

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016  
 DateRun: 03/01/2016  
 Experimenters: Alicia Melvin, Vinh Tran, Josephine Garfield  
 ClientType: Cleaner Manufacturer  
 ProjectNumber: Project #1  
 Substrates: Ceramics, Plastic, White Board  
 PartType: Coupon  
 Contaminants: Greases, Oil, Food  
 Cleaning Methods: Manual Wipe  
 Analytical Methods: Gravimetric

Purpose: To evaluate janitorial cleaners for dirt removal on a variety of surfaces for which they may be used.

Experimental Procedure: Nine coupons for each sample (three ceramic, three plastic, and three painted steel) were weighed for initials. Using a swab, coupons were then dirtied with 0.5 grams of DCC-17 and air dried at 68°F overnight. Dirty weights were then collected the next day. The cleaning samples were diluted to requested amounts (Peroxi-det (1/128); Peroxi-det (10/128); MD Stetson PC 120 (RTU); Peroxi-det (10%)) and placed into the same brand lab testing spray bottles.

Three coupons of the same substrate were placed into a Gardner Straight Line Washability unit. A Wypall X60 reinforced wipe was attached to the cleaning sled and treated with two sprays of cleaning solution. Each coupon was treated with the same cleaning solution two times. The solution was allowed to penetrate for 30 seconds followed by cleaning in the SLW unit for 20 cycles (30 seconds of cleaning). Coupons were placed back on the tray and then weighed for a final weight. If coupon's gravimetric final results were off, coupons were reweighed the next day to allow substrates to fully dry.

Results: Ceramic substrates had the lowest removal out of all the substrates. Part of this is due to the substrate's semi vitreous material when cut into coupons. Allowing the coupons to dry overnight allowed for gravimetric results to reach effective percentage removal.

Cleaner	Substrate	Initial wt	Final wt	% Removed	Average	Overall Ave
Peroxi-det (1/128)						
	Ceramic	0.384	0.0699	81.8	85.57	89.8
		0.3926	0.06	84.72		
		0.5069	0.0497	90.2		
	Plastic	0.4552	0.0342	92.49	93.44	
		0.4158	0.0215	94.83		
		0.419	0.0293	93.01		
	Painted Steel	0.3945	0.0454	88.49	90.4	
		0.4674	0.0348	92.55		
		0.4308	0.0424	90.16		
Peroxi-det (10/128)						
	Ceramic	0.5724	0.0498	91.3	85.08	90.9
		0.3828	0.0841	78.03		
		0.4787	0.0674	85.92		
	Plastic	0.4852	0.0358	92.62	94.52	
		0.4825	0.0244	94.94		
		0.4855	0.0194	96		
	Painted Steel	0.4926	0.0367	92.55	93.09	
		0.3765	0.0347	90.78		
		0.461	0.0187	95.94		
MD Stetson PC 120(RTU)						
	Ceramic	0.4267	0.0013	99.7	90.47	93.49
		0.4393	0.0652	85.16		
		0.5159	0.0693	86.57		
	Plastic	0.4847	0.0361	92.55	93.4	
		0.4713	0.0092	98.05		

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		0.4823	0.0502	89.59		
	Painted Steel	0.4948	0.0167	96.62	96.61	
		0.4747	0.0192	95.96		
		0.4854	0.0134	97.24		
Peroxi-det (10%)						
	Ceramic	0.4424	0.0125	97.17	92.86	93.36
		0.4519	0.0434	90.4		
		0.4678	0.042	91.02		
	Plastic	0.3868	0.0956	75.28	91.32	
		0.3796	0.0047	98.76		
		0.3992	0.0003	99.92		
	Painted Steel	0.3692	0.0179	95.15	95.9	
		0.3597	0.0157	95.64		
		0.3543	0.0109	96.92		

Summary:

<b>Substrates:</b>	Ceramics, Plastic, White Board				
<b>Contaminants:</b>	Greases, Oil, Food				
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
The Janitors Supply Co. Inc	Peroxi-Det All Purpose Cleaner	1.5	89.80	<input checked="" type="checkbox"/>	
The Janitors Supply Co. Inc	Peroxi-Det All Purpose Cleaner	7.8	90.90	<input checked="" type="checkbox"/>	
Next-Gen Supply Group	PC 120 Peroxide Multisurface Cleaner	100	93.49	<input checked="" type="checkbox"/>	
The Janitors Supply Co. Inc	Peroxi-Det All Purpose Cleaner	10	90.90	<input checked="" type="checkbox"/>	

Conclusion:

All the cleaners were effective at removing around 90% or more of the DCC-17 soil from all substrates.