CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2022
DateRun:	08/09/2022
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 5229 AFCO cleaner and 4325 PerOx 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 5229 AFCO 1.1% (160) 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 4325 PerOx 0.05% 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	Dirty wt	Clean wt.	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall	ATP Level	AVG	Overall
5229 AFCO	Stainless steel 304	60.952	61.0901	60.9654	0.1381	0.0134	90.30	80.94	74.69			
	Stainless steel 304	60.888	60.9767	60.9158	0.0887	0.0278	68.66					
	Stainless steel 304	60.99	61.0842	61.0052	0.0942	0.0152	83.86					
5229 AFCO	Stainless Steel 316	49.3098	49.4131	49.3436	0.1033	0.0338	67.28	68.45				
	Stainless Steel 316	49.4612	49.5326	49.4963	0.0714	0.0351	50.84					
	Stainless Steel 316	49.4888	49.7806	49.5261	0.2918	0.0373	87.22					
4325 PerOx	Stainless steel 304									0.00	0.00	10.67
	Stainless steel 304									0.00		
	Stainless steel 304									0.00		
4325 PerOx	Stainless Steel 316									22.00	21.33	
	Stainless Steel 316									4.00		
	Stainless Steel 316									38.00		

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Visually, cleaners did not remove all of the hummus off of each coupon after the cleaning step. During the sanitizing step the rest of the hommus was removed.

Summary:

Conclusion: The 5229 AFCO 1.1% was not the most effective cleaner for removing chocolate hummus from stainless steel. The 4325 PerOx 0.05 was a reasonably effective sanitizer for sanitizing stainless steel.