

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2018
DateRun: 05/09/2018
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	

CLEANING LABORATORY EVALUATION SUMMARY

		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		<input checked="" type="checkbox"/>	
International Products Corporation	LF 2100 (Liquid Foam Cleaner)	5		<input type="checkbox"/>	

Conclusion: