CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2017

DateRun: 10/19/2017

Experimenters: Dan Aspach, Kevin Smith

ClientType:

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Blood

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate effectiveness of the provided cleaners in regards to blood on steel

Experimental Procedure: Testing follows the guidelines described in ASTM G122 Standard Test Method for Evaluating the Effectiveness of Cleaning Agents.

For this test stainless steel coupons were weighed before soiling and then soiled with the synthetic blood and allowed to air dry for 24 hours. The following day the coupons were once again weighed to determine the mass of the synthetic blood and then placed into the supplied cleaners of Super Nova. 1 NpHD, PentaZyme, Super Nova.1, PentaPrep Spray all prepared at the given dilutions in water. The spray was left at room temperature. The coupons were cleaned for following the required cleaning times. After cleaning the solutions were removed and rinsed in a DI water bath and air dried for under an hour. After the coupons had dried thoroughly the dirty weights were taken and it was calculated how much had been removed from the coupons.

Product, temperature and concentrations used for supplied products.
Super Nova. 1 NpHD 160 F (1/10 fl oz/gal (0.8 ml/L water)
PentaZyme Multi-Enzymatic detergent at 140 F for 2 minutes. (0.5 oz/gal of water)
Super Nova.1 Multi-Enzymatic detergent at 140 F for 2 minutes. (0.1 oz/gal of water)
PentaPrep Spray (ready to use)
Biogone 5 minutes immersion at room temperature (1 part solution 2 parts water)

Results: The pentaPrep spray was the most effective in removing the dried blood, followed by SuperNova 1 NpHD. The Pentazyme and Super Nova 1 and similar removal rates to the supplied comparative product Biogone.

Cleaner	Initial Wt. of Cont	Clean Wt. of Cont.	% Cont. Removed	Average
SuperNova . 1 NpHD	0.0224	0.0069	69.2	71.51
	0.0136	0.0037	72.8	
	0.0102	0.0028	72.5	
Pentazyme	0.0157	0.0040	74.5	73.09
	0.0195	0.0052	73.3	
	0.0175	0.0050	71.4	
SuperNoval . 1	0.0085	0.0020	76.5	76.85
	0.0116	0.0025	78.4	
	0.0160	0.0039	75.6	
PentaPrep Spray	0.0128	0.0008	93.8	93.13
	0.0098	0.0002	98.0	
	0.0130	0.0016	87.7	

Summary:

Substrates:	Stainless Steel
Contaminants:	Blood

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Case Medical Inc.	BioGone Cleaner/Decontaminator	33	75.81	☐	
Case Medical Inc.	SuperNova .1 NpHD Neutral Detergent-CSNB01G	0.8	88.80	☑	
Case Medical Inc.	PentaPrep Multi-Enzymatic Pre-Soak-CSA012	100	91.27	☑	
	Pentazyme-CSC011	0.4	73.10	☐	

CLEANING LABORATORY EVALUATION SUMMARY

Case Medical Inc.					
Case Medical Inc.	SuperNova .1 Multi-Enzymatic Cleaner-CSNC01G	0.08	76.80	☐	

Conclusion: The PentaPrep spray was significantly more effective at cleaning the synthetic blood off stainless steel than the other cleaners.