CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	1996
DateRun:	03/08/1996
Experimenters:	Jay Jankauskas, Sutherman Ramesh
ClientType:	Coatings Manufacturer
ProjectNumber:	Project #1
Substrates:	Stainless Steel
PartType:	Coupon
Contaminants:	Adhesive, Coatings
Cleaning Methods:	
Analytical Methods:	Gravimetric
Purpose:	To determine temperature dependance
Experimental Procedure:	The purpose of this trial is to determine the temperature dependance of the two terpene chemistries as compared to NMP. Three coupons will be cleaned in 500 ml of each solution at each temperature level (75F, 120F, 160F). Cleaning time will be for thirty minutes, and an acetone rinse will follow. All coupons were prepared and contaminated in the same method as previous experiments. Data for cleaning efficiency at 160F will be imported from Phase II results to avoid redundant testing. SUBSTRATE MATERIAL: 304 Stainless Steel Coupons CONTAMINANTS: Durane Base Coatings #51144 CONTAMINATING PROCESS USED: Rubbed on with swab and allowed to cure overnight
Results:	NMP- Room Temp

sample #	clean mass (g)	mass with contamination (g)	mass after cleaning (g)	contaminant removed (g)	Percent Removal
19	60.2196	61.7264	60.8123	0.9141	60.67%
20	60.4776	62.0680	61.0376	1.0304	64.79%
27	60.2424	61.4824	60.5981	0.8843	71.31%
				2.8288	65.59%
					5.37%

Inland Tech EP-921- Room Temp

sample #	clean mass (g)	mass with contamination (g)	mass after cleaning (g)	contaminant removed (g)	Percent Removal
11	60.7079	62.2201	61.5401	0.6800	44.97%
12	60.2775	61.6108	60.8862	0.7246	54.35%
14	60.5386	62.3071	61.7279	0.5792	32.75%
				1.9838	44.02%
					10.83%

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Terpene Tech HTF85B-Room Temp

sample #	clean mass (g)	mass with contamination (g)	mass after cleaning (g)	contaminant removed (g)	Percent Removal
6	60.4836	62.0351	61.0971	0.9380	60.46%
7	59.9048	61.4770	60.4385	1.0385	66.05%
10	60.0137	61.6361	60.7846	0.8515	52.48%
				2.828	59.67%
					6.82%

NMP-120F

CLEANING LABORATORY EVALUATION SUMMARY

sample #	clean mass (g)	mass with contamination (g)	mass after cleaning (g)	contaminant removed (g)	Percent Removal
21	60.2213	61.9631	60.8190	1.1441	65.68%
22	60.0081	61.6345	60.2803	1.3542	83.26%
23	60.1057	61.5124	60.1346	1.3778	97.95%
				3.8761	82.30%
					16.15%

Terpene Tech. HTF85B: 120F

sample #	clean mass (g)	mass with contamination (g)	mass after cleaning (g)	contaminant removed (g)	Percent Removal
16	60.5752	62.4356	60.6127	1.8229	97.98%
25	60.5201	62.1252	60.6090	1.5162	94.46%
28	59.9508	61.3642	59.9562	1.408	99.62%
				4.7471	97.35%
					2.64%

Inland Tech EP-921-120 F

sample #	clean mass (g)	mass with contamination (g)	mass after cleaning (g)	contaminant removed (g)	Percent Removal
8	60.1098	61.4076	60.3152	1.0924	84.17%
24	60.2288	61.8040	60.6116	1.1924	75.70%
26	59.3009	60.6873	59.5260	1.1613	83.76%
				3.4461	81.21%
					4.78%

Summary:

Substrates:	Stainless Steel
Contaminants:	Adhesive, Coatings

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
ISP Technologies	N Methyl Pyrrolidone	100	65.69	☐	
Inland Technologies Inc	EP 921	100	81.21	☑	
Tarksol Inc	Tarksol HTF 85 B	100	97.35	☑	

Conclusion: