectants.

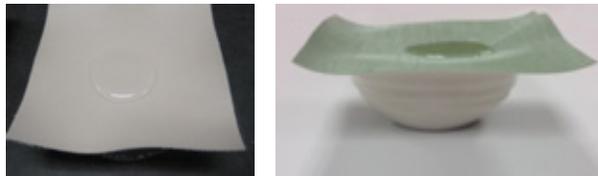
SECTION 2.3

Test Setup

This test method is designed to be conducted in a non-laboratory setting using ambient temperature and humidity.

Each test will require one petri dish 3.5" x ¾" in size or a bowl with similar size dimensions.

Cut two square samples slightly larger than the diameter of the container (e.g., a 4" x 4" sample when using a petri dish). Label each sample in the bottom left corner with the type of material and name of cleaner, sanitizer or disinfectant. Place one of the square samples on top of the petri dish or bowl. The material should create a slightly concave surface or “depression” that will allow the liquid cleaner, sanitizer or disinfectant to stay in place and be in constant contact with the test material (as shown). Retain the second sample of the test material to use as the control.



Obtain a minimum of 12.5 ml of each cleaner, sanitizer or disinfectant to be tested.

- Each application will require 2.5 ml (approximately ½ teaspoon).
- Each cleaner, sanitizer or disinfectant used for testing should be diluted according to manufacturer’s instructions found on the product label.
- To test using cleaning, sanitizing or disinfecting wipes, wring them out to collect the liquid (use gloves).

A consistent light source (i.e., light booth, fluorescent light, etc.) should be used for the duration of the test to conduct visual evaluations after each cycle.



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SECTION 2.4

Testing Chemical Management

- a. Chemicals should not be used past their recommended shelf life. Ask the manufacturer of the cleaning, sanitizing or disinfecting product for information regarding the shelf life of their product unopened and after opening.
- b. All testing chemicals must be mixed daily and have a born-on date as close as possible to the testing date.
- c. All testing chemicals should be kept in a dark place until testing begins and between tests.

SECTION 2.5

Test Procedure

2.5.1

Pour 2.5 ml of cleaning, sanitizing or disinfecting solution directly onto center of test material. Let the specimen sit for one day (or until liquid is fully evaporated). After the specimen is completely dry, conduct a visual evaluation and note any changes in appearance.

2.5.2

Repeat this procedure until completing a total of five cycles.

2.5.3

After the fifth cycle, perform a clean water rinse and wipe dry with a clean white cloth.

2.5.4

Cut the test specimen in half so that the center of the exposed specimen can be compared directly to the control sample.

2.5.5

Conduct a final visual evaluation using the control sample for comparison and rate the test specimen using the criteria below.



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SECTION 2.6

Acceptance Level

After each application, the test specimen should be compared to the control sample for visual differences in general appearance, discoloring, gloss, cracking/peeling or bubbling.

2.6.1

General Appearance:

- a. No effect – no change in color or surface finish.
- b. Slight effect – a change in color or surface finish only visible at certain angles or directions.
- c. Moderate effect – a change in color or surface finish visible from all angles and directions but does not appreciably alter the original condition of the specimen.
- d. Severe effect – a change in color or surface finish, which obviously and markedly alters the original condition of the specimen.

No effect or slight effect = Acceptable

2.6.2

Discoloring: Not acceptable beyond slight effect as noted above

2.6.3

Gloss: Not acceptable beyond moderate effect as noted above

2.6.4

Cracking or peeling: Not acceptable

2.6.5

Bubbling: Not acceptable



ACT Test Methods: Assessing Resistance to Liquid Cleaners, Sanitizers and Disinfectants

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