CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2022

DateRun: 01/01/1970

Experimenters: Amelia Wagner

ClientType: Food Manufacturer

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Food

Cleaning Methods: Ultrasonics

Analytical Methods: Gravimetric

Purpose: To evaluate the effectiveness of LFE Enzymatic cleaners in conjunction with Acetic acid sanitizer in cleaning and sanitizing stainless steel alloys 304 and 316.

Experimental Procedure: Six stainless steel coupons were used, three being the 304 alloy and three being the 316 alloy. The initial weights of each coupon were taken. The coupons were then soiled with Cedar's Chocolate Hommus by wiping a thin layer, but leaving some chunky spots, and the bottom half of the substrate. The dirty weights of each coupon were then taken. Coupons were immersed in the heated cleaner LFE Enzymatic cleaner 2.5% (130 F) and put in the ultrasonics machine for 20 mins. Directly after removing the coupons from the cleaner, they were then immersed in the sanitizer Acetic acid sanitizer 0.15% at room temperature (68 F) and put in the ultrasonics machine for five minutes. The cleaned coupons were left to air dry for 8 hours. ATP levels were measured using Hygenia ATP Swabs followed by clean weights being taken for each coupon.

Results:

Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
LFE Enzymatic Cleaner	Stainless steel 304	0.2486	0.0058	97.96	98.25	98.33
		0.2705	0.0049	98.19		
		0.2373	0.0033	98.61		
LFE Enzymatic Cleaner	Stainless Steel 316	0.3617	0.0058	98.40	98.40	
		0.2625	0.0038	98.55		
		0.2450	0.0043	98.24		

ATP Results

Cleaner	Substrate	ATP Level	Avg	Overall
Acetic Acid Sanitizer	Stainless Steel 304	13	8.33	13
		8		
		4		
Acetic Acid Sanitizer	Stainless Steel 316	12	17.67	
		35		
		6		

Summary:

Conclusion: LFE Enzymatic Cleaner 2.5% (130 F) is a highly effective cleaner for removing chocolate hummus from stainless steel alloys 304 and 316. Acetic Acid 0.15% is a reasonably effective sanitizer for stainless steel.