CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 11/15/2016

Experimenters: Francisco Abreau, Nicholas Landberg, Vinh Tran

ClientType: Cleaner Manufacturer

ProjectNumber: Project #2

Substrates: Granite

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: 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 the initial, one hour, four hour and after twenty-four hour ratings.

Results: All products performed well, all rating an overall improvement in average smell ratings from start to finish. The Summer Breeze had the best overall performance at the 1, 4 and 24 hour intervals as compared with the Fresh Step and Hartz products. Its rating was below two for every timer interval. The other two products were just over two on average.

Product	Dirty			Clean 1 hr			Clean 4 hr			Clean 24 hr		
Summer Breeze	2.5	3	2	1	1	1	1.5	1	1	1	1	1
	2	4	3	1	1.5	1.5	1	1.5	1.5	1.5	1	2
	1.5	3	2.5	1	2	1.5	1	1	1	1.5	1	1.5
Fresh Step	3.5	4.5	3	1.5	3	3	1.5	3	3.5	2	3	1
	2	3.5	2.5	1.5	1.5	2	2	2	3	2	2	1
	2	2	2	1.5	1.5	1.5	1.5	1	3	2	2	2.5
Hartz	2	3	2	2	2	1.5	2.5	1	2	2.5	3	1
	3	3.5	2.5	3	2	2	2.5	2	2.5	2.5	3	1.5
	3	2.5	3	3	3	1.5	3	1.5	2	2.5	3	2

Summary of Product Performance

Product	Ave Initial	Ave 1 hr	Aver 4 hr	Ave 24 hr
Summer Breeze	2.6	1.3	1.2	1.3
Fresh Step	2.8	2	2.3	1.9
Hartz	2.7	2.2	1.9	2.3

Summary:

Substrates:	Granite				
Contaminants:	Odor				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Clorox Company	Fresh Step Summer Breeze	100	0.00	☑	
Clorox Company	Fresh Step Crystal	100	0.00	☑	
Hartz	Hartz Litter Beads	100	0.00	☑	

Conclusion: The three products all were effective in reducing the odor smell of pet urine. The Summer Breeze performed better than the other two during the evaluation at all three time intervals.