CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2018
DateRun:	11/13/2018
Experimenters:	Othon Pagounes, Lily Green
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #15
Substrates:	Ceramics, Stainless Steel, Porcelain
PartType:	Part
Contaminants:	Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric, Visual
Purpose:	To evaluate the soil removal performance of Jenny Oven Cleaner & Rejoice Oven Cleaner cleaning products.
Experimental Procedure:	The tests were performed on artificially applied soils on ceramic, stainless steel, and porcelain substrates. Each experiment was based on the guidance from CSPA DCC-12 Screening the Efficacy of Oven Cleaners. Soil B from the standard was made using 85.4 wt.% butter, 6.5 wt. % sugar, 4.3 wt.% deionized water and 3.4 wt.% flour. The sugar was dissolved in water between 75 and 95 F. Then at room temperature or above, the softened butter was added to the solution and mixed thoroughly. Flour was added to the mixture and stirred until a uniform mixture was obtained. A uniform weight was applied to each of the eighteen pre-weighed coupons. The coupons were then covered with aluminum foil to prevent air currents from disturbing the soil film during baking. The soil was aged in a preheated 475ºF for two hours. Once coupons were cooled to room temperature, dirty weights were recorded. Cleaning was performed following the instructions on the supplied product. The product was sprayed onto the surface of the coupons and allowed to soak for two hours and then put into the SLW (Straight Line Washing) Unit to be wiped cleaned during 20 cycles. Final weights were recorded and effectiveness was calculated. The experiment was performed again to test the two cleaners, but with a soil aging time of 15 minutes, instead of two hours.
Results:	Test 1

Soil Aging Time	Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	% Average	% Overall Cleaner
2 hours	Jenny Oven Cleaner	Stainless Steel	0.3280	0.2942	10.30	41.27	67.46
			0.5737	0.3373	41.21		
			0.5658	0.1567	72.30		
		Ceramic	0.4959	0.0984	80.16	72.46	
			0.2780	0.0436	84.32		
			0.2281	0.1074	52.92		
		Porcelain	0.5117	0.1066	79.17	88.66	
			0.3851	0.0291	92.44		
			0.6076	0.0343	94.35		
	Rejoice Oven Cleaner	Stainless Steel	0.4364	0.2738	37.26	23.97	60.95
			0.4912	0.4736	3.58		
			0.4314	0.2974	31.06		
		Ceramic	0.2362	0.0771	67.36	60.41	
			0.5836	0.1742	70.15		
			0.2623	0.1476	43.73		
		Porcelain	0.6599	-0.0003	100.05	98.47	
			0.5410	0.0118	97.82		
			0.4375	0.0107	97.55		

Test 2

Soil Aging Time	Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	% Average	% Overall Cleaner
15 minutes	Jenny Oven Cleaner	Stainless Steel	0.2688	0.1552	42.26	72.80	66.87
			0.2997	0.0262	91.26		
			0.2369	0.0358	84.89		
		Ceramic	0.3392	0.0776	77.12	73.94	

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			0.3818	0.1033	72.94		
			0.2477	0.0700	71.74		
		Porcelain	0.3617	0.1421	60.71	53.86	
			0.2945	0.1389	52.84		
			0.5081	0.2640	48.04		
	Rejoice Oven Cleaner	Stainless Steel	0.1636	0.0269	83.56	62.40	63.29
			0.2238	0.1244	44.41		
			0.2555	0.1042	59.22		
		Ceramic	0.3221	0.1271	60.54	65.59	
			0.2228	0.1027	53.90		
			0.3169	0.0560	82.33		
		Porcelain	0.3617	0.0540	85.07	63.29	
			0.2945	0.1417	51.88		
			0.5081	0.2393	52.90		

Summary:

Substrates:	Ceramics, Stainless Steel, Porcelain				
Contaminants:	Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Brand Buzz	Jenny Oven Cleaner	100%	67.46	☐	
Brand Buzz	Rejoice Oven Cleaner	100%	60.95	☐	

Conclusion: The two cleaners, Jenny Oven Cleaner and Rejoice Oven Cleaner, removed about 60-70% of the soil when aged for 15 minutes and 2 hours. The two cleaners did not demonstrate a significant difference in removing the DCC-12 soil affected by the time of the aging of soil in the oven.