

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. |
|---------------------------|---------------|-----|--|--------------------------|--|

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.