CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2020
DateRun:	12/13/2020
Experimenters:	Nicole Kebler
ClientType:	
ProjectNumber:	Project #2
Substrates:	Skin
PartType:	Part
Contaminants:	Dirt
Cleaning Methods:	Manual Wipe
Analytical Methods:	Tactile, Visual
Purpose:	To evaluate supplied product for performance following DfE hand cleaning requirements.

Experimental Procedure:

The testing conducted followed Green Seal's GS 41 standard, Performance testing Hand Cleaners and Hand Soaps Used for Industrial and Institutional Purposes. The product specific performance requirements stated:

Using a fixed, repeatable procedure, the product shall demonstrate efficacy against a nationally recognized conventional product showing equivalent or better performance. The testing protocol shall include, at a minimum: cleaning ability, lathering/rinsing, and skin condition after use. A standard soil shall be used, and conclusions shall be derived from at least six separate samples. All results, a summary of conclusions and a description of how panelists are chosen shall be submitted.

To that end, the TURI Lab established a hand cleaning protocol. The TURI Lab Testing Procedure for Hand Soap Testing followed the procedures listed:

The soil used consisted of 5 grams of Synthetic carpet soil AATCC Test Method 122, 20 ml tap water. The water and soil were mixed together to make a paste. A quarter size amount of soil was applied to a subject's hand. Both hands were then rubbed together to distribute soil to both hands.

Using tap water hands were wetted and apply two pumps of supplied hand soap was applied. The comparative product was used in the same weight range of the supplied product. This was about a half of one full pump. Hands were rubbed together with soap and water for 20 seconds followed by rinsing hands in tap water for 20 seconds. Final step was to wipe or blot hands dry for 20 seconds.

During the evaluation observations were made for cleaning and rinsing. 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 (connected spots)
5	Continually covered

Observe Rinsing

Rank	Rinsing
1	Easy rinsing – no residue
2	Easy rinsing – some residue
3	Hard rinsing – no residue
4	Hard rinsing – some residue
5	Hard rinsing – lots of residue

(Easy rising requires very little hand scrubbing. Hard rinsing required lots of scrubbing or extended time to remove all soap residue)

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

Rank	Skin Condition Observation
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 supplied cleaning product, GL Naturama, was not as effective as the comparative hand washing soaps for the removal of soil from hands in the 20 seconds of cleaning and 20 seconds of rinsing. Based on ratings and observations from the four participants, GL Naturama had the highest cleaning rating average and soil was still visibly left on hands after patting dry. For cleanliness, it scored an average of 3 while the comparative products scored 2.1 and 2 averages. GL Naturama was also rated higher for rinsing with an average of 2.3 while the comparative products scored 1.8 and 1 averages. Similarly, skin condition ratings for GL Naturama were higher than the comparative products, participants noted that their hands felt considerably drier after the 20-minute mark. Overall average for skin condition for all 4 participants was 2.3 for GL Naturama while the comparative products scored 1.1 and 1.3 averages for all participants.

Observation ratings for cleaning, rinsing, and skin condition are listed below for each product tested by the four participants.

Cleanliness

Participant	A	B	C	D	Average
GL Naturama	3	2	3	4	3
7th Generation	2	1.5	2	3	2.1
Soft Soap	2	2	2	2	2

Rinsing

Participant	A	B	C	D	Average
GL Naturama	2	2	2	3	2.3
7th Generation	2	2	2	1	1.8
Soft Soap	1	1	1	1	1

Skin Condition:

Hand Soap	Participant	1-minute	5-minutes	20-minutes	60-minutes	Average per Participant	Overall Average
GL Naturama	A	1	2	2	2	1.8	2.3
	B	1.5	3	2	4	2.6	
	C	2	1	3	3	2.3	
	D	1	2	4	4	2.8	
7th Generation	A	1	1	1	1	1.0	1.1
	B	1	1	1	1	1.0	
	C	1	2	1	2	1.5	
	D	1	1	1	1	1.0	
Soft Soap Kitchen	A	1	1	1	1	1.0	1.3
	B	2	1	1	1	1.3	
	C	1	2	3	2	2.0	
	D	1	1	1	1	1.0	

Photograph results

Product	Hand Washing Photo
Soft Soap Kitchen	

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7th Generation	
Green Life Naturama CBD	 Hand washing test pictures from participants A, B, C & D

Summary:

Substrates:	Skin				
Contaminants:	Dirt				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Green Life Development, Inc	Naturama Commercial Botanical Degreaser Hand Washing Foam	100	0.00	☐	GL Naturama was not as effective for the removal of soil as comparative products. Rank = 3
Seventh Generation	Seventh Generation Hand Soap	100	0.00	☑	7th Generation was effective for the removal of soil from hands when compared to other products. Rank = 2
Professional Products	SoftSoap	100	0.00	☐	SoftSoap was effective for the removal of soil from hands when compared to other products. Rank = 1

Conclusion: GL Naturama was not as effective for the removal of soil from hands as the comparative products for cleanliness, rinsing, or skin conditions.