SOA S-402 (O) Test Method for Evaluation of Odor Removal

1. Scope

1.1 This test method provides a means for evaluating the removal of odor from a test carpet with the application of a cleaning solution.

1.2 This test method applies to pet stain and odor solutions only.

2. Safety

2.1 This practice does not purport to address all the safety concerns, if any, associated with its use. It is the responsibility of the user of this practice to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

3. References

3.1 SOA S-400 (CE) Test Method for the Evaluation of Cleaning Effectiveness of Spot Remover and Pet Stain & Odor

3.2 SOA S-100 Preparation of Solution and Test Method for pH and Optical Brightener

3.3 SOA Test Carpet Specifications

4. Terminology

4.1 Odor: the property of a contaminant that is perceived by a sense of smell.

5. Apparatus and Materials

5.1 Lab oven

5.2 Thermometer

5.3 Two glass specimen jars (250 ml with sealable lids)

5.4 Disposable pipettes (10 ml)

5.5 Trigger pump spray bottle with adjustable spray nozzle

5.6 Measuring cup or beaker capable of measuring 0.0 ml increments

5.7 Cat urine, as specified in SOA S-400 (CE) Test Method for the Evaluation of Cleaning Effectiveness of Spot Remover and Pet Stain & Odor.

5.8 Distilled water

5.9 Two non-absorbent separators to fit inside the glass specimen jar.

5.10 White unprinted paper towels

6. Test Specimen

6.1 Test carpet description: Residential cut pile (See SOA Test Carpet Specifications).
6.2 Cut 2 (two) samples of the test carpet 2”x2”.
6.3 Label the test specimen with the test identification number.

7. Test Format

7.1 Review COC for additional cleaning instructions prior to following the test method below. Follow cleaning instructions provided in the COC. If no cleaning instructions are provided, follow the test method as written.
7.2 Apply 2.5 (+/- 0.5) ml of cat urine in the center of both test carpets using a disposable pipette.
7.3 Allow both prepared test carpets to dry on a non-absorbent surface.
7.4 Prepare cleaning solution in accordance with SOA S-100 Preparation of Solution and Test Method for pH and Optical Brightener.
7.5 The cleaning solution is applied to one of the test carpets using the trigger pump spray bottle. Spray carpet until saturated. Blot with white paper towel after application.
7.6 Distilled water is applied to the second test carpet using the trigger pump spray bottle. Spray carpet until saturated. Blot with white paper towel after application.
7.7 Pour 7.5 (+/- 0.5) ml of distilled water in each of the 250 ml specimen jars. Place the nonabsorbent separator in bottom of each jar to ensure water does not contact test carpet. Insert the solution cleaned test carpet into one jar and the water cleaned carpet into the other jar and seal with lid.
7.8 Heat sealed specimen jars for 2 hours (+/- 10 minutes) at 140 degrees Fahrenheit.
7.9 Remove sealed specimen jars from the oven and keep sealed 72 (+/- 4) hours then perform evaluation.

8. Evaluation

8.1 Three technicians independently evaluate the odor of the test carpet cleaned with solution using the rating scale from the SOA Test Criteria.
8.2 Three technicians independently evaluate the odor of the test carpet cleaned with water using the rating scale from the SOA Test Criteria.

9. **Assessment**

9.1 Average the three odor ratings for the tested carpet cleaned with solution.
9.2 Average the three odor ratings for the tested carpet cleaned with water only.
9.3 The final result for odor removal is the average of the cleaning solution rating minus the average of the water only rating.

10. **Report**

10.1 The identifying information for the cleaning solution (manufacturer name, product name, and solution type).
10.2 Record date odor assessment was completed and report date.
10.3 The average rating for the tested carpet cleaned with solution.
10.4 The average rating for the tested carpet cleaned with water only.
10.5 The final result for odor removal.
10.6 Any deviations from this test method.