CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2015
DateRun:	07/12/2015
Experimenters:	Loc Nguyen
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #6
Substrates:	Porcelain
PartType:	Coupon
Contaminants:	Greases, Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To measuring the soil removal performance of oven cleaning products used in the home.
Experimental Procedure:	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 twelve preweighed porcelain 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 475 F for 120 minutes. Once coupons were cooled to room temperature, dirty weights were recorded. Cleaning was performed following the instructions on the supplied commercially available product. Product was sprayed onto the surface and allowed to soak for two hours and then wiped clean with a cloth. Final weights were recorded and effectiveness was calculated. ChemistriesEvaluated: EasyOff Fume Free; PLZ Oven Fume-Free;
Results:	The supplied product did remove more than the commercially available product. The soil amounts added, remaining soil and percent removed for each coupon cleaned are listed in the table below.

Table of Product Performance

Cleaner	Initial wt	Final wt	% Removed	%Average Removal
Easy Off Fume-Free	0.1136	0.093	18.13	
	0.1471	0.0776	47.25	
	0.2482	0.065	73.81	
	0.2128	0.0718	66.26	
	0.1664	0.137	17.67	
	0.1587	0.1123	29.24	
	0.1168	0.0579	50.43	
	0.1214	0.1211	0.25	
	0.0843	0.0841	0.24	33.7
PLZ Fume-Free New Formula				
	0.2475	0.0796	67.84	
	0.2056	0.1073	47.81	
	0.1922	0.0916	52.34	
	0.1879	0.1101	41.41	
	0.1973	0.1042	47.19	
	0.2476	0.0318	87.16	
	0.1407	0.0535	61.98	
	0.2017	0.1281	36.49	
	0.2221	0.0652	70.64	56.98

Summary:

Substrates:	Porcelain
Contaminants:	Greases, Food

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Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Reckitt Benckiser	Easy Off heavy Duty Oven Cleaner	100	33.70	☐	
Brand Buzz	PLZ Oven Fume-Free New Formula	100	56.98	☐	

Conclusion:

The PLZ Fresh & Clean Heavy Duty Oven Cleaner performed on the same level as the commercially available EasyOff Fume Free oven cleaner. The Easy-Off Heavy Duty Oven Cleaner was the least effective and second least consistent product evaluated after PLZ Oven Fume-Free. It was especially lacking when compared to its PLZ counterpart, PLZ Fresh & Clean Heavy Duty Oven Cleaner, which performed nearly 30% more efficiently.