CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2017
DateRun:	05/09/2017
Experimenters:	George Liang
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #8
Substrates:	Aluminum, Stainless Steel
PartType:	Coupon
Contaminants:	Greases, Oil, Food
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To evaluate supplied product for grease removal (using DCC-17) from stainless steel and aluminum surfaces with an initial soak in cleaning solution prior to following TURI's manual cleaning method.
Experimental Procedure:	The following experimental procedure is in accordance with TURI's cleaning a modified operating procedure for kitchen soil removal. The process added a soak prior to cleaning with manual washability unit.

Soiling Process:

A set of pre-weighed stainless steel and aluminum coupons were contaminated with 0.5 grams of DCC-17 soil using a handheld swab. Soil was applied onto the center of the coupon's surfaces. The soil, DCC-17, was made with the following ingredients: Vegetable Shortening 33%, Lard 33%, Vegetable Oil 33%, and Carbon lampblack 1%. After all the stainless steel and aluminum coupons were contaminated with DCC-17 soil, the coupons sat overnight and then re-weighed to determine the amount of contaminant added.

Cleaning Process:

Three soiled substrates were immersed into a bath for the respective cleaning agent for five minutes at a temperature of 110 oF. The coupons were then cleaned in the Gardner Straight Line Washability unit for 20 cycles (~33 seconds). The cleaning solutions were diluted to the desired concentrations specified by the vendor. Two Wypall X60 reinforced wipe were attached to the cleaning sled prior to running the SLW machine.

Efficacy Rating Process:

The substrates were left to dry at room temperature for an hour before weighing to determine the amount of contaminant removed.

Results:

Vi-Jon Economy Pot & Pan was observed to be slightly more effective on stainless steel surfaces than the comparative cleaning agent, Brady Pot & Pan, with a respective efficacy of 96.41% and 91.43%. The results on the aluminum were nearly identical, with the Vi-Jon product removing 95.55% and the Brady product 95.19%. Overall performance for the two economy products was good. The table below contains to the amount of contaminant added, the amount remaining and the percent removal by the respective cleaning agent to measure the efficacy of the cleaners.

Cleaner	Initial wt (g)	Final wt (g)	% Removed
Brady Pot and Pan Stainless Steel			
	0.4835	0.032	93.38
	0.4861	0.0486	90
	0.4842	0.044	90.91
Brady Pot and Pan Aluminum			
	0.4831	0.024	95.03
	0.4855	0.0221	95.45
	0.4849	0.0238	95.09
Vi-Jon Economy Pot and Pan Stainless Steel			
	0.4852	0.0235	95.16
	0.4853	0.013	97.32
	0.4881	0.0159	96.74
Vi-Jon Economy Pot and Pan Aluminum			

CLEANING LABORATORY EVALUATION SUMMARY

	0.4893	0.019	96.12
	0.4841	0.0167	96.55
	0.4851	0.0292	93.98

Summary:

Substrates:	Aluminum, Stainless Steel				
Contaminants:	Greases, Oil, Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Brady Industries	Brady Pot and Pan	0.78	93.31	☑	
Vi-Jon	Vi-Jon Economy Pot and Pan	0.78	95.95	☑	

Conclusion: The supplied products from Vi-Jon compared equally with the Brady brand products.