

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004
 DateRun: 05/28/2004
 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 Houghton International Cindol 3401 oil (64742-46-7) 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:

Substrates:	Sterling/Silver				
Contaminants:	Oil				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AGA Chemical	AK 225	100	99.14	<input checked="" type="checkbox"/>	
DuPont	Vertrel CCA	100	99.68	<input checked="" type="checkbox"/>	
DuPont	Vertrel MCA	100	100.01	<input checked="" type="checkbox"/>	
Micro Care	Heavy Duty Degreaser C	100	100.37	<input checked="" type="checkbox"/>	
Micro Care	Flux Remover C	100	100.55	<input checked="" type="checkbox"/>	
3M	HFE 7100	100	99.96	<input checked="" type="checkbox"/>	
3M	HFE 7200	100	98.92	<input checked="" type="checkbox"/>	
Enviro Tech International Inc	Ensolv	100	99.71	<input checked="" type="checkbox"/>	
Enviro Tech International Inc	Ensolv A	100	99.13	<input checked="" type="checkbox"/>	
Kyzen Corporation	Metalnox M6960	100	99.08	<input checked="" type="checkbox"/>	
Poly Systems USA Inc	Solvon Kreussler PB	100	99.87	<input checked="" type="checkbox"/>	
Poly Systems USA Inc	Solvon Kreussler IP	100	99.71	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 10	100	99.73	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 20	100	99.14	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 30	100	89.55	<input checked="" type="checkbox"/>	

Conclusion: All fifteen products removed over 85%.