

Tradename: AC Griffonia Lysate Advanced

Code: 16634

CAS #: 999999-99-4

Test Request Form #: 6306

Lot #: 72745

Sponsor: *Active Concepts, LLC; 107 Technology Drive Lincolnton, NC 28092*

Study Director: *Maureen Danaher*

Principal Investigator: *Kara Rivera*

Test Performed:

In vivo Immediate Skin Lifting Benefits

Introduction

Wrinkles are furrows, folds, or creases in the skin that develop as skin elasticity declines and cumulative sun exposure accelerates structural breakdown. As the skin ages, cell turnover slows and the dermis becomes thinner, making it easier for surface depressions to form. Short-term skin tightening can help counteract the appearance of wrinkles by temporarily enhancing skin firmness and improving surface smoothness. By creating a subtle tightening effect on the epidermis, these treatments can reduce the visibility of fine lines, lift areas of laxity, and provide an overall more refreshed look. This immediate improvement in skin texture can make wrinkles appear shallower and less noticeable, contributing to a more youthful and revitalized appearance. Monitoring and addressing early signs of skin damage, such as fine lines and wrinkles, supports healthier skin and helps maintain a smoother, more resilient complexion.

Accordingly, a short-term *in vivo* study was conducted to evaluate the ability of **AC Griffonia Lysate Advanced** to reduce wrinkles on the face.

Study Principle

Participants applied specific products to their designated under eyes once. Measurements were collected at baseline and three minutes after application. Photographs of participant faces were obtained using the VISIA Complexion Analysis System and analyzed for Wrinkles. The most pronounced wrinkles are represented by dark green lines whereas light green lines represent finer wrinkles in the analyzed region. Participants also completed a participant survey to determine perceived tightening effects of the designated products.

Materials

- A. Equipment:** VISIA Complexion Analysis System (Canfield Scientific., Fairfield, NJ, USA)
- B. Products:** Base Serum (Table 1); Kirkland Signature Daily Facial Towelettes
- C. Software:** Excel Analysis ToolPak (Microsoft)

Table 1. Ingredient List (INCI Names) of Base Serum

Base Undereye Serum
Water
Glycerin
Sodium Hyaluronate
C14-22 Alcohols & C23-20 Alkyl Glucoside
Cocos Nucifera (Coconut) Extract
Chlorella Vulgaris Extract
Olea Europaea (Olive) Leaf Extract
Punica Granatum Sterols

Methods

Six volunteers between the ages of 25 and 50, who were known to be free of any skin pathologies with Fitzpatrick skin types I to III, participated in this study (Table 2).

Table 2. The Fitzpatrick Classification of Skin Types Chart¹

Fitzpatrick Skin Type Descriptions*	
Skin Type	Description
I	Always burns, never tans
II	Burns easily, tans minimally
III	Burns moderately, tans to light brown
IV	Burns minimally, tans to moderate brown
V	Rarely burns, tans to dark
VI	Never burns, least sensitive to changes

*Adapted from The Surgeon General's Call to Action to Prevent Skin Cancer

Participants were randomly assigned to a specific condition and treatment (Table 3). Following Baseline images, participants were provided with their designated condition and were instructed to apply 0.2 g of product to the specified undereye region. Baseline images were taken prior to starting treatment application. Measurements were collected again three minutes after application. Participants were instructed not to wear makeup or SPF products for the measurement sessions. Participants were also asked to assess the perceived tightening effect of the treatment they applied, three minutes after application, using a scale ranging from 1 (no perceived tightening effect) to 10 (intense tightening effect).

Table 3. Descriptions of the Conditions and Treatments for each Skin Test Site

Skin Test Site	Condition	Treatment / Test Article Application Description
1	Base Serum	Base Serum
2	5.0% AC Griffonia Lysate Advanced	5.0% AC Griffonia Lysate Advanced in Base Serum

Photographic assessments were performed using the VISIA Complexion Analysis System (Canfield Scientific., Fairfield, NJ, USA). The VISIA System ensured consistent positioning of each participant's head and each participant cleaned their face with a gentle facial wipe (Simple® Cleansing Facial Wipes) before images were obtained. The photographic images were captured with standard, cross-polarized, parallel polarized, and ultraviolet light.

Images were analyzed for Wrinkle Feature Count. The Wrinkle Feature Count indicates the number of discrete instances of Wrinkles, without regard to the size or intensity, within the analyzed region. Wrinkles are furrows, folds, or creases in the skin, identified by their characteristic long, narrow shape and are photographed with standard lighting. Therefore, skin with lower Wrinkle Counts indicates a more youthful appearance. The data are displayed as averages and t-test analyses were performed with statistical significance accepted at $p \leq 0.05$. Percent change is expressed relative to Baseline values and calculated by the following equation:

$$\text{Percent Change (\%)} = \frac{\text{Wrinkle Count}_{3 \text{ minutes after application}} - \text{Wrinkle Count}_{\text{Baseline}}}{\text{Wrinkle Count}_{\text{Baseline}}} \times 100$$

Results

The data obtained met criteria for a valid study and the Base Serum performed as anticipated. Application of 5.0% **AC Griffonia Lysate Advanced**, once in a three-minute period to the undereye area, resulted in a reduction in the number of Wrinkles detected by the VISIA System.

Change in Undereye Wrinkles AC Griffonia Lysate Advanced

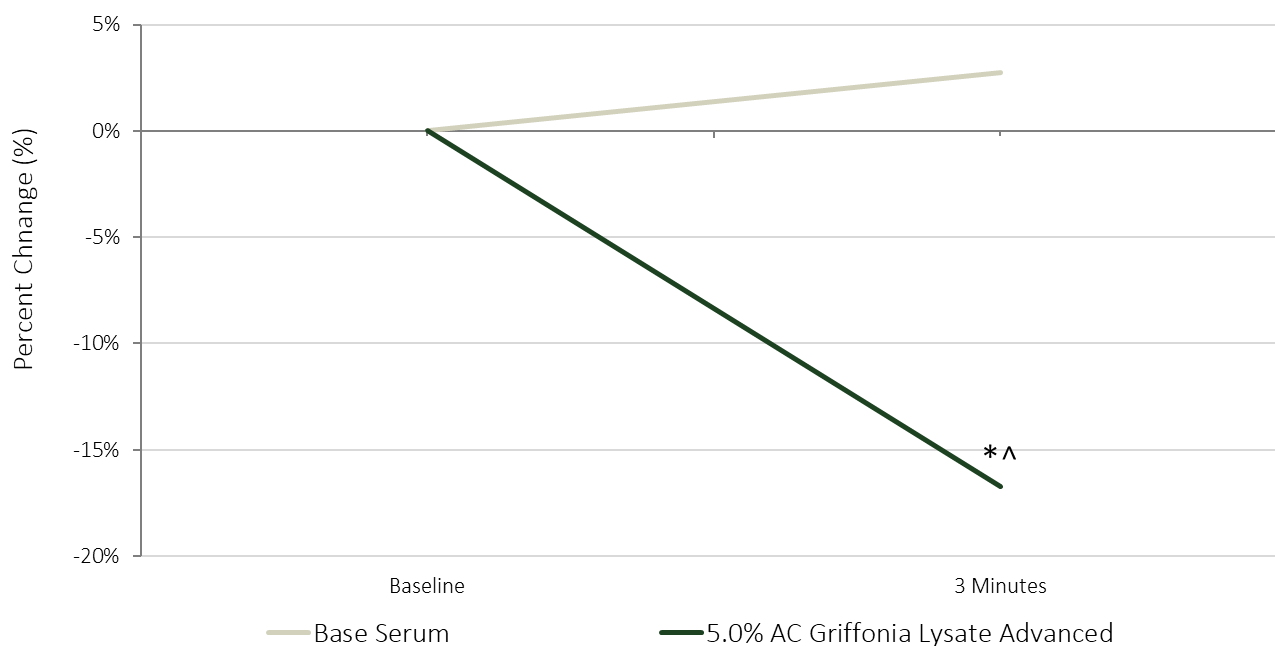


Figure 1. Change in Wrinkle Count from Baseline. * indicates significance ($p \leq 0.05$) compared to Baseline values. ^ indicates significance ($p \leq 0.05$) compared to Base Serum within the same timepoint.

Table 4. P-values from t-test Analyses of Change in Wrinkle Count from Baseline to Three Minutes After Application. * indicates significance ($p \leq 0.05$) compared to Baseline values.

	Baseline vs Three Minutes After Application
Base Serum	0.845
5.0% AC Griffonia Lysate Advanced	0.042*

Table 4. T-test Analyses of Change in Wrinkle Count between Base Serum and 5.0% AC Griffonia Lysate Advanced Three Minutes After Application. ^ indicates significance ($p \leq 0.05$) compared to Base Serum within the same timepoint.

	Three Minutes After Application
P-value	0.042^

Perceived Undereye Tightness Three Minutes After Application AC Griffonia Lysate Advanced

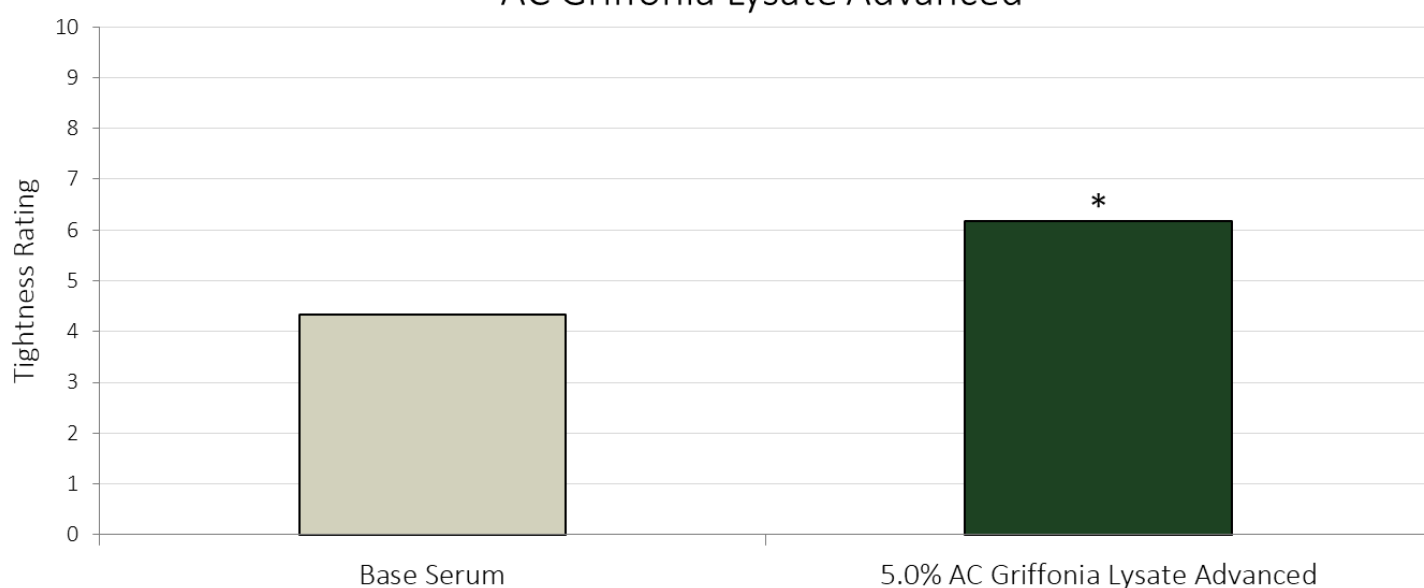


Figure 2. Participant Perceived Undereye Tightness Three Minutes After Test Material Application Ranging From 1 (no Perceived tightening effect) to 10 (intense tightening effect) * indicates significance ($p \leq 0.05$) between conditions.

Table 5. T-test Analyses of Change in in Participant Perceived Undereye Tightness Three Minutes After Application. * indicates significance ($p \leq 0.05$) between conditions.

	Base Serum vs 5.0% AC Griffonia Lysate Advanced
P-value	0.038*

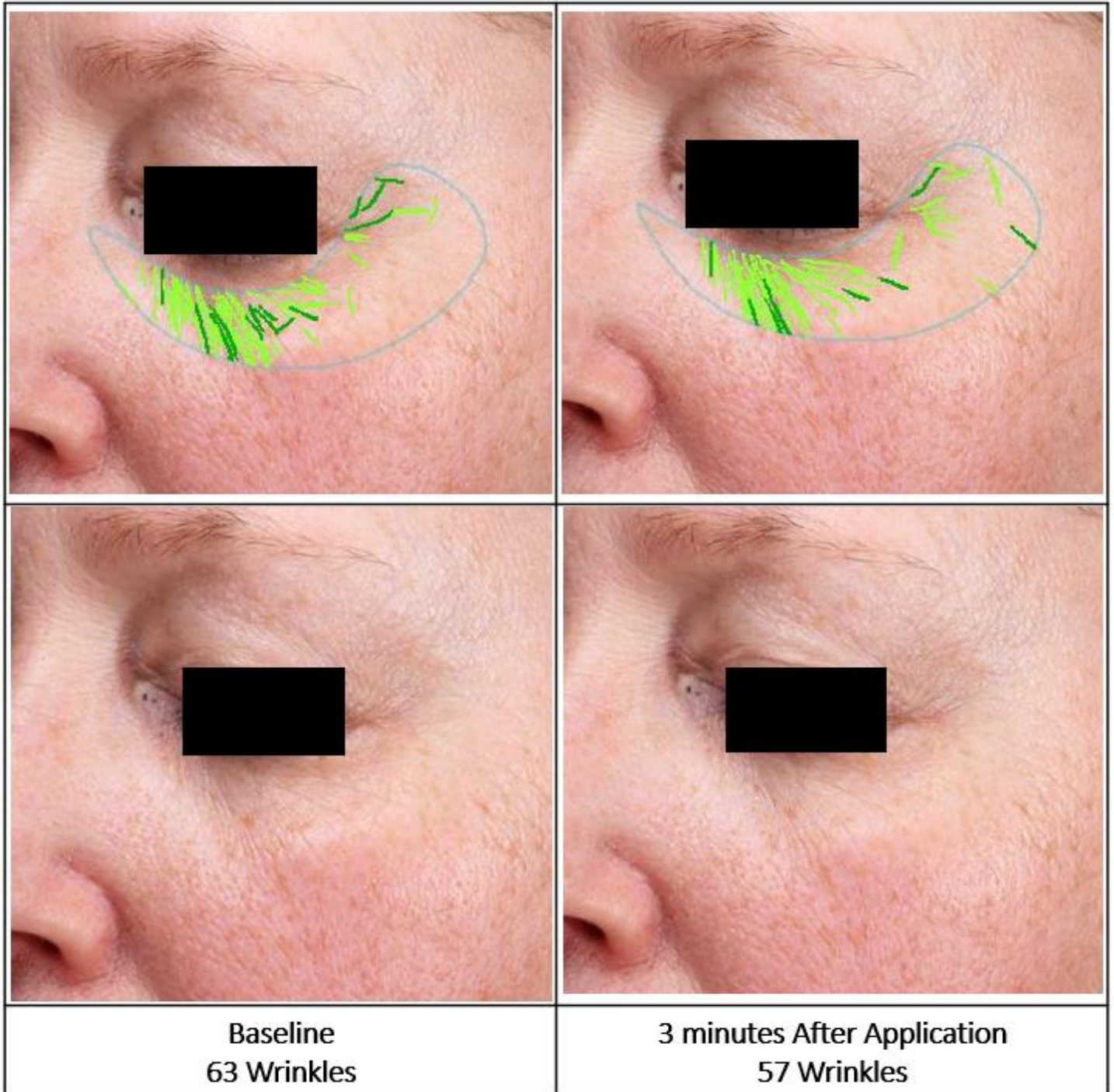


Image 1. Images of Participant Treated with 5.0% AC Griffonia Lysate Advanced. Natural Photos (top) and VISIA Image Enhancement (bottom) Before and Three Minutes After Application. The most pronounced wrinkles are represented by dark green lines whereas light green lines represent finer wrinkles.

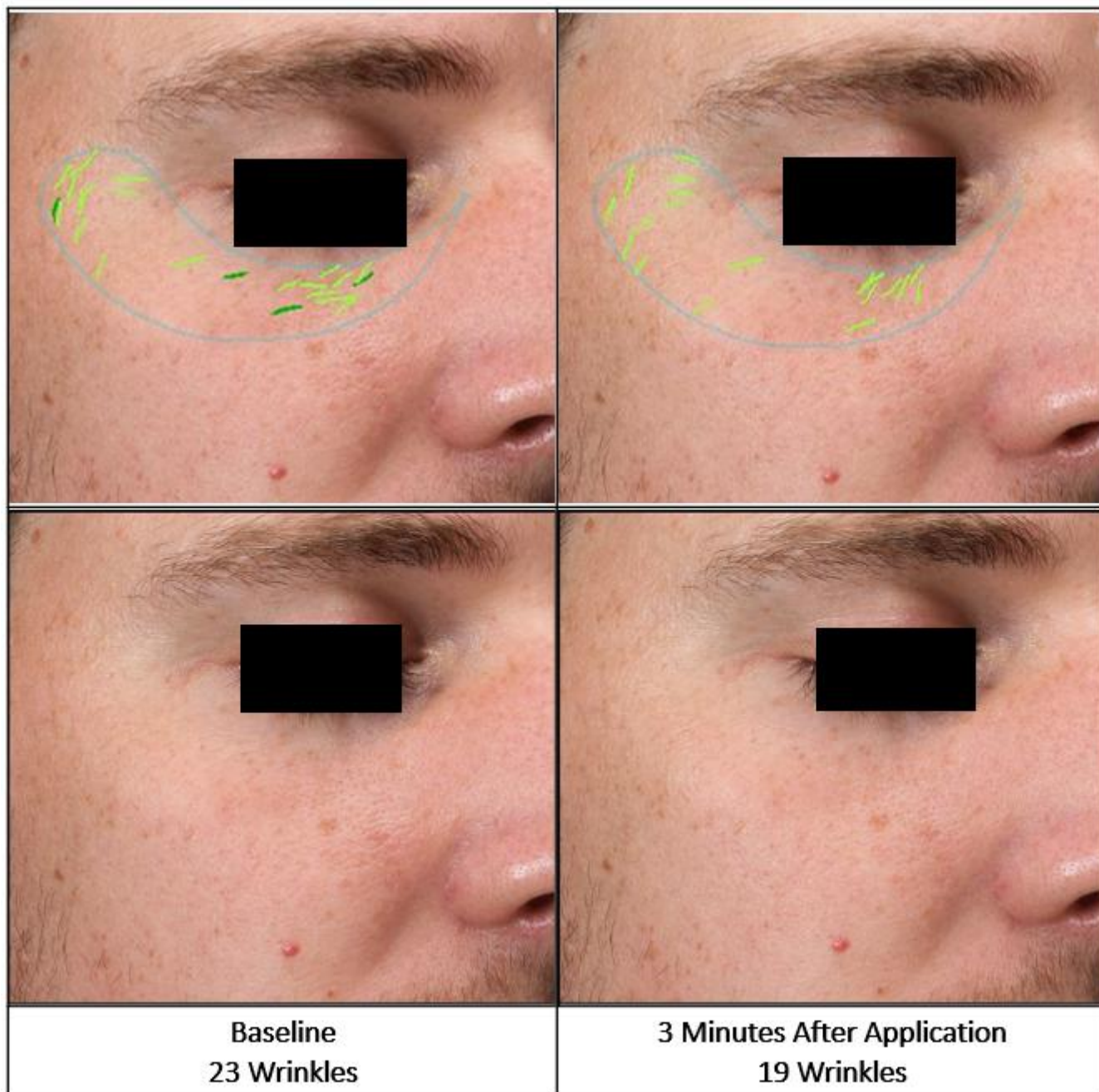


Image 2. Images of Participant Treated with 5.0% AC Griffonia Lysate Advanced. Natural Photos (top) and VISIA Image Enhancement (bottom) Before and Three Minutes After Application. The most pronounced wrinkles are represented by dark green lines whereas light green lines represent finer wrinkles.



Image 3. Images of Participant Treated with 5.0% AC Griffonia Lysate Advanced. Natural Photos (top) and VISIA Image Enhancement (bottom) Before and Three Minutes After Application. The most pronounced wrinkles are represented by dark green lines whereas light green lines represent finer wrinkles.

Discussion

As evidenced in this short-term study, **AC Griffonia Lysate Advanced** reduces the appearance of Wrinkles in the undereye region, in addition to eliciting tightening effects with application. The amount of Wrinkles present was not significantly altered with Base Serum application, indicating the Base Serum does not exert immediate significant Wrinkle reducing properties on the skin (Figure 1; Table 4). Conversely, applying 5.0% **AC Griffonia Lysate Advanced** resulted in a 16% decrease in the overall amount of Wrinkles present in the undereye region, compared to baseline, three minutes after application (Figure 1; Table 4). Moreover, applying 5.0% **AC Griffonia Lysate Advanced** significantly decreased the amount of Wrinkles present in the undereye region compared to the Base Serum three minutes after application (Figure 1; Table 5). These results indicate that applying 5.0% **AC Griffonia Lysate Advanced** provides an immediate reduction of Wrinkles on the undereye region resulting in a more youthful skin appearance (Images 1, 2, 3).

Taken together, these results indicate **AC Griffonia Lysate Advanced** reduces the appearance of Wrinkles when added to personal care applications at recommended use levels. Collectively, **AC Griffonia Lysate Advanced** improves skin health and provides a more youthful appearance by reducing the visual consequences of normal aging.

References

1. Sharma AN, Patel BC. Laser Fitzpatrick Skin Type Recommendations. [Updated 2022 Mar 9]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK557626/>