CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2012
DateRun:	12/20/2012
Experimenters:	Jason Marshall
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Stainless Steel
PartType:	Coupon
Contaminants:	Greases, Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate two supplied products for kitchen grease removal
Experimental Procedure:	The two products were used at the supplied concentration and applied to the surface using the provided spray nozzles. Preweighed stainless steel coupons were coated with shortening that was heated to the melting point. Soil was applied using a hand held swab and aged for 25 minutes in an oven at 150 C. The contaminated coupons were allowed to cool to room temperature and weighed again to determine the amount of soil added. Each coupon was placed in a vertical position. Each coupon was sprayed 3-5 times with the same cleaning solution and allowed to soak for 3 minutes. The cleaning was performed for 30 seconds using a supplied paper towel. At the end of the cleaning, coupons were wiped once with a dry paper towel. Final weights were recorded, efficiencies were calculated and recorded. A second 30 second cleaning was conducted and a second set of clean weights were recorded. Chemistries Evaluated: Proctor and Gamble Professional Dawn Power Dissolver; Kay Chemical company QSR Oven Cleaner;
Results:	Both products had mixed results for the removal of the aged shortening from the stainless-steel coupons under the conditions tested. The extended cleaning times improved the soil removal for both products. Cleaning effectiveness ranged from no cleaning to 90% cleaning for the Dawn product during the initial 30 second scrubbing. The Kay product ranged from no cleaning to 51% during the same time frame. With an additional 30 second scrubbing the Dawn product had removal rates from 49-96% and the Ecolab product had about the same range (55-90%). The Kay product had more consistent results for both scrubbing times. The table lists the amount of soil added, the amount remaining and the cleaning efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
PNG 30 sec			
	0.1452	0.1320	9.09
	0.1766	0.1773	-0.40
	0.2219	0.0214	90.36
Ecolab 30 sec			
	0.1610	0.0781	51.49
	0.1441	0.0945	34.42
	0.1081	0.1213	-12.21
PNG 60 sec			
	0.1452	0.0737	49.24
	0.1766	0.0590	66.59
	0.2219	0.0084	96.21
Ecolab 60 sec			
	0.1610	0.0148	90.81
	0.1441	0.0332	76.96
	0.1081	0.0485	55.13

Summary

Company Name:	Product Name	Conc.	Efficiency	Observations
Proctor and Gamble	Dawn Power Dissolver	100	33.02+/-49.88	30 seconds

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Kay Chemical Company	QSR Oven Cleaner	100	24.57+/-32.97	30 seconds
Proctor and Gamble	Dawn Power Dissolver	100	70.68+/-23.75	60 seconds
Kay Chemical Company	QSR Oven Cleaner	100	74.30+/-17.98	60 seconds

Summary:

Substrates:	Stainless Steel				
Contaminants:	Greases, Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
EcoLab	Kay Chemical QSR Oven Cleaner	100	74.30	☑	
Procter & Gamble	Dawn Institutional Power Dissolver	100	70.68	☑	

Conclusion: The soil aging process resulted in a challenging soil for both cleaning products using a 3-minute dwell time with 30 and 60 seconds of scrubbing.