CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2010

DateRun: 11/16/2010

Experimenters: Junhee Cho, Timothy Weil, Kathleen Tenaglia

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Aluminum, Copper, Stainless Steel

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate supplied products capabilities for manual pot and pan washing.

Experimental Procedure: Preweighed stainless steel, copper and aluminum coupons were coated with a modified Hucker's soil, allowed to dry for 24 hours and then dirty weights were recorded. The three products were formulated to 0.13% dilution and used to clean soils from the selected stainless steel, aluminum, and copper substrates. A set of three coupons of each dirty substrate were then cleaned with the three cleaners and manually wiped off using the Gardner Straight Line Washability unit (GSLW). The GSLW cycled for 20 cycles over 30 seconds. The cleaned substrates were then allowed to sit and dry for one hour. They were weighed, and the numbers were then recorded and evaluated for overall efficiency.

Results: The table lists the amount of soil added, the amount remaining after cleaning and the calculated efficiency for each coupon cleaned.

Product and Substrate	Initial wt	Final wt	% Removed
Pot and Pan Cleaner Stainless Steel	0.1730	0.0115	93.35
	0.5488	0.0074	98.65
	0.2476	0.0076	96.93
Pot and Pan Cleaner Aluminum	0.3512	0.0069	98.04
	0.1623	0.0045	97.23
	0.2329	0.0053	97.72
Pot and Pan Cleaner Copper	0.0963	0.0046	95.22
	0.2005	0.0029	98.55
	0.2301	0.0033	98.57
Dawn Stainless Steel	0.3320	0.0094	97.17
	0.2329	0.0213	90.85
	0.4091	0.0163	96.02
Dawn Aluminum	0.2543	0.0049	98.07
	0.1886	0.0068	96.39
	0.2174	0.0079	96.37
Dawn Copper	0.2587	0.0024	99.07
	0.1622	0.0030	98.15
	0.1694	0.0039	97.70
Blue Ocean Stainless Steel	0.4538	0.0018	99.60
	0.2330	0.0002	99.91
	0.3823	0.0084	97.80
Blue Ocean Aluminum	0.2366	0.0075	96.83
	0.2510	0.0072	97.13
	0.3024	0.0078	97.42
Blue Ocean Copper	0.1144	0.0018	98.43
	0.1153	0.0022	98.09
	0.2699	0.0016	99.41

Summary:

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Substrates:	Aluminum, Copper, Stainless Steel				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Procter & Gamble	Dawn Dish Detergent	0.13	96.64	☑	

Conclusion: All three products were effective against DCC-17 Soil on Stainless Steel, Aluminum, and Copper when manually wiped off.