

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2024

DateRun: 10/25/2024

Experimenters: Amelia Wagner

ClientType:

ProjectNumber: Project #7

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Blood

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To test the efficacy of Biogone concentration: 2oz/gal in removing synthetic blood from stainless steel at various temperatures.

Experimental Procedure: Biogone concentration: 2oz/gal was tested at three temperatures: 25C, 50C, and 60C. Three stainless steel coupons were chosen for each temperature tested for a total of nine coupons. Each coupon was weighed and had their initial weights recorded. The coupons were then soiled with the provided synthetic blood by using a swab to wipe the blood on the lower third of each coupon (where the coupon would come in contact with the cleaning agent during immersion). The coupons were left to air dry for 24 hours before having their dirty weights recorded. The coupons were then subjected to 2 minutes of immersion in the Biogone 2oz/gal at their respective temperatures with a stir bar set to 200 rpm. After cleaning, each coupon was rinsed in a DI water bath for 1 minute with a stir bar set to 200 rpm. The coupons were left to air dry overnight before having their clean weights recorded.

Results:

Cleaner	Temperature	Initial wt of cont.	Final wt of cont.	%Cont Removed	Visual Obvs	% AVG
Biogone 2oz/gal	25C	0.0114	0.0013	88.60	Staining left where soil was most concentrated	89.87
		0.0065	0.0009	86.15	Staining left where soil was most concentrated	
		0.0195	0.0010	94.87	Staining left where soil was most concentrated	
	50C	0.0309	0.0008	97.41	Staining left where soil was most concentrated, but to a lesser degree than previous group	93.95
		0.0066	0.0005	92.42	Staining left where soil was most concentrated, but to a lesser degree than previous group	
		0.0025	0.0002	92.00	Staining left where soil was most concentrated, but to a lesser degree than previous group	
	60C	0.0015	0.0001	93.33	No staining	94.14
		0.0040	0.0002	95.00	No staining	

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		0.0135	0.0008	94.07	Staining where soil was most concentrated but to the least degree of all groups	
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Summary:

Substrates:		Stainless Steel				
Contaminants:		Blood				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:	
Case Medical Inc.	Bigone	2oz/gal	89.87	☒		
Case Medical Inc.	Bigone	2 oz/gal	93.95	☒		
Case Medical Inc.	Bigone	2 oz/gal	94.14	☒		

Conclusion:

As the temperature increases, the performance of the Bigone 2 oz/gal improves. Cleaning at 25C and 50C was not able to remove staining, while cleaning at 60C began to remove most staining dependent on the soil load.