# CLEANING LABORATORY EVALUATION SUMMARY

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|---|---|
| SCL #: | 2023 |
| DateRun: | 03/06/2023 |
| Experimenters: | Namrata Chauhan, Mei Jin |
| ClientType: | Chemical Company |
| ProjectNumber: | Project #1 |
| Substrates: | Ceramics, Plastic, Chrome |
| PartType: | Coupon |
| Contaminants: | SSL Soil 1 Bathroom Soap Scum |
| Cleaning Methods: | Manual Wipe |
| Analytical Methods: | Gravimetric |
| Purpose: | To evaluate the efficacy of Bioneat with bathroom soap scum SSL soil |
| Experimental Procedure: | Nine pre-weighed coupons, three of each substrate per cleaner, were contaminated with one gram of Bathroom Soap Scum using a handheld swab and air dried at room temperature (68 F) for 24 hours. The contaminated coupons were weighed to record dirty weights before placing three coupons per cleaner of the same substrate into a Gardner Straight Line Washability (SLW) unit. A Kimberly-Clark Wypal reinforced paper towel was attached to the cleaning sled. The Wypal and each coupon were treated with three sprays of the product and cleaned for 20 cycles (~30 seconds of cleaning). Cleaned coupons were wiped once with a dry paper towel before the final weights were taken. |

Results:

| Cleaner | Substrate | Final wt of cont. | %Cont Removed | % AVG |
|---|---|---|---|---|
| Bioneat | Ceramic | 0.0070 | 90.38 | 90.34 |
| | | 0.0092 | 87.01 | |
| | | 0.0044 | 93.62 | |
| | Plastic | 0.0079 | 89.28 | 87.95 |
| | | 0.0110 | 85.99 | |
| | | 0.0083 | 88.58 | |
| | Chrome | 0.0225 | 69.96 | 75.64 |
| | | 0.0094 | 87.40 | |
| | | 0.0229 | 69.55 | |

* All coupons have small spots left.

Summary:

| **Substrates:** | Ceramics, Plastic, Chrome | | | | |
|---|---|---|---|---|---|
| **Contaminants:** | SSL Soil 1 Bathroom Soap Scum | | | | |
| **Company Name:** | **Product Name:** | **Conc.:** | **Efficiency:** | **Effective:** | **Observations:** |
| Durkin Company | Bioneat | 6:1 dilution | 84.64 | ☑ | Overall average percent efficacy. Bioneat was more effective on ceramic than the other substrates. |

Conclusion: Bioneat is a reasonably effective cleaner to remove soil from the coupons.