CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2011
DateRun:	11/17/2010
Experimenters:	Timothy Weil, Paul Yan
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic, Steel
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric, Visual
Purpose:	To evaluate selected all purpose clenaing products effectiveness to remove selected soils from selected substrates.
Experimental Procedure:	The supplied cleaning products were used at the recommended concentrations (6.5%). Preweighed ceramic, painted steel and plastic coupons were coated with Hucker's Soil Formulation (Jif Creamy Peanut Butter 8.8%, Salted Butter 8.8%, Arrowhead Mills stone ground wheat flour 8.8%, Egg Yolk 8.8%, Evaporated milk 13.3%, Distilled water 44.2%, Printer's ink with boiled linseed oil 0.9%, Shaws saline solution 2.7%, India Ink 3.7%) 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:	Visually there was streaking and staining across the board by all cleaners on all substrates. The appearance left the impression that the effectiveness of the client provided cleaner was more effective than the comparative product. This was supported by the data provided by the stainless-steel coupon sets which showed that the client provided cleaner achieved the same level of effectiveness as the comparative product.

Cleaner	Initial wt	Final wt	% Removed	OveralLl Ave
Smoke-Solv-Painted Steel				
	0.0326	0.0003	99.08	99.20
	0.0326	-0.0001	100.31	
	0.0240	0.0004	98.33	
Bix TSP-Painted Steel				
	0.0417	0.0010	97.60	96.20
	0.0432	0.0019	95.60	
	0.0420	0.0019	95.48	

Summary:

Conclusion: The chemistry provided by the client has the same range of effectiveness as the provided comparative product.