CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	06/02/2008
Experimenters:	Shweta Bansal
ClientType:	Lab
ProjectNumber:	Project #1
Substrates:	Aluminum
PartType:	Coupon
Contaminants:	Coatings, Cutting/Tapping Fluids, Oil
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	Removing grinding fluid, rust preventative and cutting fluid from aluminum
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. Full strength concentrations were used at room temperature. The coupons were immersed in a product for 30 seconds. Sets of coupons were coated with three contaminants: grinding fluid, rust preventative and cutting oil. Using a handheld swab and allowed to dry for 144 hours 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
M6310 Grinding Fluid			
	0.4890	0.0460	90.59
	0.5553	0.0316	94.31
	0.5031	0.0292	94.20
Smart Solve 605 Grinding fluid			
	0.7999	0.0233	97.09
	0.5199	0.0150	97.11
	0.5069	0.0444	91.24
M6310 Rust Preventative			
	0.4864	0.0379	92.21
	0.4085	0.0243	94.05
	0.5412	0.0397	92.66
Smart Solve 605 Rust Preventative			
	0.4936	0.0278	94.37
	0.4757	0.0301	93.67
	0.7236	0.0306	95.77
M6310 Cutting Oil			
	0.6470	0.0215	96.68
	0.5802	0.0315	94.57
	0.5980	0.0398	93.34
Smart Solve 605 Cutting oil			
	0.5261	0.0324	93.84
	0.4683	0.0295	93.70
	0.3928	0.0114	97.10

Summary:

Substrates:	Aluminum				
Contaminants:	Coatings, Cutting/Tapping Fluids, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Kyzen Corporation	Metalnox M6310 (For Comparison Only)	100	47.13	☐	Grinding Fluid

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United Laboratories International	Smart Solve 605	100	-38.97	☐	Grinding Fluid
Kyzen Corporation	Metalnox M6310 (For Comparison Only)	100	56.12	☐	Rust Preventative
United Laboratories International	Smart Solve 605	100	7.75	☐	Rust Preventative
Kyzen Corporation	Metalnox M6310 (For Comparison Only)	100	18.49	☐	Cutting Oil
United Laboratories International	Smart Solve 605	100	7.37	☐	Cutting Oil

Conclusion: No product removed over 85% of any of the three contaminants.