# CLEANING LABORATORY EVALUATION SUMMARY

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|---|---|
| SCL #: | 2014 |
| DateRun: | 06/29/2014 |
| Experimenters: | Jason Marshall, Junhee Cho, George Liang |
| ClientType: | Cleaner Manufacturer |
| ProjectNumber: | Project #1 |
| Substrates: | Liquid |
| PartType: | Coupon |
| Contaminants: | Odor |
| Cleaning Methods: | Low Pressure Spray |
| Analytical Methods: | Smell |
| Purpose: | To evaluate supplied products for odor elimination |
| Experimental Procedure: | Clean carpet was cut into five 2 in x 4 in rectangle strips. A panel of three then examined the odors to determine baseline values using five bottles, including a control. These strips were placed into glass bottles and the pet urine was directly applied to the carpet to determine baseline dirty odor characteristics.<br>The carpet strips were then treated with the cleaners at the recommended dilutions. Each panelist was asked to describe odor and rank the level of intensity of the malodor. After the panelists observed the initial odors, bottles were recapped and allowed to set overnight. Bottles were reopened and more cleaners were applied. Each bottle was subjected to additional rounds of treatment and each panelist was used to assess malodor levels. After the third round of testing, the malodor was allowed to sit for three days later to determine if there was any change to the malodor levels.<br>Chemistries Evaluated: Water, Eco-Green, Stain-Away, Norwex |
| Results: | Each of the four panelists observed decreases in the malodor. The non-treated sample was nearly unchanged from the start of the testing. |

| Control | Tester 1 | Tester 2 | Tester 3 | Average |
|---|---|---|---|---|
| Original | 2.0 | 3.0 | 2.0 | 2.3 |
| 2 Spray | 2.0 | 2.0 | 3.5 | 2.5 |
| 4 Spray | 2.0 | 2.0 | 3.0 | 2.3 |
| 6 Spray | 2.0 | 2.0 | 2.5 | 2.2 |
| Original (day 1) | 2.0 | 1.0 | 1.0 | 1.3 |

Visual

| Eco-Green | Tester 1 | Tester 2 | Tester 3 | Average |
|---|---|---|---|---|
| Original | 3.0 | 1.5 | 2.5 | 2.3 |
| 2 Spray | 3.0 | 2.5 | 1.5 | 2.3 |
| 4 Spray | 3.0 | 2.0 | 2.5 | 2.5 |
| 6 Spray | 3.5 | 3.0 | 3.0 | 3.2 |
| Original (day 1) | 2.0 | 1.0 | 3.5 | 2.2 |
| **Stain-Away** | **Tester 1** | **Tester 2** | **Tester 3** | **Average** |
| Original | 2.5 | 2.0 | 3.5 | 2.7 |
| 2 Spray | 2.5 | 3.0 | 3.0 | 2.8 |
| 4 Spray | 3.0 | 3.0 | 3.5 | 3.2 |
| 6 Spray | 3.5 | 3.0 | 3.0 | 3.2 |
| Original (day 1) | 2.0 | 1.0 | 2.0 | 1.7 |
| **Norwex** | **Tester 1** | **Tester 2** | **Tester 3** | **Average** |
| Original | 2.0 | 2.0 | 3.0 | 2.3 |
| 2 Spray | 3.0 | 2.0 | 2.5 | 2.5 |
| 4 Spray | 3.5 | 2.5 | 2.0 | 2.7 |
| 6 Spray | 3.5 | 3.0 | 3.0 | 3.2 |

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|---|---|---|---|---|
| Original (day 1) | 2.0 | 1.0 | 3.0 | 2.0 |

Summary

| | Control | Eco-Green | Stain-Away | Norwex |
|---|---|---|---|---|
| Original | 2.3 | 2.3 | 2.7 | 2.3 |
| 2 Spray | 2.5 | 2.3 | 2.8 | 2.5 |
| 4 Spray | 2.3 | 2.5 | 3.2 | 2.7 |
| 6 Spray | 2.2 | 3.2 | 3.2 | 3.2 |
| Original (day 1) | 1.3 | 2.2 | 1.7 | 2.0 |

Summary:

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|---|---|
| **Substrates:** | Liquid |
| **Contaminants:** | Odor |

| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
|---|---|---|---|---|---|
| Foster & Smith | Stain Away | 100 | 0.00 | ☑ | |
| A & C Green Cleaner LLC | A & C All Purpose Regular | 100 | 0.00 | ☑ | |
| Fisher Scientific | Absolute Ethanol | 0 | 0.00 | ☐ | |

Conclusion:

Based on our observed results Stain-Away works the best as it required the least number of sprays for the carpet odor to smell better. After 6 sprays Norwex, Stain-Away and Eco-Green was effective at removing the odor. As expected, the odor of the bottles cleaned with water did not remove the malodor in the bottle.