CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2016
DateRun:	06/16/2016
Experimenters:	Francisco Abreau, Vinh Tran
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Vinyl Composite Tiles
PartType:	Coupon
Contaminants:	Greases, Oil, Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate the supplied products for VCT and Painted VCT floor tile surface cleaning effectiveness.
Experimental Procedure:	First, a total set of 18 coupon tiles were obtained, 3 coupons each for the two substrates used times the three supplied cleaners. The initial weights of the coupons were acquired in order to use it as a baseline. The coupons were then soiled using 0.5g of DCC-17 soil. DCC-17 soil consists of: 33% vegetable shortening, 33% lard, 33% vegetable oil, and 1% carbon lampblack. The soiled coupons were then allowed to sit overnight for 24 hours in order for the soil to age. The next day, the dry dirty weight was then recorded for each coupon. The specified cleaners were used to test their cleaning effectiveness on the VCT and the Painted VCT floor tile coupons. The manner in which they were cleaned was as follows. Three coupons were placed into a Gardner Straight Line Washability unit. A Wypall X60 reinforced wipe was attached to the cleaning sled and soaked with 1 spray of cleaning solutions. Each coupon was sprayed 2 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 to assist in drying. Final weights were recorded and efficiencies were calculated and recorded.
Results:	The results from the testing are reported in the table below:

Cleaner	Initial wt	Final wt	% Removed	% Removal
Substrate				
Laurinex RTU				
VCT	0.3171	0.0251	92.08	
	0.4581	0.0810	82.32	
	0.3856	0.1152	70.12	81.51
Purple Tiger RTU				
VCT	0.4154	0.0851	79.51	
	0.4508	0.0983	78.19	
	0.4058	0.0904	77.72	78.48
7th Generation All Purpose RTU				
VCT	0.4658	0.1519	67.39	
	0.4713	0.1398	70.34	
	0.4587	0.1531	66.62	68.12
Laurinex RTU				
Painted VCT	0.4067	0.0813	80.01	
	0.5093	0.1361	73.28	
	0.3973	0.1205	69.67	74.32
Purple Tiger RTU				
Painted VCT	0.3288	0.0894	72.81	
	0.4045	0.1072	73.5	
	0.5236	0.1572	69.98	72.10
7th Generation All Purpose RTU				
	0.4360	0.1110	74.54	

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Painted VCT				
	0.5066	0.1346	73.43	
	0.4071	0.1527	62.49	70.15

Summary:

Substrates:	Vinyl Composite Tiles
Contaminants:	Greases, Oil, Food

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Ascalon International	Laurinex	100	77.92	☑	
Chemco	Purple Tiger All purpose cleaner	100	75.29	☐	
Seventh Generation	Free & Clear All Purpose	100	69.14	☐	

Conclusion:

The best cleaner found during our testing was determined to be the Laurinex product at an overall cleaning average of 77.92% followed by the Purple Tiger with an overall cleaning efficiency of 75.29%. It was found that the worst performing cleaner was the 7th Generation All Purpose product with an overall cleaning average of 69.14%.