CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2019

DateRun: 01/30/2019

Experimenters: Othon Pagounes, Tatyanna Moreland Junior

ClientType:

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate the effectiveness of CLEANER in the removal of SOILS on various surfaces.

Experimental Procedure: Thirty pre-weighed coupons, six per cleaner, were contaminated with either (A) maintenance soil or (B) production soil using a swab. Coupons contaminated with maintenance soil aged for 30 minutes at 105 F, and 30 minutes at 220 F for production soil. Coupons were immersed into the cleaning solution and then rinsed in a tap water bath. Coupons were left to air dry for 30 minutes at room temperature before oven drying at 105 F for 30 minutes. Coupons were cooled before final weights were recorded.

Results:

Cleaner	Soil	Initial wt	Dirty wt	Clean wt.	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
1	A	60.9449	61.0448	61.1085	0.0999	0.1636	-63.76	0.30	34.10
		48.0576	48.1406	48.1124	0.0830	0.0548	33.98		
		48.0087	48.1100	48.0789	0.1013	0.0702	30.70		
	B	47.9705	48.0603	47.9793	0.0898	0.0088	90.20	88.10	
		64.2473	64.3653	64.2572	0.1180	0.0099	91.61		
		61.2283	61.3665	61.2525	0.1382	0.0242	82.49		
2	A	63.6739	63.7367	63.7316	0.0628	0.0577	8.12	13.90	39.52
		63.9777	64.0310	64.0222	0.0533	0.0445	16.51		
		47.8547	47.9608	47.9427	0.1061	0.0880	17.06		
	B	62.8221	62.9210	62.8297	0.0989	0.0076	92.32	85.12	
		60.8239	60.9234	60.8327	0.0995	0.0088	91.16		
		60.0665	60.1455	60.0887	0.0790	0.0222	71.90		
3	A	62.6707	62.7759	62.7532	0.1052	0.0825	21.58	19.53	42.18
		60.3390	60.4282	60.4109	0.0892	0.0719	19.39		
		62.6885	62.7799	62.7638	0.0914	0.0753	17.61		
	B	62.4913	62.5944	62.5013	0.1031	0.0100	90.30	86.47	
		64.0114	64.0914	64.0229	0.0800	0.0115	85.63		
		60.4622	60.5615	60.4786	0.0993	0.0164	83.48		
4	A	48.1247	48.2444	48.2291	0.1197	0.1044	12.78	20.55	43.34
		60.2143	60.3387	60.3148	0.1244	0.1005	19.21		
		60.0946	60.1981	60.1674	0.1035	0.0728	29.66		
	B	62.6112	62.7093	62.6220	0.0981	0.0108	88.99	90.36	
		62.6879	62.7554	62.6958	0.0675	0.0079	88.30		
		48.1031	48.1773	48.1077	0.0742	0.0046	93.80		
5	A	60.0830	60.1550	60.1366	0.0720	0.0536	25.56	19.11	55.64
		58.5588	59.6584	59.6269	1.0996	1.0681	2.86		
		48.1397	48.2030	48.1847	0.0633	0.0450	28.91		
	B	47.8312	47.9921	47.8418	0.1609	0.0106	93.41	92.18	
		59.6913	59.7719	59.7030	0.0806	0.0117	85.48		
		63.9072	64.0215	63.9099	0.1143	0.0027	97.64		

Cleaner 1 with soil A, cleaner 2 with soil B, and cleaner 5 with soil A yielded unusual numbers. The likely cause is that the soil absorbed the cleaning product, causing the clean weight to weigh more than the initial weight of the coupons.

CLEANING LABORATORY EVALUATION SUMMARY

Summary:

Substrates:	Stainless Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Simple Green	Crystal Simple Green Industrial Cleaner & Degreaser	100	88.10	☑	production soil
Sycamore Group	Sycamore Degreaser 021	100	85.12	☑	production soil
Sycamore Group	Sycamore Degreaser 022	100	86.47	☑	production soil
Sycamore Group	Sycamore Degreaser 023	100	90.36	☑	production soil
Sycamore Group	Sycamore Degreaser 005	100	92.18	☑	production soil

Conclusion:

The Sycamore degreaser products are more effective than Crystal Simple Green cleaning product at removing oil from stainless steel.