CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007

DateRun: 10/16/2007

Experimenters: Jason Marshall

ClientType: Environmental Service Firm

ProjectNumber: Project #1

Substrates: Liquid

PartType: Coupon

Contaminants: Greases, Dirt, Oil

Cleaning Methods:

Analytical Methods: Colorimeter

Purpose: To measure %T and absorbance of supplied cleaning product from three locations.

Experimental Procedure: The experiment measured the percent transmittance and absorbance at 510 nm using a LaMotte's SMART Colorimeter. The instrument was first zeroed using DI water. Each sample was then measured three times. A 10 ml sample was poured into the glass bottle, capped, wiped and inverted once prior to placing in the instrument. After the reading was recorded, the 10 ml sample was poured back into the larger bottle. Then, a second reading was taken from another 10 ml sample and then finally a third sample. The values were averaged and graphed. Samples were taken from six-month samples from three locations and an unused cleaning product.

In between each location, a blank reading was taken using DI water.

Results: The resulting measurements varied from location to location. The Bergdales samples dropped from 34 to 7% transmittance from the first to second sample collected. In contrast, the Flahertys samples increased from 13 to 17 %transmittance and the Syversons remained about the same changing from 0 to 1 %transmittance.

Table 1 list the recorded values for each sample measured for both %Transmittance and Absorbance.

Sample	%T 1	%T 2	%T 3	Ave %T	Abs 1	Abs 2	Abs 3	Ave Abs
Bergdales 6-1	35	34	34	34.33	0.46	0.46	0.46	0.46
Bergdales 6-2	8	7	7	7.33	1.09	1.15	1.14	1.13
Flahertys 6-1	13	13	13	13.00	0.90	0.89	0.89	0.89
Flahertys 6-2	17	16	16	16.33	0.77	0.79	0.79	0.78
Syversons 6-1	0	0	0	0.00	2.47	2.47	2.47	2.47
Syversons 6-2	1	1	1	1.00	2.18	2.18	2.18	2.18
Unused Cleaner	127	129	131	129.00	-0.10	-0.11	-0.12	-0.11

When comparing the six-month samples to the previously measured four months of samples, the six-month samples from each site were all lower than the previous measurements. The Bergdales readings were the greatest in magnitude of the three locations in all months samples, followed by Flahertys and Syversons. The comparison of data is listed in the next table.

Sample Period	Bergdales	Flahertys	Syversons	Blank
0	115	115	115	
1	82	74	55	
2	55	43	36	
3	35	25	15	
6-1	34	13	0	
6-2	7	16	1	129

Summary:

Substrates:	Liquid				
Contaminants:	Greases, Dirt, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**

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Kleer Flo Company	Degreasol Formula 99-R		0.00	☐	

Conclusion: The %Transmittance from the six-month samples decreased from the previous measurements from the three locations.