

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2018
 DateRun: 07/31/2018
 Experimenters: Vinh Tran, Alicia McCarthy, Kevin Smith, Tuan Le, Nicole Kebler, Ted Kearney
 ClientType: Cleaner Manufacturer
 ProjectNumber: Project #4
 Substrates: Skin
 PartType: Coupon
 Contaminants: Carbon Deposits, Dirt, Clay, Oxides, Silicones
 Cleaning Methods: Manual Wipe
 Analytical Methods: Visual
 Purpose: To evaluate supplied products for performance following the GS41 hand cleaning standard.

Experimental Procedure: Using a fixed, repeatable procedure, the product's efficacy was tested against a nationally recognized conventional product showing equivalent or better performance. The testing protocol included: cleaning ability, lathering/rinsing, and skin condition after use. A standard soil was used and conclusions derived from separate testers.

TURI Lab established a hand washing protocol for testing non-foaming hand soaps is as follows:

The soil used consisted of a ratio of 5 grams of Synthetic carpet soil AATCC Test Method 122 to 20 mL tap water. The water and soil were mixed together to make a paste. A quarter sized amount of soil was applied to one of the subject's hands. The hands were then rubbed together to distribute soil to both hands. Using tap water, hands were wet and one to two pumps of foaming hand soap were applied. The hands were rubbed together with soap and water for 20 seconds followed by 20 seconds of rinsing in lukewarm tap water. The final step was to pat the hands dry for 20 seconds.

Photographs were taken of the initial clean hands, after the soil was applied and after hands were patted dry. During and after cleaning, observations were made for cleaning, lathering/rinsing and skin condition. Cleaning and lathering/rinsing observations were made once and the skin condition was recorded at 1, 5, 20 and 60 minutes. Observations were ranked using the following guidelines:

Observe cleanliness

| Rank | Cleanliness |
|------|--|
| 1 | No signs of soil |
| 2 | Only in fine lines of hand or Intermittent spots but not in fine lines |
| 3 | Intermittent spots and in fine lines |
| 4 | Multiple spots |
| 5 | Continually covered |

Observe lathering/rinsing

| Rank | Lathering/Rinsing |
|------|--|
| 1 | Lots of lathering - easy rinsing |
| 2 | Some lathering - easy rinsing |
| 3 | Some lathering - hard rinsing |
| 4 | Little lathering - easy rinsing/ No lathering - easy rinsing |
| 5 | No lathering - hard rinsing |

Observe skin condition after clean/rinse/dry at 1 minute, 5 minutes, 20 minutes and 60 minutes.

| Rank | Skin Condition |
|------|-----------------------------|
| 1 | Smooth and soft |
| 2 | Some dryness |
| 3 | Dry - Hands turning white |
| 4 | Skin stiffening |
| 5 | Very dry - Cracking of skin |

Results:

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The data collected from the testers is displayed below. The testers rated the cleanliness of their hands, the lathering quality of the soap, and the quality of their skin condition after 1, 5, 20, and 60 minutes.

Product 1

| Cleaner | Tester | Cleanliness | Lathering and Rinsing | Skin Condition Ratings | | | |
|-----------------------------|--------|-------------|-----------------------|------------------------|-------|--------|--------|
| | | | | 1 min | 5 min | 20 min | 60 min |
| AGAE Technologies Body Wash | 1 | 1.5 | 3 | 3 | 2.5 | 2.5 | 1.5 |
| | 2 | 3.5 | 5 | 2 | 2 | 2 | 2 |
| | 3 | 2 | 5 | 2 | 3.5 | 3.5 | 3.5 |
| | 4 | 2 | 5 | 2 | 2 | 2.5 | 2.5 |
| | 5 | 2 | 5 | 3 | 3 | 2 | 2 |
| | 6 | 2 | 5 | 1.5 | 1.5 | 2 | 2 |

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Product 2

| Cleaner | Tester | Cleanliness | Lathering and Rinsing | Skin Condition Ratings | | | |
|------------------------------|--------|-------------|-----------------------|------------------------|-------|--------|--------|
| | | | | 1 min | 5 min | 20 min | 60 min |
| Dove Body Wash Deep Moisture | 1 | 2 | 4 | 3 | 2.5 | 2.5 | 2 |
| | 2 | 2 | 4.5 | 4.5 | 4 | 4 | 4 |
| | 3 | 2.5 | 4.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| | 4 | 2 | 3 | 3 | 2 | 2.5 | 2 |
| | 5 | 2 | 4 | 3 | 2 | 2 | 1 |
| | 6 | 1.5 | 3.5 | 2 | 2 | 2 | 2 |

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Product 3

| Cleaner | Tester | Cleanliness | Lathering and Rinsing | Skin Condition Ratings | | | |
|--------------------------|--------|-------------|-----------------------|------------------------|-------|--------|--------|
| | | | | 1 min | 5 min | 20 min | 60 min |
| Puracy Natural Body Wash | 1 | 1.5 | 5 | 1.5 | 1.5 | 1.5 | 1 |
| | 2 | 2 | 4 | 3 | 3 | 3 | 3 |
| | 3 | 1 | 4 | 2.5 | 2.5 | 2.5 | 2.5 |
| | 4 | 1.5 | 3 | 3 | 3 | 3 | 3 |
| | 5 | 1.5 | 3 | 1.5 | 1.5 | 1.5 | 1.5 |
| | 6 | 1 | 1 | 2 | 2 | 2 | 2 |

Summary:

| | | | | | | |
|----------------------|--|---------------|--------------------|-------------------------------------|----------------------|--|
| Substrates: | Skin | | | | | |
| Contaminants: | Carbon Deposits, Dirt, Clay, Oxides, Silicones | | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: | |
| AGAE Technologies | Body Wash | 100 | 0.00 | <input checked="" type="checkbox"/> | | |

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|----------|------------------------------|-----|------|-------------------------------------|--|
| Unilever | Dove Deep Moisture Body Wash | 100 | 0.00 | <input checked="" type="checkbox"/> | |
| Puracy | Natural Body Wash | 100 | 0.00 | <input checked="" type="checkbox"/> | |

Conclusion:

The Puracy soap was the best soap overall in terms of cleanliness, lathering and lasting skin condition categories. The Dove soap is rated the second best for cleanliness, lathering and lasting skin condition. The AGAE Technologies soap was rated the third best, tied with Dove for second in skin condition, but only slightly behind the Dove Body Wash in terms of cleanliness.