CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2007
DateRun:	08/07/2007
Experimenters:	Jason Marshall, Shweta Bansal, Andrea Cheeseman
ClientType:	General
ProjectNumber:	Project #2
Substrates:	Plastic
PartType:	Coupon
Contaminants:	Waxes
Cleaning Methods:	Mechanical Agitation
Analytical Methods:	Visual
Purpose:	To evaluate successful products on larger tiles following end users procedure for stripping.
Experimental Procedure:	The successful products from the previous trials were used at 50% dilution at 5 minute cleaning intervals. In addition, several new products that were not previously tested were included in this round of testing. Furthermore, some of the new products were used at lower dilutions as recommended by the vendors. Full vinyl tile coupons (12"x12") were coated with the Johnson Wax Show Place floor coating using a paint brush. The coating was allowed to dry for an hour. After completely dry, additional coats were applied. A total of four coats were used. Initially, each solution was applied to one tile and allowed to soak for 5 minutes. At the end of the soaking, the tile was stripped manually using sections of the scrubbing pad. During scrubbing, hot water was added to the tile and stripping solvent, simulating the procedure witnessed during an on-site visit to the client's facility. Observations were recorded on the effectiveness of the strippers. In addition, three lab personnel independently ranked the strippers for performance. An average of the three assessments were made.

Results:

All Products Used at 50% Dilutions Unless Otherwise Noted.						
5 minutes of cleaning						
Manufacturer	Product	Stripping Observations	Ranking			
		1= Most Efficient;19= Least Efficient				
		Employee	1	2	3	Overall Ave
Abatement Technologies	Citrus Pure Remover	Did not remove much wax, maybe 1 layer	17	9	19	15
Bio-Kleen	Super Stripper 1:3	Removed a lot of wax	3	2	3	2.7
Bio-Kleen	Super Stripper 1:5	Some wax removed	4	4	4	4
Bi-O-Kleen	SL-100	Water and oil separating during scrubbing, leaves an oily residue on tile, some layers of wax removed	15	13	14	14
The Clean Environment Co	Cycle-Strip	Some layers of wax removed, may remove more wax at 10 minute	12	8	18	12.7

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		saturation time				
Ecolink	Safe-Strip	Some layers of wax removed, may remove more wax at 10 minute saturation time	14	17	13	14.7
EnvirOx, LLC	Grout-Safe	Some layers of wax removed, may remove more wax at 10 minute saturation time	13	16	15	14.7
Finger Lakes Chemicals	Graffiti Remover	Some layers of wax removed with scrubber, all wax can be peeled off manually, leaves a very sticky surface	1	1	1	1
Finger Lakes Chemicals	Resineater	Oily, Some layers of wax removed with scrubber, all wax can be peeled off manually leaving a sticky surface	2	14	2	6
Franmar	Soy-Gel	Hard to spread evenly, some layers of wax removed, may remove more wax at 10 minute saturation time	6	5	6	5.7
Franmar	Soy-Strip	Hard to spread evenly, removed some wax, but not able to peel manually, flakey	5	10	5	6.7
Gemtek	SC Maxi Solve	Removed some wax, but not able to peel manually	8	12	7	9
Green Products LLC	Amaizeing	Oily, some layers removed, flakey	7	6	10	7.7
	Citra-Safe		19	19	17	18.3

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Inland Technologies		Oily, bubbles on wax, did notremove much wax				
Inland Technologies	EP 921	Sticky, some layers removed	10	3	11	8
SoySafe	Graffiti Remover	Not tested, dilution formed solid-like substance	Not Included			
Soysolv Industrial Products	SoySolv	Oily, did not remove much wax	18	15	16	16.3
Spartan	Graffiti Remover SAC RTU	Some layers of wax removed, may remove more wax at 10 minute saturation time	9	7	12	9.3
Spartan	Green Solutions	Some layers of wax removed, may remove more wax at 10 minute saturation time	16	18	8	14
Vertec	Household Paint Stripper	Not tested, dilution formed solid-like substance	Not Included			
Vertec	Ink Zapper	Some layers of wax removed, very sticky surface	11	11	9	10.3

Summary:

Substrates:	Plastic
Contaminants:	Waxes

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Abatement Technologies	Citrus Pure AS850	50	0.00	☐	Rank = 15
Bi-O-Kleen Industries	Super Stripper - Floor Wax Remover	33	0.00	☑	Rank = 2.7
Bi-O-Kleen Industries	Super Stripper - Floor Wax Remover	20	0.00	☑	Rank = 4
Bi-O-Kleen Industries	Soy Lube- SL 100	50	0.00	☐	Rank = 14
The Clean Environment Co	C-8 Cycle Strip	50	0.00	☐	Rank = 12.7
EcoLink	Safe Strip	50	0.00	☐	Rank = 12.7
EnvirOx LLC	Grout Safe	50	0.00	☐	Rank = 14.7
Twin Rivers Technologies	Graffiti Remover	50	0.00	☑	Rank = 1
Finger Lakes Chemical	FLSC-12 Resineater Sample	50	0.00	☑	Rank = 6
Franmar Chemical	Soy Gel Paint Stripper	50	0.00	☑	Rank = 5.7
Franmar Chemical	Soy Strip Paint Stripper	50	0.00	☑	Rank = 6.7
Gemtek Products	Safe Care (SC) Maxi Solv	50	0.00	☑	Rank = 9
Green Products	aMAIZEing biobased solvent and stripper	50	0.00	☑	Rank = 7.7
Inland Technologies Inc	Citrasafe	50	0.00	☐	Rank = 18.3

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Inland Technologies Inc	EP 921	50	0.00	☑	Rank = 8
Soysolv Industrial Products	Soysolv industrial solvent	50	0.00	☐	Rank = 16.3
Spartan Chemical Company	Graffiti Remover SAC	50	0.00	☑	Rank = 9.3
Spartan Chemical Company	Green Solutions Floor Stripper	50	0.00	☐	Rank = 14
Vertec BioSolvents	Ink Zapper	50	0.00	☑	Rank = 10.3

Conclusion: All products will be tested under the same conditions except for the cleaning time, which will be 10 minutes.