

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2015
 DateRun: 07/15/2015
 Experimenters: Luis Raudales
 ClientType: General
 ProjectNumber: Project #1
 Substrates: Wood
 PartType: Coupon
 Contaminants: Paints
 Cleaning Methods: Manual Paint Stripping
 Analytical Methods: Gravimetric, Visual

Purpose: To evaluate four paint removers using a manual removal of paint and varnish from painted wooden coupons.

Experimental Procedure: Twelve pre-weighted wooden coupons were double coated with the supplied paint or varnish. Once dried, a second weight was recorded to determine the amount of paint added to the coupon. The cleaner was applied to each coupon with a brush and then cleaned using a 3 m Heavy Duty Scour Pad. Each coupon was scraped firmly ten times every five minutes for a 30-minute period. Then by visual and manual comparison efficiency were placed.

Results:

Cleaner	Dirty Weight	Clean Weight	% Removal
Nature Sol 100	0.1190	-0.1509	-1.27
	-0.1938	-0.0209	0.11
	0.4473	-0.0317	-0.07
EP-921	-0.0420	-1.0986	26.16
	-0.1148	-0.3655	3.18
	0.3454	-0.2382	-0.69
Bio-Solv	0.2217	0.2840	1.28
	-0.0294	0.0095	-0.32
	0.8010	-0.4589	-0.57
Soy Gold 1000	0.2684	-2.8769	-10.72
	2.2256	-2.2438	-1.00
	0.8212	-0.9771	1.19

Visual Ranking

Cleaner	5 min	10 min	15 min	20 min	25 min	30 min
Nature Sol 100	3	2	2	1.5	1	1
EP-921	5	5	5	5	4.5	3
Bio-Solv	5	4.5	4	4	4	4
Soy Gold 1000	5	4.5	4.5	4.5	4	2

Summary:

Substrates:		Wood				
Contaminants:		Paints				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:	
Brulin Corporation	Nature Sol 100	100		<input type="checkbox"/>	Had poor results on Semi Gloss Varnish but it worked fine on Latex Acrylics Paint and Minwax Polyeurthane.	
Inland Technologies Inc	EP 921	100		<input checked="" type="checkbox"/>	Had the second best performance. It needed more time to work but was able to remove the three different paints.	
Westford Chemical Corporation	Biosolve	100		<input checked="" type="checkbox"/>	Had the best performance and time for removing all three paints.	

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AG Environmental Products	Soy Gold 1000	100		<input type="checkbox"/>	Had no removal on the Semi Gloss Varnish and Latex Acrylic paint. Had limited results on the Polyurethane Paint.
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Conclusion:

Overall, Biosolve was the best paint stripper for removing all three paint contaminants. EP 921 would be another good option to look further into as a Methylene Chloride alternative on other types of paints. Future testing should include these two paint strippers.