TURI SURFACE SOLUTIONS LABORATORY
EVALUATION SUMMARY

SCL #: 2009-17-275-14-4-
DateRun: 9/24/2009
Experimenters: Marshall; Yan;
ClientType: Chemical Mfr;
ProjectNumber: 1
Substrates: Plastic;
PartType: Coupons;
Contaminants: Oil; Food;
CleaningMethods: Manual Wipe;
AnalyticalMethods: Gravimetric;
Purpose: To evaluate supplied products for peanut oil removal from non-porous surface using manual wiping.
ExperimentalProcedure: The first supplied product was used at a 1:48 dilution. The second supplied product was used at three dilutions, 1:64, 1:128 and 1:256. A conventional product was used at a 1:64 dilution. A sixth product that uses electrolyzed water was included in the testing.
Preweighed hard plastic coupons were coated with peanut oil taken from a jar of all natural peanut butter. The oil was skimmed off the top of the container and applied to the coupons using a swab. Coupons were weighed a second time to determine the amount of oil that was applied.
Coupons were placed in a Gardner Straightline washability unit. A Wypall X60 reinforced wipe 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.
Following the first round of cleaning, a second round of manual cleaning was conducted on the same set of coupons using the washability unit. A second set of final clean weights were recorded and efficiencies calculated.

ChemistriesEvaluated: PC 108 Spray & Wipe Cleaner; #120 Peroxide Mulitsurface Cleaner; Alpha HP; Activeion Pro;

Results: All six products removed over 95% of the peanut oil in the first cleaning attempt. Following the second round of wipe cleaning, all removed over 98%. The four supplied products removed over 99% of the oil. The table lists the amount of peanut oil added, remaining after cleaning and the efficiency for each coupon cleaned for both cleaning cycles.

Cleaner	Initial wt	Final wt	% Removed	2nd Final wt	2nd % Removed
PC 108					
	0.1727	0.0069	96.00	0.0022	98.73
	0.2198	0.0079	96.41	0.0000	100.00
	0.2865	0.0072	97.49	0.0004	99.86
PC 120 1:64					
	0.2379	0.0036	98.49	0.0011	99.54
	0.2743	0.0038	98.61	0.0005	99.82
	0.2599	0.0068	97.38	0.0049	98.11
PC 120 1:128					
	0.2410	0.0099	95.89	0.0014	99.42
	0.2599	0.0054	97.92	0.0001	99.96
	0.3138	0.0052	98.34	0.0012	99.62
PC 120 1:256					
	0.2637	-0.0006	100.23	-0.0013	100.49
	0.2754	0.0005	99.82	0.0009	99.67
	0.2753	0.0044	98.40	0.0000	100.00
Alpha HP					
	0.3543	0.0032	99.10	0.0004	99.89
	0.4482	0.0027	99.40	-0.0007	100.16
	0.2805	0.0036	98.72	0.0011	99.61
Activeion					
	0.3156	0.0038	98.80	-0.0014	100.44
	0.2006	0.0097	95.16	0.0036	98.21
	0.2349	0.0075	96.81	0.0040	98.30

Summary

Substrates: Plastic;
Contaminants: Oil; Food;

CompanyName:	*Product Name*	*Conc.*	*Efficiency*	*Effective*
MD Stetson	PC 108 Spray & Wipe Cleaner	2.1	99.53	Yes
MD Stetson	#120 Peroxide Mulitsurface Cleaner	1.6	99.16	Yes
MD Stetson	#120 Peroxide Mulitsurface Cleaner	0.78	99.67	Yes
MD Stetson	#120 Peroxide Mulitsurface Cleaner	0.39	100.06	Yes
JohnsonDiversey	Alpha HP	1.6	99.88	Yes
Activeion Cleaning Solutions	Activeion Pro	100	98.98	Yes

Conclusion: All six products were very effective at removing peanut oil after two cleaning cycles using manual wiping.