CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	08/04/2008
Experimenters:	Jason Marshall, Shweta Bansal
ClientType:	Machine Construction Company
ProjectNumber:	Project #2
Substrates:	Steel
PartType:	Coupon
Contaminants:	Coatings
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To evaluate non-aqueous alternative cleaning products on the first supplied rust preventative
Experimental Procedure:	Nine products were selected from the lab's database, www.cleanersolutions.org, based on client supplied information and past testing results. All eight were used at full strength. Twenty-seven preweighed steel coupons were coated with rust preventative VCI 325 using a hand held swab. Dirty weights were recorded. Three coupons were cleaned in each product for five minutes using minimal agitation. No rinse was used and coupons were air dried at room temperature. Once dry, final weights were recorded and efficiencies calculated.
Results:	Of the nine products tested, only one removed more than 80% of the rust preventative and there were three that removed greater than 60%. The table lists the amount of soil added, the amount remaining and the efficiency of each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Smart Solve 605			
	0.0362	0.0573	-58.29
	0.0740	0.0561	24.19
	0.1098	0.0572	47.91
Citrus Soy Solvent Cleaner & Degreaser			
	0.1958	0.0778	60.27
	0.2172	0.0746	65.65
	0.1915	0.0707	63.08
BG 617			
	0.1466	0.1027	29.95
	0.1726	0.1028	40.44
	0.1125	0.1078	4.18
Bean-e-doo			
	0.1592	0.0630	60.43
	0.1758	0.0688	60.86
	0.1552	0.0543	65.01
Bio T 300 B			
	0.1441	0.0603	58.15
	0.1317	0.0568	56.87
	0.1636	0.0479	70.72
Vertec Bio Gold #3			
	0.1537	0.0554	63.96
	0.1141	0.0675	40.84
	0.1687	0.0714	57.68
Makisolv			
	0.1798	0.0288	83.98
	0.1731	0.0241	86.08
	0.1645	0.0293	82.19
Solsafe 245			
	0.0857	0.0722	15.75

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	0.1601	0.0701	56.21
	0.2142	0.0622	70.96
Soyclear 1500			
	0.2371	0.0988	58.33
	0.1534	0.1188	22.56
	0.2646	0.1202	54.57

Summary:

Substrates:	Steel
Contaminants:	Coatings

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
United Laboratories International	Smart Solve 605	100	4.60	☐	
Bi-O-Kleen Industries	Citrus Soy Solvent Cleaner & Degreaser	100	63.00	☑	
BioGenesis Enterprises Inc	BG Clean 617	100	24.85	☐	
Franmar Chemical	Bean-e-doo (Parts Washer Solvent)	100	62.10	☑	
Bio Chem Systems	Bio T 300 B	100	61.92	☑	
Vertec BioSolvents	VertecBio Gold 3	100	54.16	☐	
Gemtek Products	Safe Care (SC) Maxi Solv	100	84.08	☑	
Bio Chem Systems	Solsafe 245	100	47.64	☐	
AG Environmental Products	Soy Clear 1500	100	45.15	☐	

Conclusion:

The effective non-aqueous based products will be tested along with the effective aqueous products on the first supplied rust preventative using ultrasonic cleaning.