CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2007
DateRun:	10/21/2007
Experimenters:	Jason Marshall, Shweta Bansal
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic, Steel
PartType:	Coupon
Contaminants:	Greases, Dirt
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate requested products on kitchen soil using manual cleaning
Experimental Procedure:	The supplied cleaning products were used at full strength. Preweighed fiberglass, ceramic and chrome coupons were coated with SSL Soil 4 (Ktichen Soil: Crisco Shortening 35%; Maxwell House Slow Roast Coffee, 1 tsp/4 oz 25%; Lipton The Brisk Tea, 1 bag/4 oz 25%; Garelick Farms Half and Half 5%; Synthetic Carpet Soil Mix 10%) using a hand held swab and allowed to dry for 24 hours at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. Three coupons were placed into a Gardner Straight Line Washability unit. A Kimberly-Clark WypAll X60 reinforced wipe was attached to the cleaning sled and soaked with 5-7 sprays of cleaning solutions. Each coupon was sprayed 7-10 times with the same cleaning solution. The cleaning unit was run for 20 cycles (~33 seconds). At the end of the cleaning, coupons were wiped once with a dry paper towel. Final weights were recorded. Efficiencies were calculated and recorded.
Results:	All thirteen products had difficulty removing the kitchen soil from the various substrates in the allotted time. The table lists the amount of soil added, the amount remaining, the efficiency for each coupon cleaned and the average removal from each substrate type.

Cleaner	Substrate	Initial wt	Final wt	% Removed	Ave %	
Clorox	Painted Steel	0.6891	0.3758	45.47		42.11
		0.7687	0.6543	14.88	30.99	
		0.1793	0.1208	32.63		
	Plastic	0.3303	0.2257	31.67		
		0.1692	0.0932	44.92	37.45	
		0.1588	0.102	35.77		
	Ceramic	0.1022	0.0685	32.97		
		0.1422	0.0569	59.99	57.89	
		0.1477	0.0285	80.70		
Countertop	Painted Steel	0.6061	0.5621	7.26		24.00
		0.2559	0.2363	7.66	7.32	
		0.4455	0.4141	7.05		
	Plastic	0.4512	0.4311	4.45		
		0.3940	0.3647	7.44	4.73	
		0.4854	0.4743	2.29		
	Ceramic	0.0905	0.0578	36.13		
		0.0225	0.0060	73.33	59.94	
		0.1086	0.0322	70.35		
Seventh Kitchen	Painted Steel	0.5105	0.4678	8.36		22.10
		0.2180	0.2091	4.08	5.41	
		0.3358	0.3231	3.78		
	Plastic	0.4042	0.3959	2.05		
		0.3560	0.3294	7.47	10.50	
		0.1665	0.1299	21.98		
	Ceramic	0.0810	0.0012	98.52		

CLEANING LABORATORY EVALUATION SUMMARY

		0.1154	0.0693	39.95	50.39	
		0.2332	0.2036	12.69		
Soft Scrub	Painted Steel	0.6086	0.3720	38.88		31.14
		0.6147	0.5801	5.63	16.86	
		0.2398	0.2252	6.09		
	Plastic	0.7234	0.4944	31.66		
		0.1744	0.0496	71.56	46.78	
		0.8707	0.5475	37.12		
	Ceramic	0.6435	0.348	45.92		
		0.5717	0.5003	12.49	29.76	
		0.3756	0.2596	30.88		
DFC Kitchen	Painted Steel	0.2043	0.1828	10.52		12.97
		0.6639	0.5826	12.25	10.54	
		0.3585	0.3268	8.84		
	Plastic	0.2469	0.2222	10.00		
		0.4390	0.4032	8.15	13.38	
		0.3687	0.2877	21.97		
	Ceramic	0.4904	0.4249	13.36		
		1.7795	1.7215	3.26	15.00	
		0.1694	0.1213	28.39		
Comet	Painted Steel	0.4171	0.4082	2.13		23.21
		0.4220	0.3332	21.04	12.32	
		0.2845	0.2453	13.78		
	Plastic	0.4250	0.4024	5.32		
		0.4738	0.4170	11.99	6.63	
		0.1546	0.1506	2.59		
	Ceramic	0.3643	0.1308	64.10		
		0.2405	0.1432	40.46	50.68	
		0.2443	0.1283	47.48		
Meyer Shower	Painted Steel	0.9009	0.8237	8.57		12.78
		0.5629	0.4997	11.23	6.79	
		0.5184	0.5154	0.58		
	Plastic	0.3282	0.3048	7.13		
		0.2415	0.2311	4.31	4.48	
		0.2311	0.2265	1.99		
	Ceramic	0.4382	0.3520	19.67		
		0.2078	0.1619	22.09	27.07	
		0.4319	0.2615	39.45		
Seventh Bathroom	Painted Steel	0.5309	0.5045	4.97		27.51
		0.4089	0.3953	3.33	4.82	
		0.4459	0.4184	6.17		
	Plastic	0.8018	0.7649	4.60		
		0.2219	0.2051	7.57	7.27	
		0.1390	0.1256	9.64		
	Ceramic	0.0389	0.0011	97.17		
		0.1448	0.0569	60.70	70.44	
		0.1946	0.0906	53.44		
DFC Polish	Painted Steel	0.5334	0.4061	23.87		34.55
		0.2433	0.1428	41.31	38.72	
		0.1765	0.0865	50.99		
	Plastic	0.2931	0.2875	1.90		
		0.3126	0.2752	11.96	8.92	
		0.3319	0.2891	12.90		

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	Ceramic	0.3313	0.1847	44.25		
		0.6087	0.0175	97.13	56.01	
		0.3136	0.2300	26.66		
Formula 409	Painted Steel	0.1925	0.1695	11.95		34.02
		1.3206	1.2914	2.21	10.94	
		0.3272	0.2661	18.67		
	Plastic	0.1072	0.0923	13.90		
		0.2170	0.1922	11.43	11.14	
		0.7081	0.6507	8.11		
	Ceramic	0.2798	0.0604	78.41		
		0.2788	0.0270	90.32	79.96	
		0.2884	0.0832	71.15		
Meyer All Purpose	Painted Steel	0.2321	0.2305	0.69		20.90
		0.4378	0.4279	2.26	1.48	
		0.2847	0.2805	1.48		
	Plastic	0.0314	0.0193	38.54		
		0.0886	0.0819	7.56	17.39	
		0.4308	0.4047	6.06		
	Ceramic	0.2932	0.2113	27.93		
		0.2796	0.1850	33.83	43.84	
		0.2842	0.0860	69.74		
Seventh All Purpose	Painted Steel	0.3589	0.3144	12.40		37.07
		0.3861	0.3163	18.08	16.44	
		0.3617	0.2935	18.86		
	Plastic	0.2590	0.1496	42.24		
		0.2844	0.2428	14.63	31.80	
		0.1189	0.0731	38.52		
	Ceramic	0.2084	0.0465	77.69		
		1.2790	0.6917	45.92	62.98	
		1.2719	0.4409	65.34		
DFC General Spray	Painted Steel	0.4909	0.3957	19.39		16.12
		0.6767	0.6393	5.53	17.04	
		0.6874	0.5073	26.20		
	Plastic	0.4144	0.3212	22.49		
		0.3268	0.2697	17.47	14.42	
		0.6267	0.6060	3.30		
	Ceramic	0.5331	0.3324	37.65		
		0.2342	0.2148	8.28	16.91	
		0.7472	0.7113	4.80		

Summary:

Substrates:	Ceramics, Plastic, Steel
Contaminants:	Greases, Dirt

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Clorox Company	Clorox Kitchen Cleaner	100	42.11	☐	
Seventh Generation	Free & Clear Kitchen Cleaner	100	22.10	☐	
Henkel Corporation	Soft Scrub with Bleach	100	31.14	☐	
Cogent Environmental Solutions	DFC Kitchen Spray	100	12.97	☐	
Prestige Brands Inc	Comet Bathroom Cleaner	100	23.21	☐	
Seventh Generation	Disinfecting Bathroom Cleaner	100	27.51	☐	
Cogent Environmental Solutions	DFC GPC Polish	100	34.55	☐	

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Clorox Company	Formula 409 All Purpose Cleaner	100	34.02	☐	
Seventh Generation	Free & Clear All Purpose	100	37.07	☐	
Cogent Environmental Solutions	DFC General Spray	100	16.12	☐	

Conclusion: All products removed less than 85% of the kitchen soil in 30 seconds of cleaning.