CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2002
DateRun:	09/19/2002
Experimenters:	Jason Marshall
ClientType:	Adhesive Manufacturer
ProjectNumber:	Project #2
Substrates:	Ceramics
PartType:	Coupon
Contaminants:	Coatings
Cleaning Methods:	Mechanical Agitation
Analytical Methods:	Gravimetric
Purpose:	To evaluate mechanical agitation with successful cleaner

Experimental Procedure:

One product from the previous trial and three additional products were used at full strength in 300 ml beakers at room temperature. Two other products from the previous trial were used at a 10% dilution. Eighteen preweighed coupons were coated with Anderson Development Co Escoat P-20 carbamic ester/aromatic hydrocarbon coating (108-88-3) using a hand held swab. Coupons were allowed to dry for two hours at room temperature. Once dry, a second weighing was performed to determine the amount of contaminant that was applied.

Three coupons were immersed in each solution and agitated by lifting the coupons up and down at room temperature for 5 minutes. Following cleaning, coupons were rinsed in a tap water bath for 15 seconds and dried using air knives for 2 minutes both at room temperature. Once dry, coupons were weighed a final time and efficiencies were calculated. Coupons were wiped and weighed again and a second efficiency was calculated.

Results:

Agitated Cleaning				
Cleaner	Coupon 1	Coupon 2	Coupon 3	Average
Solsafe 245	97.43	97.04	97.01	97.16
Citriburst 7	94.10	99.25	98.03	97.13
Canola Gold 110	23.58	25.18	61.98	36.91
Citrikleen XPC	98.49	98.74	98.14	98.46
Shopmaster FF	82.17	94.15	94.64	90.32
Beyond 2006	94.09	86.97	97.94	93.00

Manual Wipe Cleaning				
Cleaner	Coupon 1	Coupon 2	Coupon 3	Average
Solsafe 245	99.52	100.35	99.04	99.63
Citriburst 7	97.94	99.63	99.16	98.91
Canola Gold 110	84.13	82.16	89.54	85.28
Citrikleen XPC	99.06	99.11	99.1	99.09
Shopmaster FF	96.61	99.38	99.07	98.35
Beyond 2006	97.9	97.14	99.56	98.20

All but one cleaner were also successful with mechanical agitation alone. All six products were successful when wiped three quick times with a paper towel.

Summary:

Substrates:	Ceramics				
Contaminants:	Coatings				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Bio Chem Systems	Solsafe 245	100	99.63	☑	
Florida Chemical Company	Citrus Burst 7	100	98.91	☑	
AG Environmental Products	Canola Gold CE110	100	85.28	☑	
Pentone Corporation	Citrikleen XPC	100	99.09	☑	

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Buckeye International	Shopmaster FF	10	98.35	☑	
Today & Beyond	Beyond 2006	10	98.20	☑	

Conclusion: It appears that Solsafe 245, Citriburst 7,Citrikleen XPC, Shopmaster FF and Beyond 2006 are all capable of removing the dried coating from the ceramic coupons through agitation and manual wiping.