CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2011
DateRun:	07/27/2011
Experimenters:	Jason Marshall, Johnny Le, Mahima Tank, Alex Gyebi, Homero Harari
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Skin
PartType:	Coupon
Contaminants:	Dirt
Cleaning Methods:	Manual Wipe
Analytical Methods:	Tactile, Visual
Purpose:	To evaluate supplied products for performance following Green Seal 41 hand cleaning standard.
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: Conduct preliminary review of hand condition of subject to characterize skin condition as moist, normal, dry, or very dry prior to cleaning. 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. Apply one to two pumps of hand soap and use tap water to wet the hands. Hands were rubbed together using 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 and after cleaning, observations were made for cleaning, lathering/rinsing and skin condition. Cleaning and lathering observations were made once and the skin condition was recorded after 1 minute. Observations were ranked using the following guidelines: Observe cleanliness Rank Cleanliness 1 No signs of Soil 2 Only in fine lines of hands or intermittent spots but not in fine lines 3 Intermittent spots and in fine lines 4 Multiple spots (connected 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. 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 Photographs of each subject’s hands before soil, after soiling and after cleaning were taken to document cleaning results. Subjects were selected on the basis of skin condition. The goal was to select skin types that were normal to dry so that the effect of the cleaners could be judged on at least two skin types. Chemistries Evaluated: White Pearl Hand Soap; Up and Up Milk and Honey Moisturizing Hand Soap; Up and Up Clear Hand Soap
Results:	All three products tested were effective at removing a majority of the dirt from hands in the 20 seconds of cleaning and 20 seconds of rinsing. Based on the observations from the six subjects, the Up and Up Milk and Honey Moisturizing Hand Soap was the top cleaning performer. On average, the Milk and Honey Hand Soap removed the most soil off the hands, was comparable to the Clear Hand Soap for lathering and

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rinsing, and left the hands feeling the least amount of dryness. The New Dawn White Pearl Hand Soap was more effective at removing soil off the hands compared the Up and Up Clear Hand Soap. However, Up and Up's Clear Hand Soap produced more lathering, was easier to rinse and left the hands feeling less dry compared to New Dawns Hand Soap. Only subject F had dry hands prior to the washing.

Subject	Cleaner	Cleanliness	Lathering/ Rinsing	Skin Condition
A	1	2	4	2
B	1	2	4	2
C	1	3	2	2
D	1	3	4	2
E	1	2	2	2
F	1	5	4	1
A	2	2	2	2
B	2	3	4	1
C	2	4	4	1
D	2	2	2	1
E	2	2	2	1
F	2	2	2	2
A	3	2	4	1
B	3	3	2	1
C	3	3	2	1
D	3	4	4	1
E	3	3	2	2
F	3	3	2	3

Summary

Cleaner	Avg Cleanliness	Avg Lathering// Rinsing	Avg Skin
Condition			
White Pearl Hand Soap	2.83	3.33	1.83
Milk and Honey Hand Soap	2.5	2.67	1.33
Clear Hand Soap	3	2.67	1.5

Summary:

Substrates:	Skin
Contaminants:	Dirt

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
New Dawn Manufacturing Company	White Pearl Hand Soap	100	0.00	☑	
Fisher Scientific	Absolute Ethanol	0	0.00	☐	
Target Brands, Inc.	Up and Up Milk and Honey Moisturizing Hand Soap	100	0.00	☑	
Target Brands, Inc.	Up and Up Clear Hand Soap	100	0.00	☑	

Conclusion: The submitted product, White Pearl hand soap performed better than the comparative Clear hand soap in removing soil from the hands.