

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2020

DateRun: 07/30/2020

Experimenters: Jason Marshall

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Food

PartType: Part

Contaminants: Dirt, Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric, Visual

Purpose: To conduct performance testing on supplied product and compare with water and related industry product.

Experimental Procedure: The soil mixture used a teaspoon of AATCC Carpet soil added to 50 ml of mineral oil and shaken to mix it up. The soil was using a plastic squeeze pipette. Approximately 0.03 to 0.05 grams of soil was added to a precleaned piece of fruit/vegetable. The fruit/vegetable was weighed with the dirt to determine the amount of soil added. The dirty fruit/vegetable was cleaned for 20 seconds using immersion and mild agitations (up and down dunking). Final weights were recorded and the percent soil removal was calculated. Test evaluation was run in triplicate. Water was used as a control. In addition, a panel of three were used to visually rank the fruit/vegetable from best to worst.

Results: The supplied product was the top performer, removing over 90% of the soil. The qualitative assessment matched the quantitative removal rates.

| Cleaner | Initial wt | Final wt | % Removed | Overall Average Removal |
|-------------------------------------|------------|----------|-----------|-------------------------|
| Water | 0.0311 | 0.0106 | 65.92 | 63.67 |
| | 0.0271 | 0.0068 | 74.91 | |
| | 0.0277 | 0.0138 | 50.18 | |
| Rebel Green | 0.0543 | 0.0034 | 93.74 | 92.79 |
| | 0.0254 | 0.0038 | 85.04 | |
| | 0.0237 | 0.0001 | 99.58 | |
| Annie's Pure and Simple Meyer Lemon | 0.0462 | 0.0048 | 89.61 | 90.11 |
| | 0.0227 | 0.0013 | 94.27 | |
| | 0.0384 | 0.0052 | 86.46 | |
| Citrus Magic Veggie Wash | 0.0617 | 0.0158 | 74.39 | 67.77 |
| | 0.0574 | 0.0221 | 61.50 | |
| | 0.0660 | 0.0215 | 67.42 | |
| Fit Organic | 0.0419 | 0.0028 | 93.32 | 93.36 |
| | 0.0325 | 0.0028 | 91.38 | |
| | 0.0476 | 0.0022 | 95.38 | |

Visual Ranking

| Cleaner | Visual Rank 1 | Visual Rank 2 | Visual Rank 3 |
|-------------------------------------|---------------|---------------|---------------|
| Water | 4 | 4 | 4 |
| Rebel Green | 1 | 1 | 1 |
| Annie's Pure and Simple Meyer Lemon | 2 | 2 | 2 |
| Citrus Magic Veggie Wash | 3 | 3 | 3 |
| Fit Organic | 1 | 1 | 1 |

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|----------|--------------------------------|
| Summary: | Substrates: Food |
| | Contaminants: Dirt, Oil |

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| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
|-------------------------|---|--------|-------------|-------------------------------------|---------------|
| Water | Water | 100% | 63.67 | <input type="checkbox"/> | Visual Rank 4 |
| Rebel Green | Fruit and Veggie Clean | 100% | 92.79 | <input checked="" type="checkbox"/> | Visual Rank 1 |
| Annie's Pure and Simple | Annie's Pure and Simple All Purpose Product - Meyer Lemon | 100% | 90.11 | <input checked="" type="checkbox"/> | Visual Rank 2 |
| Beaumont Products | Veggie Wash Fruit and Vegetable Wash | 100% | 67.77 | <input type="checkbox"/> | Visual Rank 3 |
| Fit Organic | Fit Organic Fruit and Vegetable Wash | 100% | 93.36 | <input checked="" type="checkbox"/> | Visual Rank 1 |

Conclusion:

Fit Organic Fruit and Vegetable Wash was the most effective cleaner, but Rebel Green was as effective in visual ranking and percent removal.