

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 11/01/2016

Experimenters: Carla De La Cruz, Abigail Giarrosso, Rhoda Gindi, Catherine York

ClientType: Musical Instrument

ProjectNumber: Project #3

Substrates: Brass, Stainless Steel

PartType: Coupon

Contaminants: Inks

Cleaning Methods: Manual Wipe

Analytical Methods: Visual

Purpose: To evaluate the efficiency at which Smart Solve 605 and Bio Removable Degreaser can remove ink from Stainless Steel and Brass.

Experimental Procedure: Six Stainless Steel coupons and six Brass coupons were weighed to get their initial weights. Then the middle portion of each coupon was coated in ink, and the dirty weights were taken. Three of the Stainless-Steel coupons and three of the Brass coupons were treated with the Smart Solve 605 in the abrasion machine. The coupons were cleaned in 30 second increments up to 90 seconds. The coupons were lightly patted dry to remove any extra cleaner. The process was repeated with the remaining coupons and the Bio Removable Degreaser cleaner. Finally, all of the coupons were weighed to get their final weights.

| | | | | |
|----------|-------------------------|-------------|-----------|-----------|
| Results: | Stainless Steel | | | |
| | Cleaner | Initial Wt. | Final wt. | % Removed |
| | Smart Solve 605 | 0.1229 | 0.0052 | 95.77 |
| | | 0.0468 | 0.0086 | 81.62 |
| | | 0.0412 | 0.0044 | 89.32 |
| | | | | |
| | Bio Removable Degreaser | | | |
| | | 0.0326 | 0.0156 | 52.14 |
| | | 0.018 | 0.0013 | 92.78 |
| | | 0.0203 | 0.0024 | 88.18 |
| | | | | |
| | Brass | | | |
| | Smart Solve 605 | 0.0618 | 0.0148 | 76.05 |
| | | 0.1486 | 0.0141 | 90.51 |
| | | 0.0812 | 0.0192 | 76.35 |
| | | | | |
| | Bio Removable Degreaser | 0.0524 | 0.0201 | 61.64 |
| | | 0.0348 | 0.0131 | 62.36 |
| | | 0.0224 | 0.0126 | 43.75 |

| | | | | | |
|----------|---|----------------------------------|---------------|--------------------|-------------------------------------|
| Summary: | Substrates: Brass, Stainless Steel | | | | |
| | Contaminants: Inks | | | | |
| | Company Name: | Product Name: | Conc.: | Efficiency: | Effective: |
| | United Laboratories International | Smart Solve 605 | 100 | 84.90 | <input checked="" type="checkbox"/> |
| | United Laboratories International | Smart Solve 605 | 100 | 80.97 | <input checked="" type="checkbox"/> |
| | Spartan Chemical Company | BioRenewables - Restroom Cleaner | 100 | 77.70 | <input checked="" type="checkbox"/> |
| | Observations: | | | | |
| | Most of the removal occurred within the first 30 seconds of manual cleaning.(Stainless Steel) | | | | |
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|--------------------------------|----------------------------------|-----|-------|--------------------------|---|
| Spartan Chemical Company | BioRenewables - Restroom Cleaner | 100 | 55.92 | <input type="checkbox"/> | Most of the removal occurred within the first 30 seconds of manual cleaning.(Brass) |
| NuGeneration Technologies, LLC | FluoSolv CX | 100 | 59.59 | <input type="checkbox"/> | Very little removal. |

Conclusion:

The results of the experiment proved to be successful. However, the Smart Solve 605 appeared to do a better job at cleaning the ink off of the coupons compared to the Bio Removable Degreaser. In the future, the Smart Solve 605 should be used to clean the ink.