CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2005
DateRun:	01/17/2005
Experimenters:	Ephraim Massawe
ClientType:	General
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic
PartType:	Coupon
Contaminants:	Waxes
Cleaning Methods:	Mechanical Agitation
Analytical Methods:	Black light, Gravimetric
Purpose:	To evaluate bio-based floor strippers on plastic composite tiles and ceramic tiles.
Experimental Procedure:	One product, Johnson Floor Stripper, was used at 25% v/v concentration. Six pre-weighed plastic composite tiles were coated with Johnson Wax Professional Show Place floor finish (40861-29-8, 78-51-3, 34590-94-8, 111-90-0) using a hand held swab. The finish was dried using a hand held heat gun for two minutes at ~300 F. Once the finish/coupon had cooled, three more coats were applied following the same procedure. Coupons were reweighed to determine the amount of finish that was applied. Six other pre-weighed ceramic tiles were also provided with 3 coatings a similar way. Three coupons from each substrate composition were sprayed with a cleaning product. The formulation was allowed to sit on the finish surface for 10 minutes. These coupons were placed in the Gardner Abrasion Tester for manual wiping. An abrasive pad (QEP Grout Clean Up Kit Coarse) was held firmly on the abrasive machine in order to imitate the working properties of the floor tripping machine. The cleaning lasted for 5 minutes with a spraying interval of 1 minute with spraying of the cleaning agent on the pad as well as on the tiles in between. At the end the performance of Johnson floor stripper was evaluated quantitatively using gravimetric method and qualitatively using black light. This evaluation was done on each of the three coupons for each cleaning method.
Results:	The table below lists the amount of finish applied, remaining and the percent effectiveness for each coupon cleaned.

Quantitative Assessment of the cleanness:

Cleaning Method	Ceramic Tiles				Plastic Tiles			
Mechanical Abrasion	Initial wt	Final wt	% Removed	Average	Initial wt	Final wt	% Removed	Average
	0.5181	0.1125	78.28		0.4749	0.0167	96.5	
	0.698	-0.0304	95.64	90.70%	0.5499	-0.0011	100.2	99.30%
	0.5206	-0.0126	97.58		0.4842	-0.0061	101.3	
Rotary Pads	Ceramic Tiles				Plastic Tiles			
	Initial wt	Final wt	% Removed	Average	Initial wt	Final wt	% Removed	Average
	0.7156	0.0769	89.25		0.5928	-0.9976	268.3	
	0.5025	0.0491	90.23	91.8	0.4758	1.0928	-129.67	81.6
	0.8136	-0.0315	96.13		0.6444	-0.0394	106.11	

Qualitative Assessment of the cleanness:

	Ceramic Tiles		Plastic Tiles	
Cleaning Method	Observer 1	Observer 2	Observer 1	Observer 2
Mechanical Abrasion	98	90	99.9	99
	99.9	99	99.9	99
	99	97	99.9	99
Ave Efficiency:	95		Ave Efficiency:	99
Rotary Pads	99	99	99.9	99
	99	99	97	86
	99	99	99	97
Aver Efficiency:	99		Ave Efficiency:	94

Summary:

CLEANING LABORATORY EVALUATION SUMMARY

Substrates:	Ceramics, Plastic				
Contaminants:	Waxes				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Johnson Wax	Pro Strip	25	95.00	☑	Mechanical abrasion
Johnson Wax	Pro Strip	25	86.70	☑	Rotary pad

Conclusion: Johnson Floor Stripper seems to have worked pretty well in all operations and on all the coupons