

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004  
 DateRun: 05/27/2004  
 Experimenters: Jason Marshall  
 ClientType: Lab  
 ProjectNumber: Project #1  
 Substrates: Sterling/Silver  
 PartType: Coupon  
 Contaminants: Oil  
 Cleaning Methods: Vapor Degreasing  
 Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Two hundred fifty milliliters of each product were used at full strength in a 4000 ml beaker and heated to its boiling point on a hot plate. Preweighed aluminum coupons were coated with the Exxon Mobil Vacmul 03D (94741-44-2) using a handheld swab. Coupons were weighed a second time to determine the amount of soil added to each coupon. Three coupons were cleaned in each solution for 5 minutes using vapor degreasing. After cooling to room temperature, the coupons were weighed a final time and efficiencies were calculated.

Results:

Summary:

<b>Substrates:</b>	Sterling/Silver				
<b>Contaminants:</b>	Oil				
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
AGA Chemical	AK 225	100	99.57	<input checked="" type="checkbox"/>	
DuPont	Vertrel CCA	100	99.16	<input checked="" type="checkbox"/>	
DuPont	Vertrel MCA	100	100.14	<input checked="" type="checkbox"/>	
Micro Care	Heavy Duty Degreaser C	100	99.98	<input checked="" type="checkbox"/>	
Micro Care	Flux Remover C	100	100.43	<input checked="" type="checkbox"/>	
3M	HFE 7100	100	96.57	<input checked="" type="checkbox"/>	
3M	HFE 7200	100	97.42	<input checked="" type="checkbox"/>	
Enviro Tech International Inc	Ensolv	100	100.04	<input checked="" type="checkbox"/>	
Enviro Tech International Inc	Ensolv A	100	99.96	<input checked="" type="checkbox"/>	
Kyzen Corporation	Metalnox M6960	100	100.02	<input checked="" type="checkbox"/>	
Poly Systems USA Inc	Solvon Kreussler PB	100	100.18	<input checked="" type="checkbox"/>	
Poly Systems USA Inc	Solvon Kreussler IP	100	99.83	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 10	100	97.35	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 20	100	99.59	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 30	100	92.22	<input checked="" type="checkbox"/>	

Conclusion: All fifteen products removed over 85%.