

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 10/07/2016

Experimenters: John Truong

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Ceramics, Plastic, Chrome

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To test the efficiency of Natural Cleaning Company's Citrus Cleaning ES against Lysol Power Bath.

Experimental Procedure: Ceramic, plastic and chrome coupons were selected and arranged into two sets of three coupons. The initial weights were taken and they were promptly soiled. They were then allowed to air dry for a day, at which point the dirty weights were taken to determine the amount of soil added. Coupons were then cleaned for 30 seconds with a cleaner per set. Paper towel was sprayed once and attached to the cleaning sled. The coupons were sprayed once as well. After cleaning, the coupons were air dried for another day and final clean weights were taken and effectiveness calculated.

Chemistries Evaluated: Natural Cleaning Company Citrus Cleaning (ES) Extra Strength, Lysol Power Bath

Results: The Natural Cleaning Company Extra Strength performed the most efficiently on chrome coupons, however Lysol Power Bath was the most effective supplied product on the ceramic and plastic coupons.

| Cleaner                        |            |          |           |               |
|--------------------------------|------------|----------|-----------|---------------|
| Substrate                      | Initial wt | Final wt | % Removed | Ave % Removed |
| Citrus Cleaning Extra Strength |            |          |           |               |
| Ceramic                        |            |          |           |               |
|                                | 0.1159     | 0.0758   | 34.60     | 19.57         |
|                                | 0.1998     | 0.1546   | 22.62     |               |
|                                | 0.1945     | 0.1916   | 1.49      |               |
| Chrome                         |            |          |           |               |
|                                | 0.1287     | 0.0700   | 45.61     | 57.78         |
|                                | 0.1410     | 0.0345   | 75.53     |               |
|                                | 0.1416     | 0.0677   | 52.19     |               |
| Plastic                        |            |          |           |               |
|                                | 0.1383     | 0.0673   | 51.34     | 43.23         |
|                                | 0.1537     | 0.0635   | 58.69     |               |
|                                | 0.1530     | 0.1229   | 19.67     |               |
| Lysol Power Bath               |            |          |           |               |
| Ceramic                        |            |          |           |               |
|                                | 0.2052     | 0.1576   | 23.20     | 29.94         |
|                                | 0.1444     | 0.0859   | 40.51     |               |
|                                | 0.2117     | 0.1564   | 26.12     |               |
| Chrome                         |            |          |           |               |
|                                | 0.1412     | 0.0864   | 38.81     | 41.53         |
|                                | 0.1386     | 0.0869   | 37.30     |               |
|                                | 0.1392     | 0.0717   | 48.49     |               |
| Ceramic                        |            |          |           |               |
|                                | 0.1543     | 0.0931   | 39.66     | 60.23         |
|                                | 0.1281     | 0.0352   | 72.52     |               |
|                                | 0.1442     | 0.0454   | 68.52     |               |

Summary:

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|                            |                                |               |                    |                          |                      |
|----------------------------|--------------------------------|---------------|--------------------|--------------------------|----------------------|
| <b>Substrates:</b>         | Ceramics, Plastic, 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> |
| Reckitt Benckiser          | Lysol Bathroom Cleaner         | 100           | 43.90              | <input type="checkbox"/> |                      |
| A Natural Cleaning Company | Citrus Cleanser Extra Strength | 100           | 40.19              | <input type="checkbox"/> |                      |

Conclusion:

The test showed that the most efficient cleaner of the two was Lysol Power Bath, by a small margin of 3%. There was no notable visual difference between the effects of the two cleaners on the coupons.