CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2018

DateRun: 05/08/2018

Experimenters: Carla De La Cruz, Sabrina Apel

ClientType: Jewelry Mfr

ProjectNumber: Project #4

Substrates: Sterling/Silver

PartType: Coupon

Contaminants: Lubricating/Lapping Oils

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To identify the hardest lubricating oils to remove from gold and silver substrates.

Experimental Procedure: Twenty four silver-plated aluminum coupons, three per soil, were used for each cleaner. Initial weights were recorded before soiling the coupons on one side with a thin layer using a swab. Dirty weights were taken immediately after soiling, and the coupons were immersed three at a time for five minutes in an unheated (68 F) beaker filled with the respective cleaner. The coupons were air dried before taking final weights and observations.

Results:

Soil	Cleaner	Initial wt.	Final wt.	% Removed	%Avg Removed
Masterdraw 419TT #4	Aquavantage 1400 GD	0.0237	0.0021	91.14	87.28
		0.0217	0.0018	91.71	
		0.0200	0.0042	79.00	
	LF2100	0.0140	0.0018	87.14	72.10
		0.0242	0.0029	88.02	
		0.0277	0.0163	41.16	
Hamilube 9030 - HV3 #11	Aquavantage 1400 GD	0.1213	0.1221	-0.66	1.80
		0.1175	0.1188	-1.11	
		0.1510	0.1402	7.15	
	LF2100	0.1473	0.1372	6.86	20.23
		0.1991	0.1551	22.10	
		0.1923	0.1313	31.72	
BurnFree #5	Aquavantage 1400 GD	0.0275	0.0175	36.36	46.00
		0.0365	0.0199	45.48	
		0.0308	0.0135	56.17	
	LF2100	0.0146	0.0109	25.34	22.76
		0.0198	0.0165	16.67	
		0.0156	0.0115	26.28	
xxAluminum #19	Aquavantage 1400 GD	0.0351	0.0091	74.07	76.64
		0.0292	0.0076	73.97	
		0.0414	0.0075	81.88	
	LF2100	0.0234	0.0229	2.14	14.39
		0.0166	0.0136	18.07	
		0.0148	0.0114	22.97	
#9 Marvel Mystery Oil	Aquavantage 1400 GD	0.0299	0.0121	59.53	67.06
		0.0260	0.0099	61.92	
		0.0281	0.0057	79.72	
	LF2100	0.0135	0.0175	-29.63	-15.56
		0.0188	0.0202	-7.45	
		0.0177	0.0194	-9.60	
#3 BurnFree Masterdraw 5585C	Aquavantage 1400 GD	0.1159	0.1135	2.07	2.68
		0.1333	0.1300	2.48	
		0.1606	0.1550	3.49	
	LF2100	0.0205	0.0039	80.98	85.60
		0.0163	0.0021	87.12	

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		0.0186	0.0021	88.71	
Caster Oil #7	Aquavantage 1400 GD	0.0573	0.0574	-0.17	-0.08
		0.0919	0.0928	-0.98	
		0.0871	0.0863	0.92	
	LF2100	0.0200	-0.0037	118.50	79.59
		0.0174	0.0007	95.98	
		0.0243	0.0184	24.28	
#1 Masterdraw L240B	Aquavantage 1400 GD	0.0622	0.0012	98.07	98.52
		0.0617	0.0005	99.19	
		0.0999	0.0017	98.30	
	LF2100	0.0567	0.0555	2.12	-1.76
		0.0400	0.0414	-3.50	
		0.0360	0.0374	-3.89	

Summary:

Substrates:	Sterling/Silver
Contaminants:	Lubricating/Lapping Oils

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Brulin Corporation	Aquavantage 1400	10	0.00	☑	
International Products Corporation	LF 2100 (Liquid Foam Cleaner)	5	0.00	☐	

Conclusion: