CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009

DateRun: 11/02/2009

Experimenters: Junhee Cho, Scott Nadolna, Johnny Le

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Ceramics, Plastic, Steel

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To retest supplied product at higher dilution for all purpose cleaning follow GS 37 standard.

Experimental Procedure: The supplied cleaning product was used at the new recommended concentration (5%). Preweighed ceramic were coated with Hucker's Soil Formulation (Jif Creamy Peanut Butter 9.2%, Salted Butter 9.2%, Arrowhead Mills stone ground wheat flour 9.2%, Egg Yolk 9.2%, Evaporated milk 13.8%, Distilled water 45.8%, Printer's ink with boiled linseed oil 0.9%, Shaws saline solution 2.7%) using a handheld 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 Reinforced paper towel 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 solution was allowed to penetrate for 30 seconds followed by cleaning in the SLW unit for 20 cycles (~33 seconds). At the end of the cleaning, coupons were wiped once with a dry paper towel. Final weights were recorded, and efficiencies were calculated and recorded.

Results: The retesting of the supplied product at the higher dilution resulted in the product removing over 85% of the Hucker's soil using manual cleaning. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
CleanLine 5% ceramic	0.0626	0.0084	86.58
	0.2523	0.0145	94.25
	0.2711	0.0181	93.32
Cleanline 5% painted steel	0.4213	0.0458	89.13
	0.1195	0.0425	64.44
	0.1155	0.0395	65.80
Cleanline 5% plastic	0.0830	0.0045	94.58
	0.0505	0.0014	97.23
	0.0597	0.0121	79.73
Formula 409 Ceramic	0.1094	0.0095	91.32
	0.0722	0.0039	94.60
	0.0659	0.0033	94.99
Formula 409 Painted steel	0.0770	0.0075	90.26
	0.0879	0.0047	94.65
	0.0645	0.0043	93.33
Formula 409 plastic	0.0466	0.0034	92.70
	0.1058	0.0002	99.81
	0.0557	0.0018	96.77

Summary:

Substrates:	Ceramics, Plastic, Steel				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**

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Cleanline Products	H2O2 Super Citrus Concentrate	5	85.01	☑	

Conclusion: The supplied product had an overall average efficiency greater than 85% and would be considered effective based on the SSL testing methodology for all purpose cleaning at the higher concentration.