CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2015
DateRun:	01/21/2015
Experimenters:	George Liang, Russell Curtis
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #4
Substrates:	Textile
PartType:	Coupon
Contaminants:	Inks
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gloss-Color Meter
Purpose:	To determine the color removal from a cloth that has been saturated with the foam cleaner.
Experimental Procedure:	Four different types of cloths were saturated with the cleaning foams. These were allowed to sit for 15 minutes to soak in the foam. After 15 minutes, each set of colored fabric was covered in a paper towel and patted down to determine color leakage. These paper towels underwent a gloss meter testing to determine how close the towels were to the initial value using the formula FINAL/INITIAL *100%. ChemistriesEvaluated: Shout Stain and Odor, Shout Urine, Bran Buzz Carpet 0.2%, Brand Buzz Urine 0.4%, Resolve
Results:	Only 2 of the cloth types, the red stripped and the solid brown, had any visual color absorption from the cloth. Our visual analysis could not effectively differentiate between the two types of staining, resulting in the need for a gloss based analysis. The other two cloths did not undergo a gloss analysis.

Initial Reading	Initial L	A initial	B initial	G Initial					
	Value	88.43	-2.11	3.09	1.8				
Cleaner	Cloth	L Final	A Final	B Final	G Final	Change L %	A %	B%	G%
Shout Stain and Odor	Red	88.84	-1.36	2.39	1.90	0.46	35.55	22.65	5.56
Shout Stain and Odor	Red	88.86	-1.50	2.66	2.00	0.49	28.91	13.92	11.11
Shout Stain and Odor	Red	85.64	-1.46	3.76	2.00	3.16	30.81	21.68	11.11
Shout Stain and Odor	Green	89.30	-1.50	1.96	1.90	0.98	28.91	36.57	5.56
Shout Stain and Odor	Green	88.26	-1.73	1.80	1.80	0.19	18.01	41.75	0.00
Shout Stain and Odor	Green	86.06	-1.46	1.79	1.70	2.68	30.81	42.07	5.56
Shout Stain and Odor	Brown	78.08	2.26	10.45	1.60	11.70	207.11	238.19	11.11
Shout Stain and Odor	Brown	76.02	1.97	9.09	1.40	14.03	193.36	194.17	22.22
Shout Stain	Brown	75.73	2.21	10.23	1.40	14.36	204.74	231.07	22.22

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and Odor									
Shout Urine	Red	90.57	-1.85	1.86	2.00	2.42	12.32	39.81	11.11
Shout Urine	Red	88.98	-1.68	2.14	1.80	0.62	20.38	30.74	0.00
Shout Urine	Red	85.55	-1.46	0.80	2.00	3.26	30.81	74.11	11.11
Shout Urine	Green	90.74	-1.60	3.11	2.00	2.61	24.17	0.65	11.11
Shout Urine	Green	92.06	-1.71	2.52	1.40	4.10	18.96	18.45	22.22
Shout Urine	Green	87.51	-1.55	1.31	1.90	1.04	26.54	57.61	5.56
Shout Urine	Brown	79.77	2.00	10.55	1.66	9.79	194.79	241.42	7.78
Shout Urine	Brown	79.73	2.46	10.80	1.80	9.84	216.59	249.51	0.00
Shout Urine	Brown	74.72	2.71	11.00	1.50	15.50	228.44	255.99	16.67
BB Carpet 0.2%	Red	90.62	-1.58	1.60	1.80	2.48	25.12	48.22	0.00
BB Carpet 0.2%	Red	91.01	-1.60	1.65	2.03	2.92	24.17	46.60	12.78
BB Carpet 0.2%	Red	90.46	-1.52	1.65	1.90	2.30	27.96	46.60	5.56
BB Carpet 0.2%	Green	91.85	-1.59	2.20	1.90	3.87	24.64	28.80	5.56
BB Carpet 0.2%	Green	92.06	-1.61	2.05	2.80	4.10	23.70	33.66	55.56
BB Carpet 0.2%	Green	92.04	-1.60	2.21	1.90	4.08	24.17	28.48	5.56
BB Carpet 0.2%	Brown	85.65	-1.20	1.67	2.30	3.14	43.13	45.95	27.78
BB Carpet 0.2%	Brown	86.11	-1.54	0.65	4.40	2.62	27.01	78.96	144.44
BB Carpet 0.2%	Brown	85.54	-1.37	1.10	2.50	3.27	35.07	64.40	38.89
BB Urine 0.4%	Red	85.52	-1.53	0.83	1.30	3.29	27.49	73.14	27.78
BB Urine 0.4%	Red	85.44	-1.48	0.79	1.70	3.38	29.86	74.43	5.56
BB Urine 0.4%	Red	86.16	-1.49	1.07	1.80	2.57	29.38	65.37	0.00
BB Urine 0.4%	Green	85.50	-1.57	1.77	2.20	3.31	25.59	42.72	22.22
BB Urine 0.4%	Green	85.45	-1.47	0.84	1.90	3.37	30.33	72.82	5.56
BB Urine 0.4%	Green	85.98	-1.50	0.80	2.00	2.77	28.91	74.11	11.11
BB Urine 0.4%	Brown	75.53	2.14	8.83	4.50	14.59	201.42	185.76	150.00

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BB Urine 0.4%	Brown	84.24	-0.77	2.40	1.70	4.74	63.51	22.33	5.56
BB Urine 0.4%	Brown	81.01	0.16	4.31	3.40	8.39	107.58	39.48	88.89
Resolve	Red	89.17	-1.55	2.39	1.80	0.84	26.54	22.65	0.00
Resolve	Red	88.52	-1.61	2.57	1.70	0.10	23.70	16.83	5.56
Resolve	Red	89.24	-1.70	2.16	2.00	0.92	19.43	30.10	11.11
Resolve	Green	88.02	-1.47	2.35	1.90	0.46	30.33	23.95	5.56
Resolve	Green	88.00	-1.54	3.01	1.90	0.49	27.01	2.59	5.56
Resolve	Green	88.68	-1.53	2.49	1.90	0.28	27.49	19.42	5.56
Resolve	Brown	73.88	5.37	10.55	1.40	16.45	354.50	241.42	22.22
Resolve	Brown	72.44	6.41	11.52	1.20	18.08	403.79	272.82	33.33
Resolve	Brown	73.85	6.50	12.70	1.40	16.49	408.06	311.00	22.22

The only color that exhibited any substantial change was the brown carpets. Furthermore, the G value range was small enough to cause massive shifts, thus rendering the G data useless. Taking this into account, the data was summarized,

Cleaner	Average Change L %	Average A %	Average B Change %
Shout Stain and Odor	13.37	201.74	221.14
Shout Urine	11.71	213.27	248.98
Brand Buzz Carpet 0.2%	3.01	35.07	63.11
Brand Buzz Urine 0.4%	9.24	124.17	82.52
Resolve	17.01	388.78	275.08

Summary:

Substrates:	Textile				
Contaminants:	Inks				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
SC Johnson & Son Inc	Shout Carpet Oxy - Stain & odor remover	100	0.00	☐	
SC Johnson & Son Inc	Shout Urine Destroyer Carpet	100	0.00	☐	
Brand Buzz	Brand Buzz Carpet	100	0.00	☑	
Brand Buzz	Brand Buzz Urine	100	0.00	☑	
Reckitt Benckiser	Resolve High Traffic Foam Carpet Cleaner	100	0.00	☐	

Conclusion:

Based on the summarized table, the Brand Buzz cleaning products exhibited the least amount of color change upon application. The Brand Buzz Carpet formulation exhibited the least amount of change while the BrandBuzz Urine was a close second.