CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2014
DateRun:	11/13/2014
Experimenters:	Loc Nguyen, George Liang
ClientType:	Cleaning Equipment Mfr
ProjectNumber:	Project #1
Substrates:	Stainless Steel
PartType:	Coupon
Contaminants:	Greases, Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate three supplied products for all purpose cleaning following GS 37 requirements
Experimental Procedure:	The Greasy Soil Test Method is a standard method that evaluates the cleaning performance of products intended for use on washable walls or other hard, non-glossy surfaces. This method provides instructions for soil application, cleaning and evaluation of spray-and-wipe cleaners under controlled cleaning conditions. This method can be used to assess product performance for cleaning a fabricated greasy soil blend applied to painted wallboard tiles. It is not inclusive of all soil or substrates typically encountered by a consumer while using these products. Three coupons were placed into a Gardner Straight Line Washability unit. A Kimberly-Clark Wypal reinforced paper towel was attached to the cleaning sled and soaked with 1 spray of cleaning solution. Each coupon was sprayed once 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. Chemistries Evaluated: Force of Nature; Clorox Clean Up Cleaner & Bleach; Formula 409 All Purpose Cleaner Lemon Fresh

Results:

Cleaner	Initial wt	Final wt	% Removed	Overall Ave
Force of Nature - Stainless Steel	0.4990	0.0313	93.73	96.35
	0.5388	0.0108	98.00	
	0.5184	0.0054	98.96	
	0.5029	0.0624	87.59	
	0.5256	0.0384	92.69	
	0.5149	0.0490	90.48	
	0.5104	0.0105	97.94	
	0.5464	0.0039	99.29	
	0.5226	0.0116	97.78	
Force of Nature - Granite	1.0103	0.0266	97.37	
	0.9067	0.0217	97.61	
	0.9076	0.0173	98.09	
	0.8240	0.0139	98.31	
	0.9996	0.0087	99.13	
	0.8761	0.0153	98.25	
	0.9797	0.0621	93.66	
	0.9723	0.0290	97.02	
	0.9436	0.0147	98.44	
Clorox – Stainless Steel	0.2759	0.0102	96.30	92.76
	0.4187	0.0389	90.71	
	0.4419	0.0367	91.69	
	0.4581	0.0226	95.07	
	0.5144	0.0362	92.96	

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	0.4787	0.0536	88.80	
	0.4905	0.0228	95.35	
	0.6243	0.0337	94.60	
	0.4405	0.0484	89.01	
Clorox - Granite	0.4907	0.0440	91.03	
	0.5893	0.1337	77.31	
	0.5047	0.0156	96.91	
	0.5074	0.0236	95.35	
	0.5093	0.0251	95.07	
	0.5062	0.0167	96.70	
	0.5163	0.0391	92.43	
	0.5263	0.0319	93.94	
	0.4885	0.0175	96.42	
Formula 409 - Stainless Steel	1.8728	0.0572	96.95	93.94
	1.3296	0.0667	94.98	
	1.5920	0.0867	94.55	
	1.0088	0.0494	95.10	
	1.3024	0.0742	94.30	
	0.8237	0.0862	89.54	
	1.4713	0.1456	90.10	
	1.6606	0.0138	99.17	
	1.3375	0.1343	89.96	
Formula 409 - Granite	1.8410	0.2075	88.73	
	2.4500	0.1675	93.16	
	3.0500	0.2142	92.98	
	3.0400	0.1254	95.88	
	3.4000	0.1401	95.88	
	3.1150	0.2068	93.36	
	2.4800	0.0898	96.38	
	1.8900	0.0478	97.47	
	2.2900	0.1739	92.41	

Summary:

Substrates:	Stainless Steel
Contaminants:	Greases, Food

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Healthier Cleaning Innovations	Force of Nature	100	95.16	☑	
Clorox Company	Formula 409 All Purpose Cleaner	100	92.72	☑	
Fisher Scientific	Absolute Ethanol	0	0.00	☐	

Conclusion:

The three products were successful at removing more than 90% of the grease mix from two surfaces, stainless steel and granite. All three were consistent in their removal as shown by the low standard deviation.