

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 10/17/2016

Experimenters: John Truong, Sabrina Apel

ClientType: Cleaning Equipment Mfr

ProjectNumber: Project #1

Substrates: Ceramics, Chrome

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate three supplied cleaning products for Bathroom Soap Scum removal from ceramic and chrome surfaces.

Experimental Procedure: Three cleaners (Catholyte NaOH, Anolyte Hypochlorous, and Lysol Bathroom Cleaner) were received "Ready to Use" (RTU). Nine pre-weighed coupons (three ceramic, three chrome) per cleaner were coated with one gram of bathroom soap scum, at room temperature, using a hand held swab. The contaminated coupons were air dried for 24 hours at room temperature and weighed again to determine the amount of soil added the following day.

Three coupons of each substrate were placed in the SLW unit and a KC Wypal reinforced paper towel was attached to the cleaning sled and treated with two sprays of cleaning solution. Each coupon was sprayed twice with the same cleaning solution. The cleaning unit was run for 20 cycles (equivalent of 30 seconds of cleaning). At the end of the cleaning cycle, the coupons were wiped once with a dry paper towel. Coupons were dried and final weights were recorded. Efficiencies were calculated and recorded.

Results: The three supplied products removed over 95% of the bathroom soap scum on each substrate using the manual wipe unit.

| Cleaner                | Initial wt | Final wt | % Removed | % Average |
|------------------------|------------|----------|-----------|-----------|
| Ceramic                |            |          |           |           |
| Catholyte              |            |          |           |           |
|                        | 0.1832     | 0.0034   | 98.14     | 97.71     |
|                        | 0.2142     | 0.0045   | 97.90     |           |
|                        | 0.2327     | 0.0068   | 97.08     |           |
| Anolyte                |            |          |           |           |
|                        | 0.2172     | 0.0034   | 98.43     | 98.95     |
|                        | 0.4943     | 0.0037   | 99.25     |           |
|                        | 0.2126     | 0.0018   | 99.15     |           |
| Lysol Bathroom Cleaner |            |          |           |           |
|                        | 0.2111     | 0.0053   | 97.49     | 98.41     |
|                        | 0.2058     | 0.0018   | 99.13     |           |
|                        | 0.3644     | 0.005    | 98.63     |           |
| Chrome                 |            |          |           |           |
| Catholyte              |            |          |           |           |
|                        | 0.1542     | 0.0034   | 97.80     | 97.19     |
|                        | 0.1629     | 0.0042   | 97.42     |           |
|                        | 0.1672     | 0.0061   | 96.35     |           |
| Anolyte                |            |          |           |           |
|                        | 0.1568     | 0.0054   | 96.56     | 97.13     |
|                        | 0.1479     | 0.0038   | 97.43     |           |
|                        | 0.1770     | 0.0046   | 97.40     |           |
| Lysol Bathroom Cleaner |            |          |           |           |
|                        | 0.1876     | 0.0077   | 95.90     | 95.34     |
|                        | 0.2015     | 0.0078   | 96.13     |           |

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|  |        |        |       |  |
|--|--------|--------|-------|--|
|  | 0.1912 | 0.0115 | 93.99 |  |
|--|--------|--------|-------|--|

Summary:

|                      |                                    |               |                    |                                     |                      |
|----------------------|------------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| <b>Substrates:</b>   | Ceramics, Chrome                   |               |                    |                                     |                      |
| <b>Contaminants:</b> | Films, Soaps                       |               |                    |                                     |                      |
| <b>Company Name:</b> | <b>Product Name:</b>               | <b>Conc.:</b> | <b>Efficiency:</b> | <b>Effective:</b>                   | <b>Observations:</b> |
| Annihilare           | Free (Catholyte)                   | 100           | 97.45              | <input checked="" type="checkbox"/> |                      |
| Annihilare           | Annihilyte General Purpose Cleaner | 100           | 98.04              | <input checked="" type="checkbox"/> |                      |
| Reckitt Benckiser    | Lysol Bathroom Cleaner             | 100           | 96.88              | <input checked="" type="checkbox"/> |                      |

Conclusion:

Catholyte NaOH, Anolyte Hypochlorous, and Lysol Bathroom Cleaner efficiently removed Bathroom Soap Scum on ceramic and chrome using the Manual SLW Unit.