CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2024
DateRun:	02/27/2024
Experimenters:	Amelia Wagner
ClientType:	Lab
ProjectNumber:	Project #13
Substrates:	Aluminum, Stainless Steel
PartType:	Coupon
Contaminants:	Food
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric, Visual
Purpose:	Redo Benchmark Testing of BevSafe cleaner: unheated ultrasonics with rinse step
Experimental Procedure:	Three pre weighed coupons of both stainless steel and aluminum were used per soil for two cleaners for a total of 12 coupons. Half of the coupons were soiled with tea and tea leaves with a swab. The other half were soiled with coffee and coffee grounds with a swab. The coupons were then baked in the oven or 40 minutes at a temperature of 200 F to adhere the soils to the coupons and to initiate staining. The dirty weights of the coupons were then recorded. The coupons were then subjected to 20 minutes of unheated immersion with BevSafe Line and Tank Cleaner at a dilution of 4.5%. After removing the coupons from the cleaner, they were rinsed in a beaker of clean DI water. The coupons were allowed to dry overnight before clean weights were recorded.

Results:

Substrate	Soil	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
Stainless Steel	Pigeon Cove Tea Leaves	0.0998	0.0001	99.90	99.57	94.62
		0.1474	0.0002	99.86		
		0.0749	0.0008	98.93		
	Coffee	0.0208	0.0005	97.60	89.67	
		0.0042	0.0006	85.71		
		0.0042	0.0006	85.71		
Aluminum	Pigeon Cove Tea Leaves	0.0420	-0.0413	198.33	180.09	180.09
		0.0864	-0.0446	151.62		
		0.0454	-0.0410	190.31		
	Coffee	0.0042	NA	NA	NA	
		0.4496	NA	NA		
		0.0051	NA	NA		

The aluminum coupons soiled with coffee were not tested after it became apparent that the product would strip the substrate.

Summary:

Conclusion: BevSafe Line and Tank Cleaner 4.5% is much more effective utilizing unheated immersion when a rinse step is added post cleaning.