CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 09/25/2016

Experimenters: Francisco Abreau, Nicholas Landberg, Vinh Tran

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Liquid

PartType: Coupon

Contaminants: Odor

Cleaning Methods: Immersion/Soak

Analytical Methods: Smell

Purpose: To measure the effect of various deodorizers on the scent of urine-infected cat litter over time.

Experimental Procedure: Thirteen bottles were filled with 2-3 inches of cat litter that had been pre-soiled with cat urine, allowing for three bottles per cleaner and one control. The bottles were capped and left for five days. On the fifth day, the initial smell ratings were taken by three testers (from 1-5, 1 being best), and the recommended amounts of each product were added to their designated bottles. Successive smell ratings were then scheduled to be taken at one, four, eight, and twenty-four hours after the soils were added. Due to tester error, only the initial and twenty-four hour ratings were taken by two of the testers.

Results: All products performed well, all rating an overall improvement in average smell ratings from start to finish, with Fresh Step Tropical improving by an average of 0.33, Fresh Step Crystal by an average of 1.30, Hartz Litter Beads by an average of 1.67, and Arm and Hammer by an average of 2.08.

Cleaner	Initial	Final	Change
Fresh Step Tropical	3.25	2.5	0.75
	3.75	2.75	1
	3	3.75	-0.75
Fresh Step Crystal	3	2.5	0.5
	3.65	1.25	2.4
	2.25	1.25	1
Hartz Litter Beads	3.5	2	1.5
	4	2	2
	3.25	1.75	1.5
Arm and Hammer	3.25	1.25	2
	2.25	1	1.25
	4.25	1.25	3

Summary:

Substrates:	Liquid				
Contaminants:	Odor				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Clorox Company	Fresh Step Tropical	100	0.00	☐	
Clorox Company	Fresh Step Crystal	100	0.00	☑	
Fisher Scientific	Absolute Ethanol	0	0.00	☐	
Fisher Scientific	Absolute Ethanol	0	0.00	☐	
Hartz	Hartz Litter Beads	100	0.00	☑	

Conclusion: While the one, four, and eight hour ratings were not recorded from the twenty-four-hour tests we see that Arm and Hammer has the greatest improvement in smell rating, and Hartz Litter Beads has the most consistency in rating change. While the two Fresh Step products come up short in both areas of performance, Fresh Step Crystal was found to have the second highest consistency of the four, and while Arm and Hammer has the best improvement, it is tied with Fresh Step Tropical for the poorest rating consistency.