

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2014  
 DateRun: 11/14/2014  
 Experimenters: Loc Nguyen, George Liang  
 ClientType: Cleaning Equipment Mfr  
 ProjectNumber: Project #1  
 Substrates: Stainless Steel, Wood, Granite  
 PartType: Coupon  
 Contaminants: Oil, Food  
 Cleaning Methods: Manual Wipe  
 Analytical Methods: Gravimetric  
 Purpose: To evaluate products for light oil removal.

Experimental Procedure: Prewieghed stainless steel, granite, and wood coupons were coated with Vegetable Oil. 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 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  
 Summary Substrates: Stainless Steel, Granite, Wood  
 Contaminants: Vegetable Oil  
 Force of Nature  
 pH = 6.01  
 Concentration = 250 ppm

## Results:

Cleaner	Initial wt	Final wt	% Removed
HealthierCleaning_LightOil_StainlessSteel_ForceOfNature			
	0.5700	0.0177	96.89
	0.4391	0.0132	96.99
	0.5379	0.0289	94.63
	0.7805	0.0443	94.32
	0.7281	0.0273	96.25
	0.3035	0.0156	94.86
	0.5210	0.0194	96.28
	0.4106	0.0230	94.40
	0.5131	0.0197	96.16
HealthierCleaning_LightOil_Granite_ForceOfNature			
	0.5801	0.0126	97.83
	0.5943	0.0112	98.12
	0.9396	0.0139	98.52
	1.3993	0.0064	99.54
	0.9557	0.0154	98.39
	0.7525	0.0057	99.24
	1.0428	0.0166	98.41
	0.6653	0.0207	96.89
	0.7624	0.0170	97.77
HealthierCleaning_LightOil_Wood_ForceOfNature			
	0.2854	0.1639	42.57
	0.6748	0.0320	95.26
	0.6821	0.0202	97.04

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	0.7265	0.0329	95.47
	0.7143	0.0612	91.43
	0.4659	0.0069	98.52
	0.6209	0.0371	94.02
	0.6334	0.1935	69.45
	0.5435	0.0305	94.39
HealthierCleaning_LightOil_StainlessSteel_Clorox			
	0.5890	0.0085	98.56
	0.5734	0.0100	98.26
	0.6335	0.0164	97.41
	0.5425	0.0102	97.17
	0.5569	0.0115	98.12
	0.6245	0.0206	97.93
	0.4781	0.0115	96.70
	0.7673	0.0111	98.05
	0.5075	0.0159	97.59
HealthierCleaning_LightOil_Granite_Clorox			
	0.7951	0.0194	98.55
	0.8391	0.0189	96.87
	0.5991	0.0160	97.01
	0.6868	0.0092	97.56
	0.5778	0.0073	97.75
	0.5684	0.0058	97.33
	0.3997	0.0331	99.01
	0.6357	0.0315	98.66
	0.5250	0.0322	98.74
HealthierCleaning_LightOil_Wood_Clorox			
	0.5257	0.0313	98.98
	0.6675	0.0313	91.69
	0.4798	0.0240	91.72

Summary:

<b>Substrates:</b>	Stainless Steel, Wood, Granite				
<b>Contaminants:</b>	Oil, Food				
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
Healthier Cleaning Innovations	Force of Nature	100	93.45	<input checked="" type="checkbox"/>	
Clorox Company	Formula 409 All Purpose Cleaner	100	83.00	<input checked="" type="checkbox"/>	

Conclusion:

Force of Nature and Clorox exhibited similar levels of cleaning for the three substrates evaluated. Both were more consistent than the Formula 409 on the wood surface cleaning. When excluding the wood cleaning for the 409, all three products were comparable.