CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	09/23/2008
Experimenters:	Jason Marshall
ClientType:	Machine Construction Company
ProjectNumber:	Project #2
Substrates:	Steel
PartType:	Coupon
Contaminants:	Coatings
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To evaluate top two products on thirds supplied contaminant using heated immersion cleaning.
Experimental Procedure:	The top two products were selected from the previous trial based on success on removing two of the supplied soil using heated immersion cleaning. Both were used at full strength based on vendor recommendations. Beakers were heated to 130 F on a hot plate. Six preweighed steel coupons were coated with the rust preventative VCI 325 using a hand held swab. Coupons were weighed again to determine the amount of soil added. Three coupons were cleaned in each solution for 10 minutes using stir bar agitation. Coupons were rinsed for 15 seconds in tap water at 120 F and dried using compressed air at room temperature for 30 seconds. Final weights were recorded and efficiencies calculated.
Results:	The Bean-e-doo product removed over 95% of the rust preventative within 10 minutes of immersion cleaning. The Smart Solve 605 removed around 80%. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Smart Solve 605			
	0.0983	0.0213	78.33
	0.1442	0.0206	85.71
	0.0931	0.0245	73.68
Bean-e-doo			
	0.1160	0.0069	94.05
	0.0893	0.0058	93.51
	0.1263	0.0032	97.47

Summary:

Substrates:	Steel
Contaminants:	Coatings

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
United Laboratories International	Smart Solve 605	100	79.24	☐	
Franmar Chemical	Bean-e-doo (Parts Washer Solvent)	100	95.01	☑	

Conclusion: The Bean-e-doo product removed over 90% of all three contaminants using heated immersion cleaning and over 95% using heated ultrasonic cleaning. The Smart Solve 605 removed 90% on two of the three contaminants using heated immersion and removed greater than 90% on all three using heated ultrasonics. Piloting of the two products should take place next.