CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009

DateRun: 04/15/2009

Experimenters: 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 continue evaluating possible cleaning alternatives for dairy equipment.

Experimental Procedure: Three additional products were selected based on past testing results matching client supplied information. Three 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
LF 2100	1.5253	0.0062	99.59
	1.6997	0.2105	87.62
	1.2003	0.0447	96.28
Amberclean L12	1.5720	0.3442	78.10
	0.7780	0.1814	76.68
	0.5065	0.0514	89.85
Multi Use Cleaner	0.8108	0.1362	83.20
	1.4351	0.3030	78.89
	0.5590	0.0385	93.11

Summary:

Substrates:	Stainless Steel
Contaminants:	Calcium/lime, Food

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
International Products Corporation	LF 2100 (Liquid Foam Cleaner)	5	94.49	☑	
Innovative Organics Inc	Amberclean L 12	5	81.55	☐	
Enviro-One	Multi Use Green Conc.	5	85.07	☑	

Conclusion: Two of the products removed over 85% of the whole sweet milk from the stainless steel coupons using manual cleaning.