CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 10/24/2004

Experimenters: Jason Marshall, Ephraim Massawe

ClientType: General

ProjectNumber: Project #1

Substrates: Plastic

PartType: Coupon

Contaminants: Coatings

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate more biobased products for floor stripping.

Experimental Procedure:

Three more products were selected from the lab's inventory of biobased products. These products were specified by vendor information as being designed for floor stripping. The three products were used at 100% dilutions as suggested by the manufacturer.

Nine preweighed 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.

Three coated coupons were placed in a BYK Gardner abrasion tester used to apply uniform manually cleaning. The coupons were sprayed with a cleaning product. The formulation was allowed to sit on the finish surface for 5 minutes. A cotton rag was placed on the cleaning sled and sprayed with the same cleaning product as the coupons. The cleaning lasted for 30 cycles (50 seconds). At the end of the cleaning, the coupons were wiped once to remove any cleaner residue. Final weights were recorded and efficiencies were calculated.

Results:

One of the products tested out performed the current floor stripper being used by the client. A second product had identical results and the third product showed potential for removing the floor finish but had some foaming issues that would need to be addressed. The table below lists the amount of floor finish was added, how much remained and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Bio T Max	0.2005	0.0709	64.64
	0.1772	0.0347	80.42
	0.1989	0.0793	60.13
Botanic Gold	0.1694	0.0952	43.8
	0.2119	0.1611	23.97
	0.1582	0.0681	56.95
SC Actisolv	0.1612	0.039	75.81
	0.1548	0.0367	76.29
	0.1391	0.0278	80.01
Current Product			
Johnson Wax	0.1188	0.0597	49.75
	0.1189	0.0232	80.49
	0.1173	0.0254	78.35
		Ave	69.53

Summary:

Substrates:	Plastic				
Contaminants:	Coatings				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Bio Chem Systems	Bio T Max	100	68.40	☑	
PureTech International	Botanical Gold	100	41.58	☑	Foaming issues at full strength
Gemtek Products	SC Actisolv Safety Solvent	100	77.37	☑	

Conclusion:

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Additional testing may be performed to improve the performance of all of the products that showed signs of removing the floor finish in previous trials.