CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2015
DateRun:	04/09/2015
Experimenters:	Nicholas Landberg
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #5
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:	The test was performed on artificially applied soils on porcelain substrates. The 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 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: PLZ Oven Fume-Free; EasyOff Fume Free; PLZ Fresh & Clean Heavy Duty Oven Cleaner; Easy-Off Heavy Duty Oven Cleaner
Results:	Table of Product Performance

Cleaner	Initial wt	Final wt	% Removed
PLZ Oven Fume-Free			
	0.2533	0.1777	29.85
	0.1502	0.0874	41.81
	0.2138	0.0978	54.26
	0.2764	0.0478	82.71
	0.2425	0.0997	58.89
	0.2511	0.0302	87.97
	0.3735	0.0674	81.95
	0.2855	0.0489	82.87
	0.3044	0.0840	72.40
	0.3046	0.0758	75.11
	0.2658	0.0458	82.77
	0.1726	0.0034	98.03
EasyOff Fume Free			
	0.1468	0.0097	93.39
	0.2365	0.0048	97.97
	0.3130	0.0217	93.07
	0.1657	0.0235	85.82
	0.2098	0.0156	92.56
	0.2320	0.0149	93.58
	0.3259	0.0150	95.40
	0.3028	0.0139	95.41
	0.3778	0.0248	93.44
	0.3162	0.0051	98.39
	0.2227	0.0047	97.89

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	0.2246	0.0218	90.29
PLZ Fresh & Clean Heavy Duty Oven Cleaner			
	0.2428	0.0684	71.83
	0.2059	0.0178	91.36
	0.3048	0.0468	84.65
	0.2452	0.0053	97.84
	0.2116	0.0106	94.99
	0.2378	0.0126	94.70
	0.2915	0.0248	91.49
	0.2653	0.0308	88.39
	0.2416	0.0128	94.70
	0.1401	0.0103	92.65
	0.2912	0.0498	82.90
	0.2953	0.0882	70.13
Easy-Off Heavy-Duty Oven Cleaner			
	0.1513	0.0841	44.42
	0.2503	0.1272	49.18
	0.1932	0.1253	35.14
	0.2137	0.1144	46.47
	0.2113	0.0453	78.56
	0.1939	0.1407	27.44
	0.2964	0.0899	69.67
	0.2997	0.0631	78.95
	0.3065	0.0538	82.45
	0.3106	0.1293	58.37
	0.2751	0.1243	54.82
	0.2446	0.0619	74.69

Summary:

Substrates:	Porcelain
Contaminants:	Greases, Food

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Brand Buzz	PLZ Oven Fume-Free	100	70.72	☐	
Reckitt Benckiser	Easy Off heavy Duty Oven Cleaner	100	93.93	☑	
Brand Buzz	PLZ Fresh & Clean Heavy Duty Oven Cleaner	100	87.97	☑	

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.