

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006  
 DateRun: 07/14/2006  
 Experimenters: Jason Marshall  
 ClientType: Cleaner Manufacturer  
 ProjectNumber: Project #1  
 Substrates: Ceramics, Plastic, Steel  
 PartType: Coupon  
 Contaminants: Hucker's Soil  
 Cleaning Methods: Manual Wipe  
 Analytical Methods: Gravimetric

Purpose: To run a second cleaning cycle for one of the supplied products for All-purpose cleaning

Experimental Procedure: One supplied cleaning products was used at full strength to clean the coupons previously contaminated with the Hucker's Soil Formulation (Jif Creamy Peanut Butter 9.2%, Salted Butter 9.2%, Arrowhead Mills stone ground wheat flour 9.2%, Egg Yolk 9.2%, Evaporated milk 13.8%, Distilled water 45.8%, Printer's ink with boiled linseed oil 0.9%, Shaws saline solution 2.7%).

Three coupons were placed into a Gardner Straight Line Washability unit. A Professional Painter's Rag was attached to the cleaning sled and soaked with 5-7 sprays of cleaning solutions. Each coupon was sprayed 7-10 times with the same cleaning solution. The cleaning unit was run for 20 cycles (~33 seconds). At the end of the cleaning, coupons were wiped once with a dry paper towel. Final weights were recorded, efficiencies were calculated and recorded.

Results: The table lists the amount of soil added, the amount remaining and the percent removed for each coupon cleaned. The values from both rounds of cleaning are listed.

| Cleaner                            | Initial wt | Final wt | % Removed |
|------------------------------------|------------|----------|-----------|
| Cogent Sodium hypochlorite Steel   | 0.7091     | 0.0226   | 96.81     |
|                                    | 0.5136     | 0.0527   | 89.74     |
|                                    | 0.7826     | 0.0415   | 94.70     |
| Round 2                            | 0.7091     | 0.0050   | 99.29     |
|                                    | 0.5136     | 0.0013   | 99.75     |
|                                    | 0.7826     | 0.0051   | 99.35     |
| Cogent Sodium hypochlorite Plastic | 0.8569     | 0.0303   | 96.46     |
|                                    | 1.0498     | 0.0299   | 97.15     |
|                                    | 0.5279     | 0.0402   | 92.38     |
| Round 2                            | 0.8569     | 0.0018   | 99.79     |
|                                    | 1.0498     | 0.0002   | 99.98     |
|                                    | 0.5279     | 0.0007   | 99.87     |
| Cogent Sodium hypochlorite Ceramic | 0.6902     | 0.1802   | 73.89     |
|                                    | 0.9517     | 0.2429   | 74.48     |
|                                    | 0.8444     | 0.2760   | 67.31     |
| Round 2                            | 0.6902     | 0.1313   | 80.98     |
|                                    | 0.9517     | 0.1735   | 81.77     |
|                                    | 0.8444     | 0.2566   | 69.61     |

Summary:

|                                |                             |               |                    |                                     |                      |
|--------------------------------|-----------------------------|---------------|--------------------|-------------------------------------|----------------------|
| <b>Substrates:</b>             | Ceramics, Plastic, Steel    |               |                    |                                     |                      |
| <b>Contaminants:</b>           | Hucker's Soil               |               |                    |                                     |                      |
| <b>Company Name:</b>           | <b>Product Name:</b>        | <b>Conc.:</b> | <b>Efficiency:</b> | <b>Effective:</b>                   | <b>Observations:</b> |
| Cogent Environmental Solutions | DFC Sodiumhypochlorite 0.02 | 100           | 92.27              | <input checked="" type="checkbox"/> |                      |

Conclusion: The second cycle of cleaning improved the efficiency of the Sodium hypochlorite 0.02% solution. The effectiveness increased to 92.27% from 86.69%.