CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2009
DateRun:	10/15/2009
Experimenters:	Junhee Cho, Scott Nadolna
ClientType:	Ceramic Coating Company
ProjectNumber:	Project #2
Substrates:	Aluminum
PartType:	Coupon
Contaminants:	Waxes
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate products using longer manual cleaning times.
Experimental Procedure:	Nine products from the previous trials were selected. All were used at room temperature. Five alkaline aqueous cleaners were diluted to 5% using DI water in 300 ml beakers. Four cleaner was used at full strength. Twenty-four preweighed glass coupons were coated with wax manually without heat gun and allowed to dry for 24 hours at room temperature. The contaminated coupons were weighed again to determine the amount of soil added.
Results:	Two products were effective in removing the wax with a manual wiping action. The table lists the amount of soil initially added and the amount remaining after cleaning and the product efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Shop Master RC			
	0.0224	0.0051	77.23
	0.0772	0.0061	92.1
	0.0397	0.0093	76.57
Gemtek-SC Aircraft metal cleaner			
	0.0978	0.029	70.35
	0.0781	0.0232	70.29
	0.0801	0.0209	73.91
Biochem system - Solsafe 245			
	0.0994	0.0185	81.39
	0.0517	0.0103	80.08
	0.0555	0.0075	86.49
AGT Environmental - Soy clean 1500			
	0.0716	0.0195	72.77
	0.1669	0.0363	78.25
	0.0578	0.0273	52.77
MacDermid - NDLF Supreme			
	0.1715	0.0765	55.39
	0.0824	0.0395	52.06
	0.0776	0.0286	63.14
Alconox inc - Detergent 8			
	0.0633	0.024	62.09
	0.0492	0.0184	62.6
	0.0777	0.0333	57.14
Humisafe - Humisafe 9100			
	0.0724	0.0275	62.02
	0.0767	0.0363	52.67
	0.0615	0.0232	62.28

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Activion - Active Ion			
	0.0571	0.0301	47.29
	0.1001	0.0441	55.94
	0.095	0.0433	54.42
Humisafe - Humisafe s-910			
	0.1048	0.0466	55.53
	0.1029	0.0496	51.8
	0.125	0.041	67.2

Summary:

Substrates:	Aluminum
Contaminants:	Waxes

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Buckeye International	Shopmaster RC	5	81.97	☑	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	71.52	☐	
Bio Chem Systems	Solsafe 245	100	82.65	☑	
AG Environmental Products	Soy Clear 1500	100	67.93	☐	
MacDermid Industrial Products	New Dimensions LF Supreme	5	56.86	☐	
Alconox Inc	Detergent 8	5	60.61	☐	
PCI of America	Hurrisafe 9100 Paint Prep	5	58.99	☐	
Activeion Cleaning Solutions LLC	Activeion Pro	100	52.55	☐	

Conclusion:

Two products (Shopmaster RC, Solsafe 245) removed more than 80% of the wax from aluminum coupon. The added cleaning time did not improve cleaning performance. The top four products from both trials will be tested on the next supplied oil under similar conditions.