CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2022

DateRun: 08/10/2022

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 effective ness of LFE Enzymatic cleaner and NaDCC tablet 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 Hummus 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 NaDCC tablets 269ppm 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	0.3561	0.0021	99.41	99.66	99.20
	stainless steel 304	0.2177	0.0028	98.71		
	stainless steel 304	-0.7176	0.0062	100.86		
LFE Enzymatic Cleaner	Stainless Steel 316	0.3462	0.0076	97.80	98.74	
	Stainless steel 316	0.2527	0.0033	98.69		
	Stainless Steel 316	0.2554	0.0007	99.73		

ATP Results

Cleaner	Substrate	ATP Level	Avg	Overall
Caprylic Acid Sanitizer	Stainless Steel 304	1	2.7	9.3
		4		
		3		
Caprylic Acid Sanitizer	Stainless Steel 316	22	16.0	
		22		
		4		

Sanitizer left white residue

Summary:

Conclusion: LFE Enzymatic Cleaner 2.5% (130 F) is an effective cleaner for stainless steel alloys 304 and 316. NaDCC tablets 269ppm are not an effective sanitizer for stainless steel alloys 403 and 316

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