CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009

DateRun: 04/02/2009

Experimenters: Junhee Cho, Smith Gadd

ClientType: General

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Calcium/lime, Food

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To identify possible cleaning products for dairy equipment cleaning

Experimental Procedure: Six products were selected from the lab's on-line database, www.cleanersolutions.org, based on past testing results matching client supplied information. Each of these products were diluted to 5% using DI water in 400 ml beakers and heated to 120 F on a hot plate.

Peweighed stainless coupons were coated with the whole sweet milk contaminant using a squeeze bulb. The contaminant covered coupons were put in an oven at 130F and dried for 15 minutes. Once dry, the coupons were weighed a second time to determine the amount of milk applied.

Three coupons were immersed into each solution and cleaned for 5 minutes using stir-bar agitation. Rinsing was performed for 15 seconds using tap water heated to 120 F and followed by 60 seconds of air blow off with dry compressed air at room temperature. Final weights were recorded and efficiencies were calculated for each coupon cleaned.

Results:

Cleaner	Initial wt	Final wt	% Removed
Conrsolv	0.2110	0.0056	97.35
	0.7432	0.0069	99.07
	2.8137	0.1311	95.34
Soysolv II Plus	1.3324	0.2270	82.96
	2.1565	0.2831	86.87
	2.3794	0.2520	89.41
Beyond 2001	0.5688	0.2135	62.46
	0.9293	0.0570	93.87
	3.0277	0.3604	88.10
Bean-e-doo	3.5283	0.1959	94.45
	2.9350	0.4733	83.87
	1.4205	0.2528	82.20
Simple Green Cleaner	0.6283	0.0024	99.62
	0.9248	0.0860	90.70
	1.4565	0.1685	88.43
DFC 5	0.2740	0.0108	96.06
	0.4607	0.0172	96.27
	1.0273	0.1151	88.80

Summary:

Substrates:	Stainless Steel				
Contaminants:	Calcium/lime, Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Soysolv Industrial Products	Cornsolv industrial solvent	5	97.25	☑	
Soysolv Industrial Products	Soysolv II solvent	5	86.41	☑	
Today & Beyond	Beyond 2001	5	81.48	☐	
Franmar Chemical	Bean-e-doo (Parts Washer Solvent)	5	86.94	☑	
Simple Green	Crystal Simple Green Industrial Cleaner & Degreaser	5	92.92	☑	

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Cogent Environmental Solutions	DFC 5	5	93.71	☑	

Conclusion: Five of the six products removed more than 95% of the dairy based food contaminant.