CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	07/28/2008
Experimenters:	Shweta Bansal
ClientType:	Lab
ProjectNumber:	Project #1
Substrates:	Aluminum
PartType:	Coupon
Contaminants:	Cutting/Tapping Fluids
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To remove vanishing cutting fluid from aluminum using immersion cleaning
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 for removal of the contaminant. Five percent concentrations were used and heated the samples at 130F. The coupons were immersed in a product for 5 minutes, rinsed with tap water and dried using room temperature compressed air. Coupons were coated with vanishing cutting fluid using a handheld swab and allowed to dry for one hour 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
Daraclean 235			
	0.2522	0.1096	56.54
	0.2164	0.1429	33.96
	0.2988	0.1172	60.78
SC Supersolv			
	0.3029	0.0522	82.77
	0.3728	0.0578	84.50
	0.4659	0.0578	87.59
Bio T Max			
	0.4027	0.0682	83.06
	0.4454	0.0521	88.30
	0.4020	0.0543	86.49
Sea Wash Blue			
	0.3693	0.1035	71.97
	0.4483	0.1038	76.85
	0.3500	0.1499	57.17
Valtron SP 2275			
	0.6383	0.1025	83.94
	0.5283	0.0970	81.64
	0.9955	0.1000	89.95
SC Aircraft & Metal Cleaner			
	0.8885	0.1547	82.59
	0.6062	0.1489	75.44
	0.7274	0.1341	81.56

Summary:

Substrates:	Aluminum				
Contaminants:	Cutting/Tapping Fluids				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Magnaflux	Daraclean 235	5	50.43	☐	
Gemtek Products	SC Supersolve Safety Solvent	5	84.11	☐	
Bio Chem Systems	Bio T Max	5	85.95	☑	
	Sea Wash Blue	5	88.74	☑	

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Warren Chemical Company					
Valtech Corporation	Valtron SP 2275	5	85.18	☑	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	79.86	☐	

Conclusion: Three of the six products removed over 85% of the cutting fluid using heated immersion cleaning.