CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	11/23/2008
Experimenters:	Johanna Oviedo
ClientType:	Lab
ProjectNumber:	Project #1
Substrates:	Stainless Steel
PartType:	Coupon
Contaminants:	Cutting/Tapping Fluids
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To test nontoxic industrial cleaning solutions for oil removal
Experimental Procedure:	Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Products were selected based on the compatibility of substrate and removal of foreign substance. Used 5% concentration and heated the samples at 135F. The steel coupons were immersed in a product for 5 minutes, rinsed for 30 seconds in tap water at 120F and dried in 30 seconds using compressed air is room temperature. Coupons were coated with used oil. Using a handheld swab and allowed to dry for 144 minutes at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. After cleaning process, the final weights were recorded, efficiencies were calculated and recorded.

Results:

Cleaner	Initial wt	Final wt	% Removed
Warren Chemical Compa ny, Sea Wash 77			
	0.1794	0.0646	63.99
	0.5656	0.0870	84.62
	0.5122	0.1731	66.20
A1 Hydro Parke Hill, SW Wash 10			
	0.3957	0.0245	93.81
	0.4295	0.0714	83.38
	0.4371	0.0775	82.27
Kyzen Company, Metalnox CP30			
	0.3151	0.0837	73.44
	0.4564	0.0590	87.07
	0.1348	0.0213	84.20
Kyzen Company, Lonox 13302			
	0.7258	0.3062	57.81
	0.9183	0.0998	89.13
-	2.0812	0.0427	102.05
Brulin Corporation, Nonsilicated H TP			
	2.3856	0.0393	98.35
	1.4773	0.0232	98.43
	0.0939	0.0378	59.74
Brulin Corporation, Safety Strip 58			98.00
	0.2490	0.0050	97.99
	0.4646	0.1548	66.68
	0.0256	0.0052	79.69

Summary:

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Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Warren Chemical Company	Sea Wash 77	5	71.60	☐	
A 1 Hydro Parke Hill Chemical	SW Wash 10 Aircraft Cleaner	5	86.48	☑	
Kyzen Corporation	Metalnox CP 30	5	81.57	☐	
Kyzen Corporation	Ionox 13302	5	83.00	☐	
Brulin Corporation	Non Silicated HTD	5	85.51	☑	
Brulin Corporation	Safety Strip 5896 B Oil Seal	5	81.45	☐	

Conclusion: Two products were successful in removing more than 85% of the oil from stainless steel using immersion cleaning.