Clinical Study Report

Title	An 18 Week Study to Assess the Efficacy of a Test Product Used in Combination with a Currently Marketed Prescription Product
Clinical Study Number	CS251008
Protocol	VCS.PR251008.V02
Sponsor	Good Molecules
Sponsor Representative	Ivan Souza Director R&D Good Molecules 3711 Market Street Suite 960 Philadelphia PA 19104 267.694.8938 ivan.souza@goodmolecules.com
Study Site	Validated Claim Support, LLC 400 Frank W Burr Blvd. Suite 105 Teaneck, New Jersey 07666 201-331-9300
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Institutional Review Board (IRB)	Allendale Investigational Review Board, Inc 30 Neck Road, Old Lyme, CT 06371 Main: 860 434 5872

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Clinical Study Summary

Title	An 18 Week Study to Assess the Efficacy of a Test Product Used in Combination with a Currently Marketed Prescription Product		
Clinical Study Number	CS251008		
Protocol	VCS.PR251008.V02		
Sponsor	Good Molecules		
Study Design	Randomized, Double-Blind, Placebo Controlled		
Objectives	1. To assess the efficacy of a topical product to improve Skin Lightness (L* and ITA°). 2. To assess the efficacy of a topical product to improve skin condition and appearance (Hyperpigmentation, Brightness/Radiance, Skin Texture).		
Number of Subjects	47 completed (required n=40 to complete)		
Target Population	Female subjects, age 18-75 years, open to all races and ethnicities		
Duration	18 Weeks [Screening, Baseline, Week 10, Week 18]		
Test Products	***Sample No.***	***Formula***	***Designation***
	SA251062	SBA0014C-230725 A	Treatment
	SA251063	SBA0014C-250707 A	Placebo
Support Products	***Support No.***	***Description***	
	SP251007	4% Hydroquinone	
	SP251008	Banana Boat Light As Air Sunscreen Lotion UVA/UVB Broad Spectrum SPF 50+	
Methods	**Parameter**	**Assessment**	
	To assess the efficacy of a topical product to improve Skin Lightness (L* and ITA°).	● Chromameter	

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		± 2 Days		
	Completion	Week 18 ± 2 Days	29 Jan 2026	16 Feb 2026
Summary	This study was an 18-week randomized, double-blind, placebo-controlled study of one test product and one placebo product. A panel of 47 subjects completed the study. See Section 19.0 Results for further details. VISIA CR images will be delivered via secure cloud-based storage link with the following naming convention (Example: 1234 CS251008_ _Cross-Polarized_Frontal_BL_Brown Photo): ● Subject MRN ● Clinical Study Number (CS#) ● Lighting Mode (Cross-Polarized) ● View (Left Oblique, Right Oblique, or Frontal) ● Time Point (BL, W10, W18) ● Image Type (Brown Photo, Brown Features, Red Photo, Red Features)			

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Quality Assurance Statement

The Quality Department (QD) at Validated Claim Support, LLC is independent of the employees involved in the investigation. The QD is responsible for overseeing essential study documentation and, if requested by the Sponsor, monitoring study conduct.

This statement confirms that the study is conducted in accordance with Good Clinical Practices and other applicable laws and regulations, as well as VCS Standard Operating Procedures and approved study protocol (where applicable).

Quality Assurance: **Signature & Date:**

Principal Investigator: **Signature & Date:**

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1. Introduction

This document is a report for a clinical research study. This study was conducted according to Validated Claim Support's approved study protocol (VCS.PR251008.V02), VCS Standard Operating Procedures, Good Clinical Practice (FDA and ICH guidelines), and applicable government regulations.

2. Objectives

Data was analyzed with specific regard to the following objectives:

1. Improve Skin Lightness (L* and ITA°), as demonstrated by Chromameter readings.
2. Improve the appearance of Hyperpigmentation, Brightness/Radiance, Skin Texture, as demonstrated by Expert Grading, Subjective Questionnaire results, and Visia CR Imaging.

3. Study Design

This was an eighteen-week study of the performance of a test product versus a placebo product. Both products were used in conjunction with 4% Hydroquinone until week 10. 49 subjects were assigned to either the test or placebo groups, per randomization. 47 subjects completed the study, 23 in the test group and 24 in the placebo group. Changes in skin condition were assessed by expert grading and instrumental measurements. Consumer perception of the product and its effects were determined from analysis of results from subjective questionnaires. Visia-CR Imaging was conducted on the entire panel (40 subjects, both test and placebo).

Evaluation points occurred at Baseline (BL), Week 10 (W10), and after eighteen weeks of use (W18). Subjects were texted or emailed at Week 5 (W5) and Week 14 (W14) to confirm compliance with test product and study instructions. A detailed outline of study visits appears in Section 7.0.

4. Test Products

Upon reception of samples at VCS, the test product, which is assigned a unique code, is digitally logged. The products were blinded using a code generated by the Sponsor and both the subjects and the study staff were blinded to assignments to product or placebo. Products were stored in a secure location, and unused products will be disposed upon issue of the final report.

The Sponsor purports that toxicology, microbiology, preservative efficacy, and/or other in-vitro/in-vivo safety and performance analyses were conducted as required by law or as recommended by legal counsel and that the test product does not contain antibiotics,

antiseptics, steroids, hormones, or any other substances at levels of concentration requiring label declaration by the relevant regulatory authorities.

Sample No.	Formula	Designation
Test Products		
SA251062	SBA0014C-230725A	Treatment
SA251063	SBA0014C-250707A	Placebo
Support Products		
SP251007	N/A	Prescription
SP251008	N/A	SPF 50

4.1 Use Instructions

All subjects were provided with an SPF (provided at screening) and a prescription of 4% Hydroquinone to use as instructed. All subjects were randomized into a treatment group (test or placebo) and used the assigned product per Sponsor instructions for the following eighteen weeks. Subjects and study staff were blinded to product assignment. Sponsor-provided instructions were explained to subjects and provided to subjects in writing along with a daily product log to record use. Study use instructions as follows:

Facial Toner (Test): Dispense onto a cotton round and gently sweep over the cleansed face once in the morning. For external use. Avoid contact with eyes.

Facial Toner (Placebo): Dispense onto a cotton round and gently sweep over the cleansed face once in the morning. For external use. Avoid contact with eyes.

SPF: Apply liberally to the face during the daytime at least once. Reapply as needed, after sweating or swimming, or whenever expecting prolonged sun exposure. Avoid contact with eyes.

4% Hydroquinone: Apply to the affected areas on the face and rub in well twice daily, in the morning and before bedtime, or as directed by the physician. Apply during the first 10 weeks of this study.

Morning- Apply as follows:

1. Wash and dry face
2. Apply toner and allow to dry
3. Apply 4% hydroquinone and allow to absorb (for the first 10 weeks; will be collected at the Week 10 visit)
4. Apply SPF and allow to absorb
5. Apply makeup (if using)

Before bedtime- Apply as follows:

1. Wash and dry face
2. Apply 4% hydroquinone and allow to absorb (for the first 10 weeks; will be collected at the Week 10 visit)

5. Population

1.1. Sample Size

49 healthy subjects were enrolled in the study and 47 completed. 2 subjects discontinued. All subjects completed VCS required documentation, were assigned a Subject ID (a unique identification number), satisfied the study-specific inclusion and exclusion criteria, and gave their informed consent.

1.2. Inclusion Criteria

1. Female subjects of any race, in good general health, aged 18-75 years old, inclusive at enrollment.
2. Individuals with facial hyperpigmentation and/or melasma.
3. Individuals willing to use a generic 4% Hydroquinone prescription topical cream up to 10 weeks.
4. Individuals willing to refrain from use of other drugs or skincare intended to treat hyperpigmentation, other than study specific products (prescription drug, test product, SPF 50) for the duration of the study.
5. Individuals who are able to cooperate with the Principal Investigator and study personnel throughout the duration of the study and are willing to comply with all study procedures, methods, evaluations, and study product use.
6. Individuals who are able to read, understand and willing to sign an informed consent for this specific study and have completed all site required documentation prior to study enrollment (Registration and Medical History).
7. Individuals who are able to receive emails on their cellular phones and are capable of completing electronic Informed Consents, Photo Model Releases, and/or Questionnaires on their device.
8. Individuals willing to be photographed and sign a model release.

5.3 Exclusion Criteria

1. Individuals with known allergies and/or reactions to Hydroquinone.
2. Individuals currently participating in other clinical studies that are testing a face product.
3. Individuals with uncontrolled medical condition(s), including dermatological problems, which could put them at risk in the opinion of the Principal Investigator or compromise the study outcome and/or chronic or serious diseases and conditions which would prevent

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participation in this clinical study such as cancer, AIDS, insulin-dependent diabetes, renal impairment, mental illness, and/or drug/alcohol addiction.
4. Individuals with a history of melanoma, or a treated skin cancer within the last 5 years.
5. Individuals who are pregnant, lactating, or planning to become pregnant. Individuals who become pregnant during the study must inform the Principal Investigator immediately.
6. Individuals who are unreliable or unlikely to be available for the duration of the study.
7. Individuals with a history of allergic reactions, skin sensitization and/or known allergies to cosmetic and personal care products/ingredients.
8. Individuals who are immunocompromised.
9. Individuals who are employees of VCS, other testing firms/laboratories, consumer product, and/or raw goods manufacturers/suppliers.
10. Individuals who are unable to communicate or cooperate with the Principal Investigator/study personnel due to language problems, poor mental development, or impaired cerebral function.
11. Individuals who started hormones within the last three months preceding the commencement of the study.
12. Individuals who are using oral contraception for less than three months before study commencement or who have changed their contraceptive method within the three months before the Baseline visit or planning to modify their contraception treatment within the duration of the study.
13. Individuals who have regular salon and/or dermatological procedures that can interfere with study results (Microdermabrasion, Fillers, Facial Peels, etc.) and are not willing to stop throughout the study.
14. Individuals with facial tattoos and facial piercings (that can't be removed).
15. Individuals with tattooed/permanent make up (i.e., eyeliner, eyebrows, lip liner, etc.), eyebrow microblading, and/or eyelash extensions.
16. Individuals who plan to change their hairstyle throughout the course of the study or who wear hair coverings regularly (i.e., wigs, coloring, extensions, etc.).

6. Methods

This study was performed in accordance with VCS final approved clinical study protocol (VCS.PR251008.V02) signed on 18 Aug 2025.

All evaluations are performed under controlled conditions. Prior to evaluations, all panelists were asked to acclimate to ambient conditions for at least 15 minutes.

6.1 Instrumentation

The devices used for this study are non-invasive and have no known risks associated with them.

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6.1.1 Chromameter

The three characteristics of color are hue, value and chroma which represent color, lightness and saturation respectively. Employing these characteristics, the Chroma Meter CR-200 (Konica Minolta, Tokyo Japan) converts all colors within the range of human perception into a common numerical code known as the CIE L*a*b* color space, allowing quantification of product-induced changes in skin color within these parameters. A pulsed xenon arc lamp provides diffuse, uniform lighting over the 8mm aperture, and the light reflected perpendicular to the surface is collected by the optical-fiber cable for color analysis. The Chroma Meter represents lightness as L* where 0=black and 100=white, while the red-green and yellow-blue color spectra are represented as a* and b* respectively where red and yellow are indicated by positive values and green and blue by negative values.

All subjects had Chromameter measurements taken in triplicate and averaged on the right or left cheek, on an area with visible hyperpigmentation at Baseline, Week 10, and Week 18. The measurement location was documented on a face map at Baseline and referenced for all other timepoints.

6.2 Expert Grading

Ordinal scales allow a number to be directly and objectively attached to the quality of a given attribute. When responding to an ordinal scale item, the expert grader specifies their level of agreement to a statement by choosing a set grade, or level. The grader was blinded to the assigned treatment group.

All subjects had Hyperpigmentation, Brightness/Radiance, and Skin Texture assessed by an expert grader at Baseline, Week 10, and Week 18 utilizing a 10-point ordinal scale. Clinical grading was performed in the same room at each study visit using overhead lighting as well as a lighted magnifying loop as needed. The following 10-point ordinal scales were used:

Parameter	Positive Anchor (0)	Negative Anchor (9)
Hyperpigmentation	Uniform, even appearance	Uneven, discolored, mottled pigmentation present
Brightness/Radiance	Radiant, luminous, glowing appearance	Dull/matte and/or sallow, lackluster
Skin Texture	Smooth, even surface appearance	Rough, uneven surface appearance

6.3 Questionnaire

Subjective questionnaires allow the Sponsor to gauge the subjects' opinions of the test product and its effects. Questions asked for subjects' agreement to a statement. The Sponsor provided a questionnaire, and VCS analyzed the results.

All subjects completed the questionnaire at Week 18.

6.4 Visia CR Imaging

Photographs are acquired via Canfield VISIA CR Imaging System. Subjects are provided with a non-reflective black headband selected to not visibly pull the scalp or hair to keep hair out of the face, as needed. A black cape is put on, so clothing or reflections are not visible. Subjects are guided throughout the process by a professional photographer and/or a clinical technician. Subjects stood in a neutral position and placed their chins on the chin rest in the VISIA CR capture enclosure. Subjects remained as still as possible while the capture enclosure is rotated to take photos.

Images were taken of the face, utilizing the following angles: 45 degrees right, straight on, and 45 degrees left with the following lighting conditions: Standard 1, Raked, Cross Polarized, Parallel Polarized, Blue Excitation and Orange Fluorescence. Analysis was performed on all subjects for the following parameters: hyperpigmentation (RBX Brown). Images were taken on all subjects at Baseline, Week 10, and Week 18. Images will be delivered via secure cloud-based storage link.

7. Procedure

This study included the following visits: Screening, Baseline, Week 10, and Week 18.

7.1 Screening Visit

- Potential subjects arrived at the test site and underwent the following Screening procedures. All findings were reported on the appropriate CRFs:
  - Read and sign an informed consent form as described in Section 12.
  - Complete or update personal/medical history.
  - Be screened for qualification using an Inclusion/Exclusion criteria checklist.
  - Undergo a brief medical assessment by a board-certified Dermatologist to determine qualification.

- Subjects that met entrance criteria as defined in Sections 5.2 and 5.3 received screening instructions and support products (SPF) and were given an appointment time for their Baseline visit. They were then dismissed from the Screening visit.
- A prescription was filled by the Dermatologist for all qualified subjects and the prescription product was delivered to VCS prior to the Baseline visit for dispensation at the visit.

7.2 Baseline Visit

- Subjects arrived at the test site with clean facial skin, having used no other face products, including cleanser. Upon arrival, subjects washed their face with Cetaphil Daily Facial Cleanser and acclimated to the clinic environment for 15 minutes prior to assessments allowing subjects to relax and let their skin balance to the environment.
- The following procedures were performed, and all findings were reported on the appropriate CRFs:
    - Personal/medical history review for any changes since previous visit.
- Subjects that met entrance criteria as defined in Sections 5.2 and 5.3 were enrolled and proceeded with study participation.
- All enrolled subjects completed the following Baseline procedures:
    - Expert Grading assessments as described in Section 6.2
    - Instrumental assessments as described in Section 6.1
    - VISIA CR Imaging as described in Section 6.4
- Subjects were given the prescription product and the test or placebo product (per randomization), and verbal application instructions as described in Section 4.1 as well as detailed written application instructions and a log to record product use.
- Subjects were reminded to inform VCS immediately of any adverse reactions or events which may occur.
- After completion of all Baseline procedures, subjects received an appointment time for their Week 10 visit and were dismissed from the Baseline visit.

7.3 Week 5 Check-In

- Subjects received a text or email at Week 5 to confirm compliance with test product use and study instructions. Yes/No responses were collected, recorded and followed up as needed.

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7.4 Week 10 Visit

- Subjects arrived at the test site with clean facial skin, having used no other face products, including cleanser. Upon arrival, subjects washed their face with Cetaphil Daily Facial Cleanser and acclimated to the clinic environment for 15 minutes prior to assessments allowing subjects to relax and let their skin balance to the environment.
- Subjects were questioned for any changes in medical history since their last visit and screened for any adverse events.
- After acclimation, subjects completed the following Week 10 procedures:
    - Expert Grading Assessments as described in Section 6.2
    - Instrumental assessments as described in Section 6.1
    - VISIA CR Imaging as described in Section 6.4
- Subject Daily logs and products were collected. Daily logs were reviewed, and products were inspected to verify protocol compliance with product use instructions. The prescription product was collected. Daily logs and the test product were returned to subjects.
- Subjects were reminded to inform VCS immediately of any adverse reactions or events which may occur.
- After completion of all Week 10 procedures, subjects received an appointment time for their Week 18 visit and were dismissed from the Week 10 visit.

7.5 Week 14 Check-In

- Subjects received a text or email at Week 14 to confirm compliance with test product use and study instructions. Yes/No responses were collected, recorded and followed up as needed.

7.6 Week 18 Visit

- Subjects arrived at the test site with clean facial skin, having used no other face products, including cleanser. Upon arrival, subjects washed their face with Cetaphil Daily Facial Cleanser and acclimated to the clinic environment for 15 minutes prior to assessments allowing subjects to relax and let their skin balance to the environment.
- Subjects were questioned for any changes in medical history since their last visit and screened for any adverse events.

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- Subject Daily logs and products were collected. Daily logs were reviewed, and products were inspected to verify protocol compliance with product use instructions.
- After acclimation all subjects completed the following Week 18 procedures:
    - Expert Grading assessments as described in Section 6.2
    - Instrumental assessments as described in Section 6.1
    - VISIA CR Imaging as described in Section 6.4
    - Questionnaire completion as described in Section 6.3
- Subjects were advised to inform VCS immediately of any adverse reactions or events which may develop within 48 hours.
- After completion of Week 18 procedures, subjects received a stipend for their participation and were dismissed from the study.

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7.7 Procedure Summary Table

Procedures		Screening	Baseline	Week 5	Week 10	Week 14	Week 18
Study Initiation and Qualification	Informed Consent and Medical History	X					
	Inclusion/Exclusion Criteria Reviewed	X					
Dispense (D) / Inspect (I) / Collect (C) Products **Prescription product was collected and discontinued*		D *Support*	D *Test*		I/C* *Test*		I/C *Test*
Interim Compliance Check-In				X		X	
Expert Grading	Hyperpigmentation, Brightness/Radiance, and Skin Texture		X		X		X
Instrumentation	Chromameter		X		X		X
Consumer Perception	Subjective Questionnaire						X
Imaging	Visia CR		X		X		X

8. Prohibitions & Restrictions for the Duration of the Study

- Use of other drugs or skincare intended to treat hyperpigmentation, other than study specific products (prescription drug, test product, SPF 50
- Excessive/direct sun exposure for the purpose of tanning during the study. Provided SPF must be used and reapplied as needed to avoid interaction with the prescription product.
- Use of self-tanning products or tanning beds during the study.
- Initiating the use of any new cosmetic/personal care products on the test area during the study.
- Use of other toner products.

10. Indemnity Provision

Prior to commencement of this in-vivo clinical study with VCS an indemnification agreement was signed by the sponsor. No claims of injury were made by any of the subjects who participated in this study.

11. Institutional Review Board (IRB)

Institutional Review Board (IRB) review was requested by the Sponsor for this study.

IRB Information:

Name: Allendale Investigational Review Board, Inc
14 Somerset Lane, Old Lyme CT 06371
Main: 860 434 5872
Email: erin.staab@allendaleirb.com

12. Informed Consent

A study-specific informed consent was obtained from each subject prior to any study-related procedures. It described the study design, reasons for study, possible adverse effects, associated risks and potential benefits of treatment, and their limits of liability. Subjects signed and dated the informed consent document to indicate their authorization to proceed and acknowledge their understanding of the contents. Subjects were informed that they were free to withdraw from the study at any time without being obliged to give a reason.

The study team utilized a secure electronic signature platform, to administer and document the informed consent, in accordance with 21 CFR Part 50 (Protection of Human Subjects) and 21 CFR Part 11 (Electronic Records and Electronic Signatures).
Participants had the option to sign electronically either prior to their visit or onsite. At the visit, subjects were given time to ask questions before the consent is countersigned by the Principal Investigator or their designee administering the consent. An electronic copy of the fully signed consent is retained by VCS and is made available to the subject. Subjects who were not capable of providing or were unwilling to provide voluntary informed consent were not enrolled.

15. Monitoring

The study was not monitored by the Sponsor.

16. Recording of Data

Study data was captured using an EDC (Electronic Data Capture) system. Paper case report forms (CRFs), as needed, followed Good Documentation Practices by VCS staff.

17. Safety & Ethics

The study was conducted in compliance with the main principles of Good Clinical Practice (GCP) under International Conference of Harmonisation (ICH) Harmonised Tripartite Guideline on GCP E6(2). The practices and procedures conducted during this study pertaining to informed consent, subject safety, investigator responsibility, and adverse event reporting were designed to comply with ICH E6. This study is not intended for submission to the FDA.

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The study conformed to the requirements of the Declaration of Helsinki and its subsequent amendments (World Medical Association; 2013).

18. Statistical Methods

Statistical analysis was performed internally by VCS personnel per protocol. Data analysis is excluded for subjects who were discontinued from the study.

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