CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2015
DateRun:	01/22/2015
Experimenters:	George Liang, Russell Curtis
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #4
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 fifteen 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. 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. The carpet strips were then treated with the cleaners at the recommended dilutions. The treated bottles were then presented uncapped to one member of the odor panel. The panelist was asked to describe odor and rank the level of intensity of the malodor. Each panelist was subjected to three bottles for each product for the cat malodor elimination. The rating was according to the scale set being 1 as best and 5 being the worse. Each bottle was treated with 2 sprays (1 cycle of spray) for each round of cleaning of the selected cleaner until a maximum of 8 sprays (4 cycles of sprays). After 8 sprays the bottles were evaluated to see how effective the cleaners are. The contaminated carpets were left overnight to sit for an additional 3 days to reevaluate the malodor level to see if the malodor has arisen again. If the malodor level has been determined to be above a 2; one additional cycle of spray is applied onto the carpet. ChemistriesEvaluated: Shout Stain & Odor, Shout Urine Destroyer, BrandBuzz Carpet.4%, BrandBuzz Urine .2%, Resolve
Results:	Each of the three panelists observed decreases in the malodor. The non-treated sample was nearly unchanged from the start of the testing.

Cleaner	Shout Stain & Odor				
Tester 1	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	3.5	3	3	1.5
Bottle 2	5	4	3	2	2
Tester 2	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	4	3	3	2
Bottle 2	5	5	3	2	2
Tester 3	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	4	4	3	2.5	1.5
Bottle 2	5	3	3	2	2
Average	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	4.7	3.8	3	2.8	1.7
Bottle 2	5	4	3	2	2
% Average	4.8	3.9	3	2.4	1.8
Cleaner	Shout Urine Destroyer				
Tester 1	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	4	2	1.5	1.5

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Bottle 2	5	3.5	3	1.5	1.5
Tester 2	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	4	4	3	2.5	2.5
Bottle 2	3	2	2	2	1
Tester 3	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	3	3	2	2
Bottle 2	4	1.5	1	1	1
Average	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	3.7	2.7	2	2
Bottle 2	4	2.3	2	1.5	1.2
% Average	4.3	3	2.3	1.8	1.6
Cleaner	BrandBuzz Carpet .4%				
Tester 1	Initial	Spray 2 Spray 4	Spray 6	Spray 8	
Bottle 1	4	3	3	2	2
Bottle 2	5	3	3	1.5	1.5
Tester 2	Initial	Spray 2 Spray 4	Spray 6	Spray 8	
Bottle 1	3	2	2	2	2
Bottle 2	3	3	3	2	2
Tester 3	Initial	Spray 2 Spray 4	Spray 6	Spray 8	
Bottle 1	3	3	2	2	2
Bottle 2	3	2	2.5	2	2
Average	Initial	Spray 2 Spray 4	Spray 6	Spray 8	
Bottle 1	3.3	2.7	2.3	2	2
Bottle 2	3.7	2.7	2.8	1.8	1.8
% Average	3.5	2.7	2.6	1.9	1.9
Cleaner	BrandBuzz Urine .2%				
Tester 1	Initial	Spray 2 Spray 4	Spray 6	Spray 8	
Bottle 1	5	5	4	4	2.5
Bottle 2	5	5	4	3	1.5
Tester 2	Initial	Spray 2 Spray 4	Spray 6	Spray 8	
Bottle 1	4	3	3	2.5	2
Bottle 2	5	3.5	3	2	2
Tester 3	Initial	Spray 2 Spray 4	Spray 6	Spray 8	
Bottle 1	5	4	2.5	2.5	2
Bottle 2	5	4	2.5	2	1.5
Average	Initial				

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		Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	4	3.2	3	2.2
Bottle 2	5	4.2	3.2	2.3	1.7
% Average	4.8	4.1	3.2	2.7	1.9
Cleaner	Resolve				
Tester 1	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	4	2.5	1	1
Bottle 2	5	3.7	2.5	1	1
Tester 2	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	3	2	1.5	1.5
Bottle 2	3	3	3	2	2
Tester 3	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	3.5	2	1	1
Bottle 2	4	2.3	2	1	1
Average	Initial	Spray 2	Spray 4	Spray 6	Spray 8
Bottle 1	5	3.5	2.2	1.2	1.2
Bottle 2	4	3	2.5	1.3	1.3
% Average	4.5	3.3	2.3	1.3	1.3

Overnight 3 day sit:

Cleaner : Shout Stain % Odor		
Tester 1	Initial Odor	Spray 2
Bottle 1	1	-
Bottle 2	1.5	-
Tester 2	Initial Odor	Spray 2
Bottle 1	1	-
Bottle 2	1	-
Tester 3	Initial Odor	Spray 2
Bottle 1	1	-
Bottle 2	1.5	-
Average	Initial Odor	Spray 2
Bottle 1	1	-
Bottle 2	1.3	-
% Average	1.2	-
Cleaner: Shout Urine Destroyer		
Tester 1	Initial Odor	Spray 2
Bottle 1	2	1
Bottle 2	1.5	1.5
Tester 2	Initial Odor	Spray 2
Bottle 1	3.5	1
Bottle 2	1.5	1.5
Tester 3	Initial Odor	Spray 2
Bottle 1	3.5	1
Bottle 2	1.5	1.5

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Average	Initial Odor	Spray 2
Bottle 1	3	1
Bottle 2	1.5	1.5
% Average	2.3	1.3
Cleaner: BrandBuzz Carpet . 4%		
Tester 1	Initial Odor	Spray 2
Bottle 1	3	3
Bottle 2	3	2.5
Tester 2	Initial Odor	Spray 2
Bottle 1	2	2
Bottle 2	3	2.5
Tester 3	Initial Odor	Spray 2
Bottle 1	3	2.5
Bottle 2	3	2
Average	Initial Odor	Spray 2
Bottle 1	2.7	2.5
Bottle 2	3	2.3
% Average	2.8	2.4
Cleaner: BrandBuzz Urine . 2%		
Tester 1	Initial Odor	Spray 2
Bottle 1	1.5	-
Bottle 2	2	-
Tester 2	Initial Odor	Spray 2
Bottle 1	2	-
Bottle 2	2	-
Tester 3	Initial Odor	Spray 2
Bottle 1	2.5	-
Bottle 2	2	-
Average	Initial Odor	Spray 2
Bottle 1	2	-
Bottle 2	2	-
% Average	2	-
Cleaner: Resolve		
Tester 1	Initial Odor	Spray 2
Bottle 1	1.5	-
Bottle 2	1	-
Tester 2	Initial Odor	Spray 2
Bottle 1	1.5	-
Bottle 2	1.5	-
Tester 3	Initial Odor	Spray 2
Bottle 1	2	-
Bottle 2	1	-
Average	Initial Odor	Spray 2
Bottle 1	2	-
Bottle 2	1.2	-
% Average	1.4	-

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Cleaner:	Initial	Spray 2	Spray 4	Spray 6	Spray 8	Rank Order
Shout Stain & Odor	4.8	3.9	3	2.4	1.8	4
Shout Urine Destroyer	4.3	3	2.3	1.8	1.6	2
BrandBuzz Carpet . 4%	3.5	2.7	2.6	1.9	1.9	3
BrandBuzz Urine .2%	4.8	4.1	3.2	2.7	1.9	5
Resolve	4.5	3.3	2.3	1.3	1.3	1

Overnight Summary:

Cleaner:	Initial	Spray 2	Rank Order
Shout Stain & Odor	1.8	-	1
Shout Urine Destroyer	2.3	1.3	4
BrandBuzz Carpet . 4%	2.8	2.4	5
BrandBuzz Urine .2%	2	-	3
Resolve	1.4	-	2

Summary:

Substrates:	Liquid				
Contaminants:	Odor				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
SC Johnson & Son Inc	Shout Carpet Oxy - Stain & odor remover	100	0.00	☐	Rank 4
SC Johnson & Son Inc	Shout Urine Destroyer Carpet	100	0.00	☑	Rank 2
Brand Buzz	Brand Buzz Carpet	0.4	0.00	☑	Rank 3
Brand Buzz	Brand Buzz Urine	0.2	0.00	☐	Rank 5
Reckitt Benckiser	Resolve High Traffic Foam Carpet Cleaner	100	0.00	☑	Rank 1

Conclusion:

Cleaner Resolve worked the best at removing the malodor as it only took 6 sprays to reach a malodor level of 1.3. The second best cleaner at removing the malodor is Shout Urine Destroyer with a rating of 1.6. BrandBuzz Carpet .4% was the third best cleaner in removing the malodor as it took 6 sprays to reach a rating of 1.9. Comparatively the cleaners Shout Stain& Odor and BrandBuzz Urine .2% was the least effective compared to Resolve, Shout Urine Destroyer and BrandBuzz Carpet .4% because it required 8 sprays respectively to reach a malodor level of 1.8 and 1.9.

After the 3 day overnight; the carpets were once again reevaluate for their malodor level. The carpets treated with Shout Stain & Odor, BrandBuzz Urine .2% and Resolve did not need to be sprayed for an additional cycle as their malodor level respectively is 1.2, 2 and 1.4. Their malodor level did not greatly increase overnight whereas the carpet treated by Shout Urine Destroyer and BrandBuzz Carpet .4% has been noted to have an increase in malodor level. Their malodor level has been respectively noted to be 2.3 and 2.8. An additional cycle of spray was applied to the carpet using Shout Urine Destroyer and it was effective at removing the overnight malodor. However BrandBuzz Carpet .4% did not bring down the malodor level to be below 2 after the additional cycle of spray,

Shout Stain & Odor is the best cleaner at having the malodor level down. The second best cleaner is Resolve. The third best is BrandBuzz Urine .2%. Overall Resolve is the best cleaner as it has kept the malodor level from increasing overnight and was ranked number one in removing the odor originally. Even though BrandBuzz Urine .2% was not the best cleaner to eradicate the malodor level originally; it however has eliminated the odor from arising overnight. In addition to that Shout Urine Destroyer was effective at bringing down the overnight malodor down as well after that one additional cycle of spray. Thus; the most effective cleaners are Shout Stain & Odor, Shout Urine Destroyer, BrandBuzz Urine .2% and Resolve.