CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2012

DateRun: 11/02/2012

Experimenters: Jason Marshall, Johnny Le

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: Follow up test for oil removal using manual wiping

Experimental Procedure: Production soil as described in Green Seal GS 34 was made by mixing 200 ml Quench Oil and 200 ml cutting oil for 20 minutes at room temperature using a magnetic stirrer in a second 750 ml beaker. Approximately 100 mg of each soil was applied to a precleaned and preweighed stainless steel coupon onto one with a handheld swab. The production soil on the coupons was baked in an oven for thirty minutes at 105° C (220 F). The coupons were then allowed to cool to room temperature and weighed a second time to determine the amount of soil added.

Three soiled coupons were placed in the Gardner Straight Line washability unit. Cleaning products were sprayed twice onto the reinforced Wypal X60 paper towel attached to the cleaning instrument. The cleaning was performed using Gardner Straight-line washability unit and conducted for 5 cycles. The coupons were then weighed to determine amount of soil removed/remaining. A dry Wypal towel was used to remove excess cleaning product from surface if needed). A final dry/clean weight was recorded and soil removal rates were calculated.

Results: Following recommended cleaning procedures for the supplied products (spraying directly onto paper towel) all 4 products removed over 90% of the soil using manual wiping. The supplied product was comparable to the other non-aerosol spray cleaning product, removing about 3% less soil. The table lists the amount of soil added, the amount remaining and the calculated efficiencies.

Cleaner	Initial wt	Final wt	% Removed
EZ Finishes Wow			
	0.1023	0.0127	87.59
	0.0930	0.0127	86.34
	0.1136	0.0040	96.48
Bryson Industries Citrushine			
	0.1152	0.0096	91.67
	0.1039	0.0090	91.34
	0.0999	0.0024	97.60
3M Stainless Steel Polish & Cleaner			
	0.1266	0.0086	93.21
	0.1103	0.0063	94.29
	0.1225	0.0092	92.49
Misty Painless Stainless			
	0.1372	0.0032	97.67
	0.1208	0.0028	97.68
	0.1126	0.0053	95.29

Summary:

Substrates:	Stainless Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
3M	Stainless Steel Cleaner & Polish Aerosol	100	93.13	☑	

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Amrep Inc	Misty Painless Stainless A00142 Aerosol	100	96.88	☑	
EZ Finishes Inc.	WOW Stainless Steel Cleaner	100	90.14	☑	
Bryson Industries	Bryson Citrishine SS Polish	100	93.53	☑	

Conclusion: EZ Finishes WOW spray cleaner removed more than 90% of the soil using manual cleaning.