

A photograph of matcha tea preparation on a dark wooden surface. In the center is a white ceramic bowl containing a small amount of bright green matcha powder. A wooden whisk (chasen) is positioned in the bowl, with its handle extending towards the top right. To the left of the bowl is another wooden whisk. Above the bowl is a small, round, textured ceramic container filled with green powder, with its lid placed to the left. In the background, there are rolled-up items, possibly tea towels or cloths, in shades of grey and white. The overall lighting is soft and focused on the central elements.

AC Skimmuni-Tea

INCI: Water (and) Lactobacillus (and) Camellia Sinensis Leaf Extract (and) Lactobacillus Ferment

Available Efficacy Studies

In Vitro

- Dermal Microbiome Immunology Assay
- IL-1 α ELISA
- ORAC Assay Analysis
- Cellular Detoxification Assay

In Vivo

- Mood Survey Analysis
- EEG Brainwave Study
- 24 Hour Moisturization Study
- 24 Hour TEWL Study
- Cellular Renewal Study

Tox & Safety

- OECD 201 Fresh Water Algae Growth Inhibition
- OECD 301B Ready Biodegradability Assay
- OECD TG 442C - Direct Peptide Reactivity Assay
- OECD TG 442D - In Vitro Skin Sensitization Report
- AMES
- Cellular Viability
- Dermal & Ocular Irritation
- Phototoxicity Assay

VISIA data
coming soon!



Mood Survey

Pleasant Mood Index AC Skinmuni-Tea

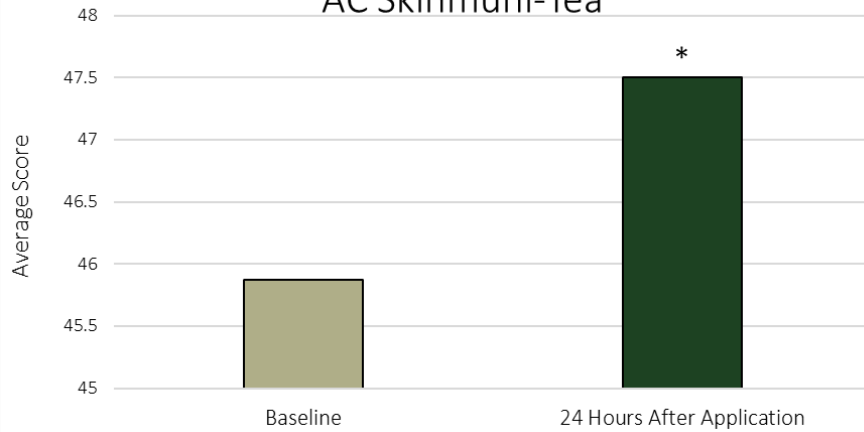


Figure 1. The impact of AC Skinmuni-Tea application on Pleasant Mood Index scores. The Pleasant Mood Index (Brief Mood Introspection Scale) provides an evaluation of mood in terms of pleasant or unpleasant with higher scores indicating a more pleasant mood.

Global Self-Worth AC Skinmuni-Tea

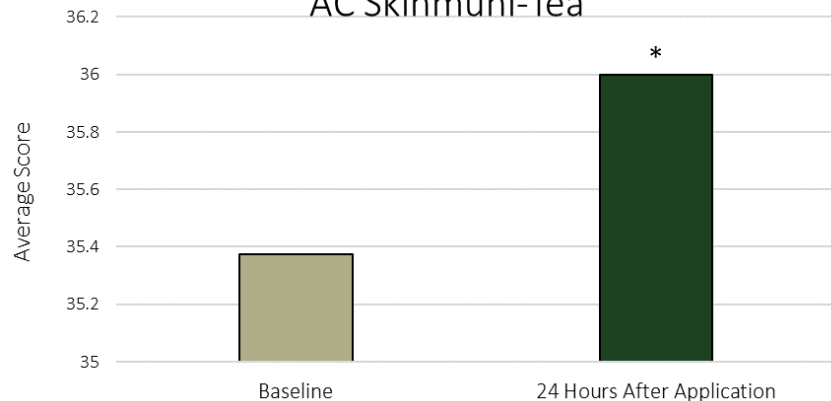


Figure 2. The impact of AC Skinmuni-Tea application on Global Self-Worth scores. The Global Self-Worth (Rosenberg Self-Esteem Scale) survey measures both positive and negative feelings about an individual to evaluate self-esteem with higher scores representing more self-esteem.

Users want to experience emotional pleasure from their cosmetics, ultimately leading to an improved state of well-being. A Mood Survey Analysis was conducted to evaluate the effect of applying AC Skinmuni-Tea on mood state and perceived self-esteem. Participants completed mood surveys before and 24 hours after product application to demonstrate the dynamic aspects of a product experience and the perceived effects.

After 24 hours, 5.0% AC Skinmuni-Tea in a base lotion increased pleasant mood by 4% and self-worth by 2%

+ 4% Mood
+ 2% Self-worth

Benefits

AC Skinmuni-Tea elicits perceivable mood and self-esteem effects and confers benefits beyond the traditional physical beauty attributes associated with cosmetic products.

EEG Brainwave Study



Relaxation During Application AC Skinmuni-Tea

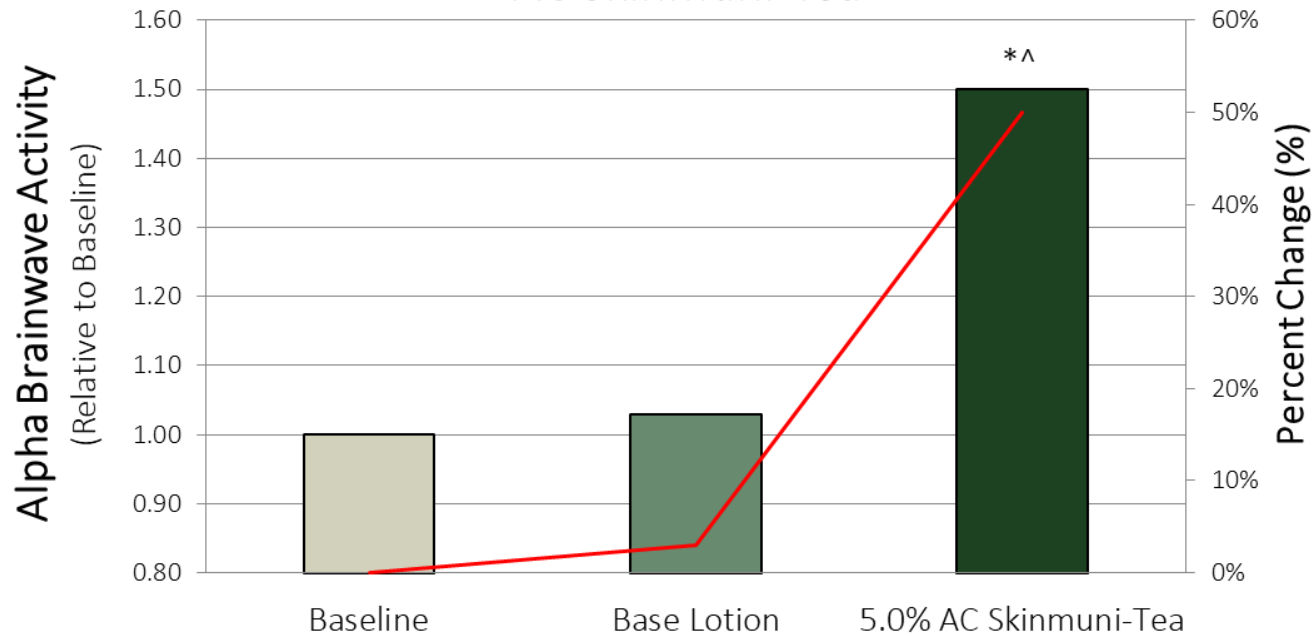


Figure 3. Alpha Brainwave Activity During Product Application Relative to Baseline. * indicates significance ($p \leq 0.05$) compared to Baseline. ^ indicates significance ($p \leq 0.05$) compared to Base Lotion.

An EEG Brainwave Study was conducted to evaluate the immediate relaxation and calming properties of AC Skinmuni-Tea application. A headband is placed on the forehead of participants and brainwaves are monitored as products are applied to the skin. The brainwaves associated with relaxation and calmness are isolated and analyzed to provide insight to the psychological state during product application.

5.0% AC Skinmuni-Tea significantly increased alpha brainwave activity by 50% during the 30-second application compared to baseline brainwave activity.

Benefits

+50%

AC Skinmuni-Tea enhances the psychological response when applying a cosmetic product by increasing relaxation and calmness which can augment the consumer experience.

Dermal Microbiome-Immunology Assay

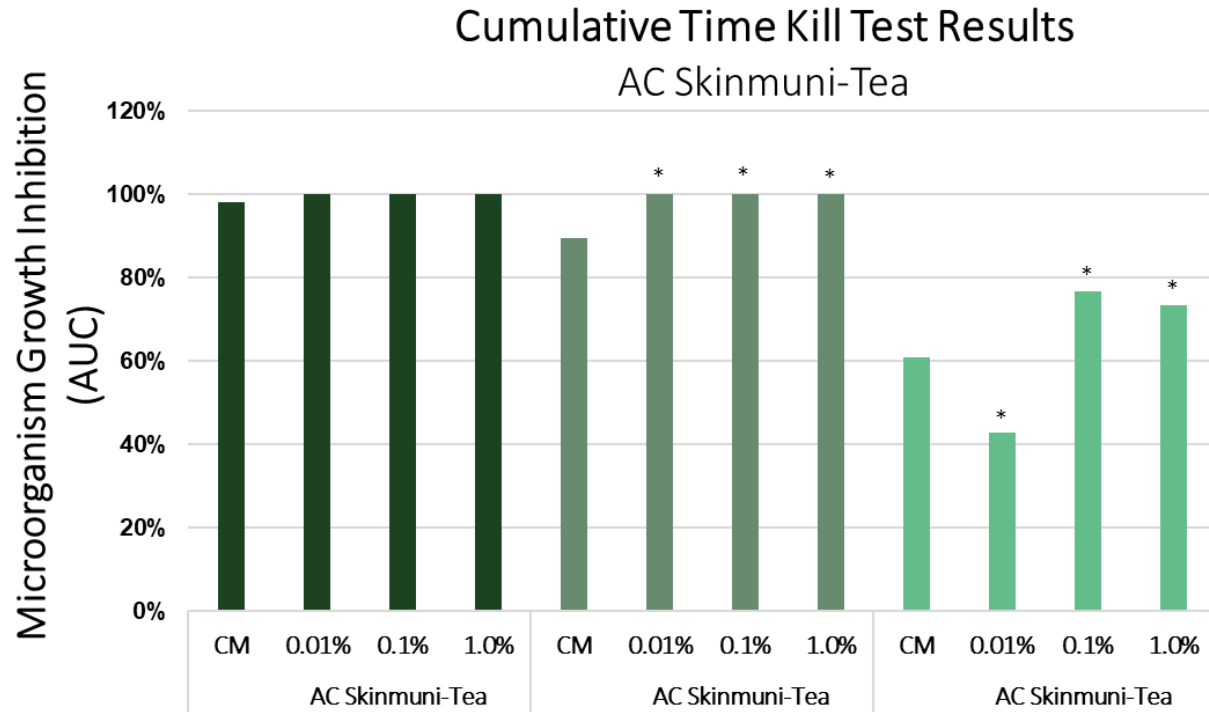


Figure 4. Time Kill Test results for dendritic cells treated with antimicrobial-free AC Skinmuni-Tea inoculated with the tested microorganism populations across time intervals. Values indicate the percent of microorganisms killed. * indicates significance ($p < 0.05$) compared to Complete Media within each microorganism tested.

Microorganism	Pathogenic or Nonpathogenic
<i>S. aureus</i>	Pathogenic
<i>P. aeruginosa</i>	Pathogenic
<i>S. epidermidis</i>	Nonpathogenic

Dendritic cells are a small group of heterogeneous cells residing in the epidermis and dermis known as the gatekeepers of the immune system. A Dermal Microbiome-Immunology Assay was conducted to assess the effect of antimicrobial-free AC Skinmuni-Tea to alter dendritic cell paracrine signaling molecules to kill detrimental microorganisms and maintain commensal microbiota commonly found on the skin.

Dendritic cells treated with 0.01% AC Skinmuni-Tea maintained 57% of the commensal microbiota, *S. epidermidis*.

+57%

Benefits

AC Skinmuni-Tea enhanced the ability of signaling molecules from dendritic cells to kill detrimental microorganism while maintaining commensal microbiota commonly found on the skin.

IL-1 α ELISA

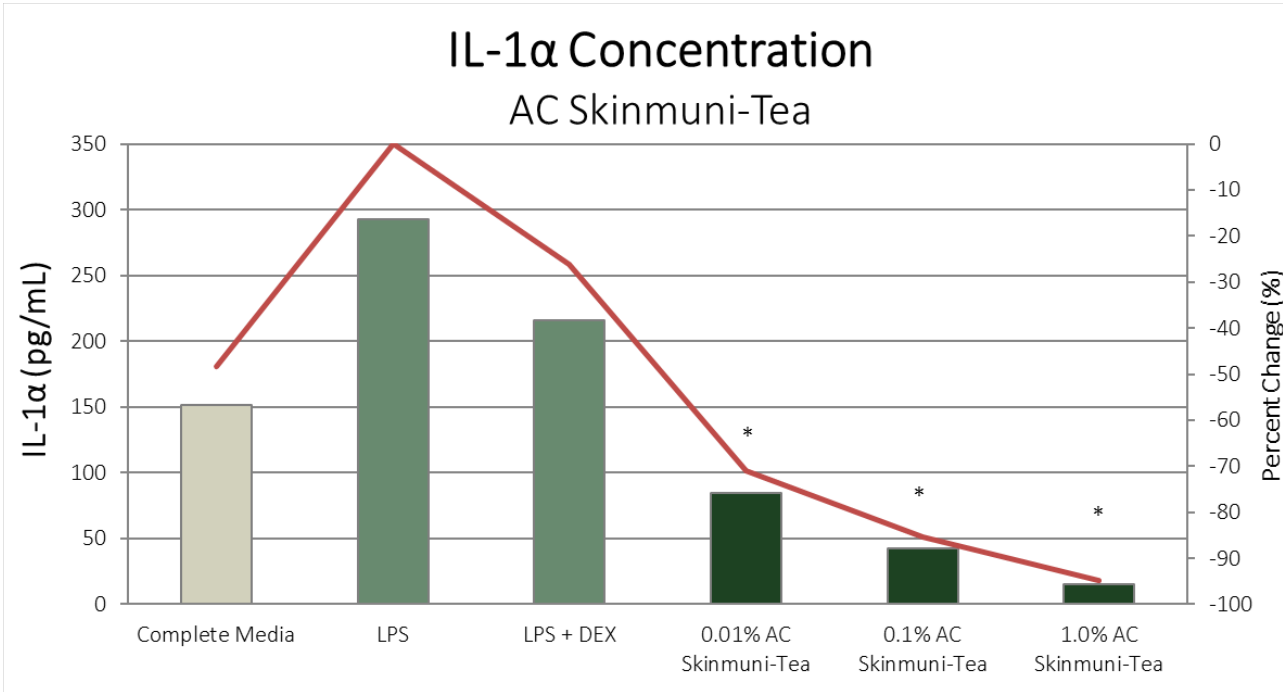


Figure 5. The Effect of AC Skinmuni-Tea-treated Keratinocytes on IL-1 α Concentrations. * indicates significance ($p < 0.05$) compared to LPS-treated keratinocytes.

IL-1 α is a pro-inflammatory cytokine that is largely responsible for the initial inflammatory response and induces the production of other inflammatory mediators. In keratinocytes, chronically elevated IL-1 α levels can lead to hair loss, scaling and a reduction in skin elasticity. An IL-1 α ELISA was conducted to assess the *in vitro* effect of AC Skinmuni-Tea on IL-1 α concentrations produced by keratinocytes in a pro-inflammatory environment.

Keratinocytes treated with AC Skinmuni-Tea at 1.0% demonstrated 95% reduction in IL-1 α levels compared to LPS-treated keratinocytes.

-95%

Benefits

AC Skinmuni-Tea retains soothing and anti-inflammatory properties, which may help to attenuate the formation of an inflammatory environment and blunt the characteristics of cellular aging.

ORAC Assay

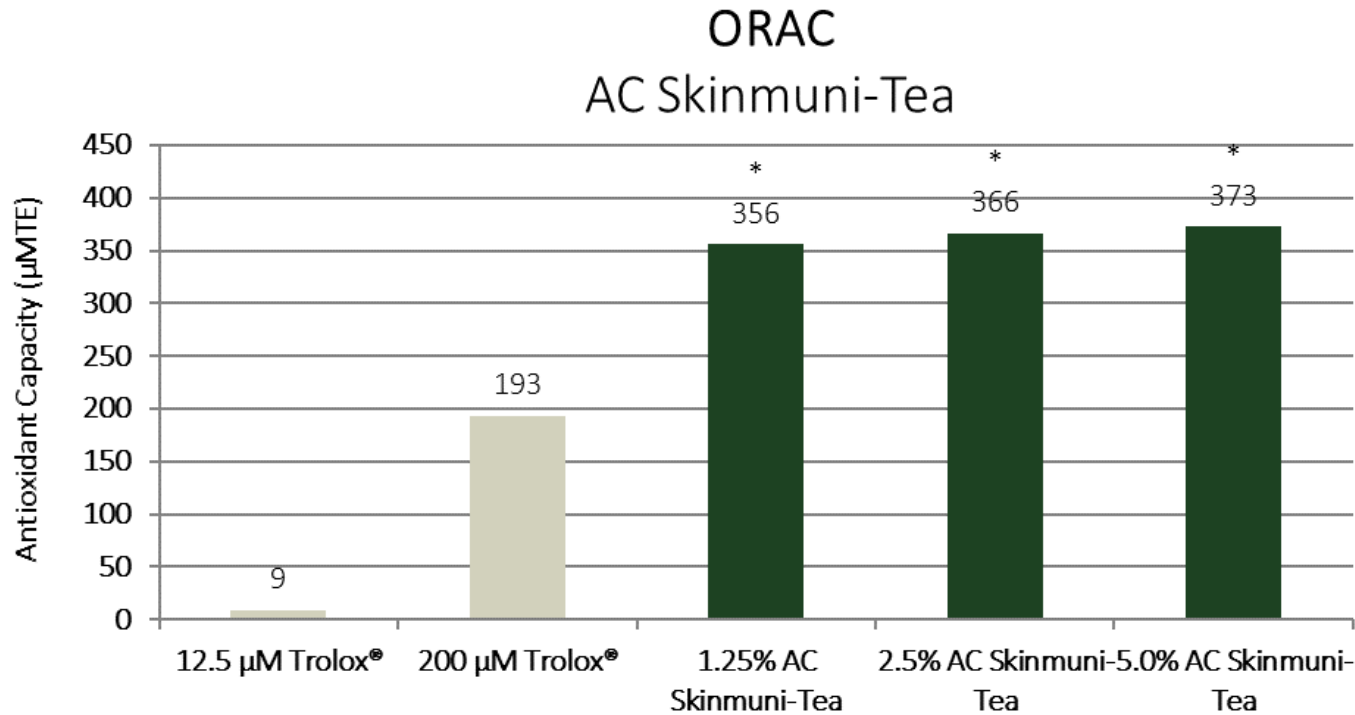
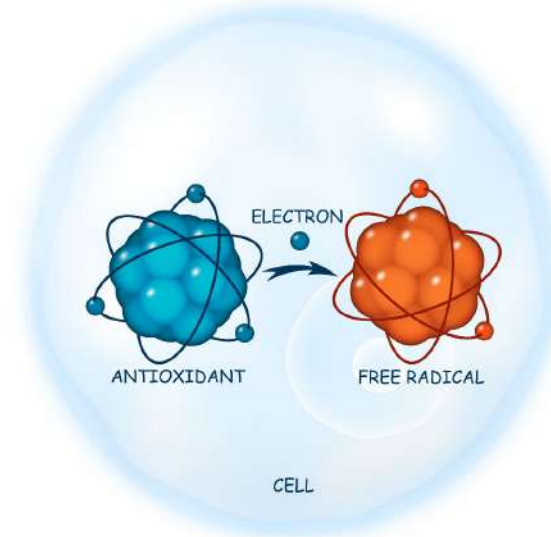


Figure 6. Antioxidant capacity of AC Skinmuni-Tea. * indicates significance ($p \leq 0.05$) compared to 200 µM Trolox®

Free Radical



Maximizing the antioxidant capacity on a cellular level allows for free radicals to be dealt with at a rate that provides protection from cellular damage. This cellular damage can be seen as physical signs of aging, such as wrinkles, loss of elasticity, unwanted pigmentation and skin unevenness with slow regeneration.

AC Skinmuni-Tea at 5.0%
exhibited greater
antioxidant activity than
200 μ M Trolox[®] with a
value of

373
 μ MTE

Benefits

AC Skinmuni-Tea is capable of
providing antioxidant properties and
aids in the anti-aging process through
protection at the cellular level.

Cellular Detoxification Assay

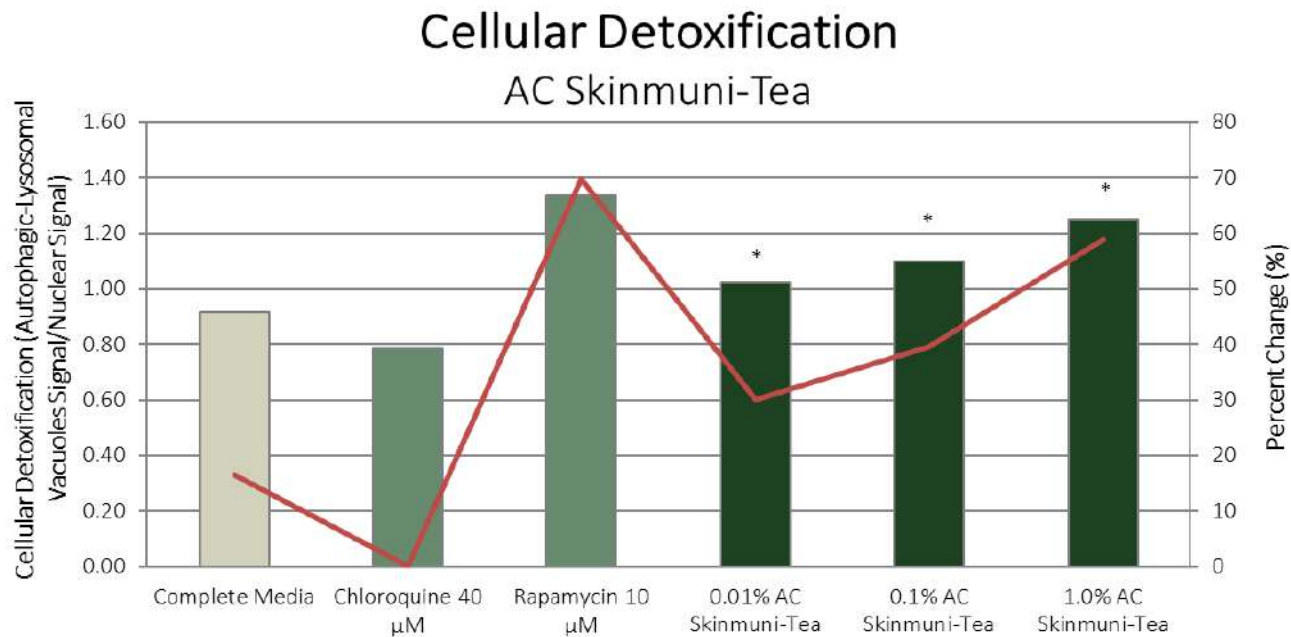
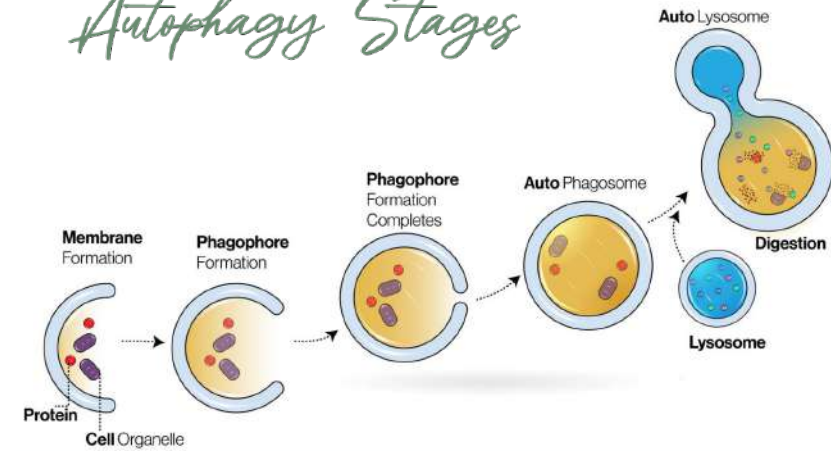


Figure 7. The Effect of AC Skinmuni-Tea on Fibroblast Cellular Detoxification. * indicates significance ($p < 0.05$) compared to Complete Media.

Autophagy Stages



Autophagy is the self-identification and delivery of damaged cellular proteins and organelles, intracellular microbes and toxins to lysosomal vacuoles for breakdown. Cellular detoxification can be manipulated by topical application of certain ingredients that trigger autophagy in dermal fibroblasts.

Fibroblasts treated with AC Skinmuni-Tea at 1.0% demonstrated an increase by 36% in autophagic-lysosomal vacuoles compared to untreated fibroblasts.

Benefits

+36%

AC Skinmuni-Tea triggers the cellular detoxification process, which may help to attenuate characteristics of cellular aging.

24-Hour Moisturization Assay

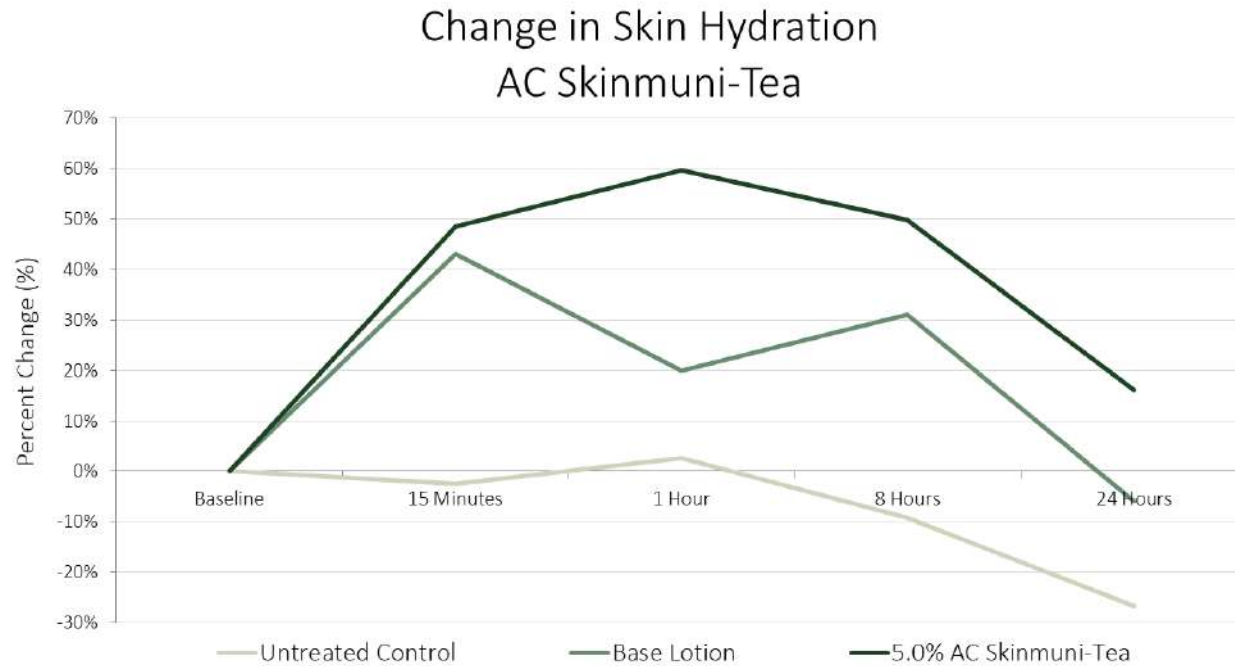


Figure 8. Percent Change in Skin Hydration Relative to Baseline Values

Proper hydration maintains the skin's structural and functional integrity and contributes to the appearance of healthier-looking skin.

Accordingly, a moisturization study was conducted to evaluate the immediate and short-term skin hydrating properties of AC Skinmuni-Tea.

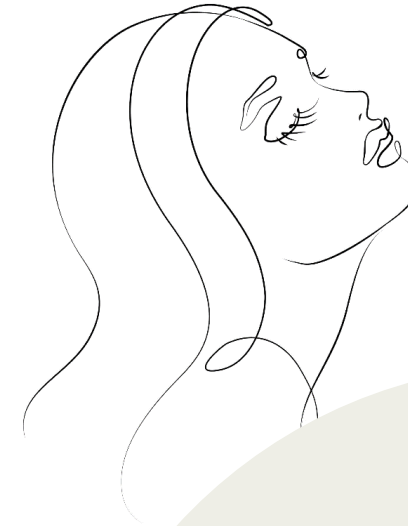
Applying 5.0% AC Skinmuni-Tea once in a 24-hour period significantly augmented skin moisturization by 60% one hour after application, and remained elevated 24 hours after application.

Benefits

+60%

AC Skinmuni-Tea demonstrates immediate and short-term skin hydration properties which improves the skin's protective barrier function and contributes to the appearance of healthier-looking skin.

24-Hour Transepidermal Water Loss Study



Change in Transepidermal Water Loss AC Skinmuni-Tea

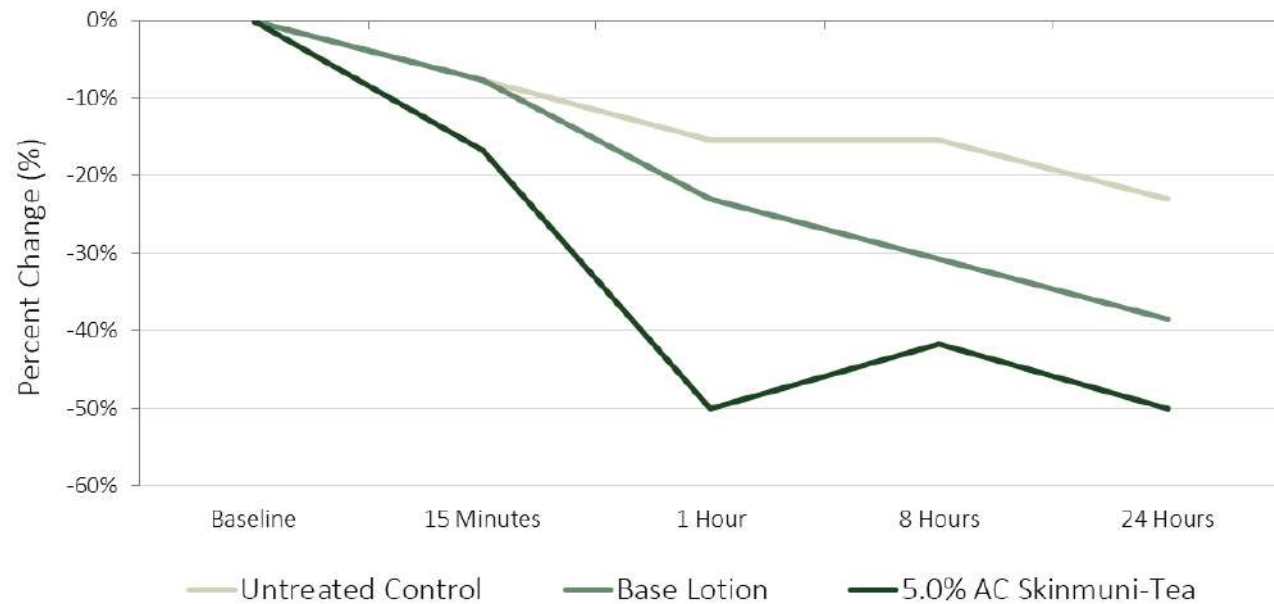


Figure 9. Percent Change in Transepidermal Water Loss Relative to Baseline Values.

Moderating excessive TEWL improves the skin's protective barrier function and contributes to the appearance of healthier-looking skin.

Accordingly, a transepidermal water loss study was conducted to evaluate the immediate and short-term moisture retention properties of AC Skinmuni-Tea.

Applying 5.0% AC Skinmuni-Tea once in a 24-hour period significantly reduced TEWL by 46% one hour after application, and remained suppressed 24 hours after application.

Benefits

-46%

AC Skinmuni-Tea demonstrates immediate and short-term moisture retention properties which improves the skin's protective barrier function and contributes to the appearance of healthier-looking skin.

Cellular Renewal

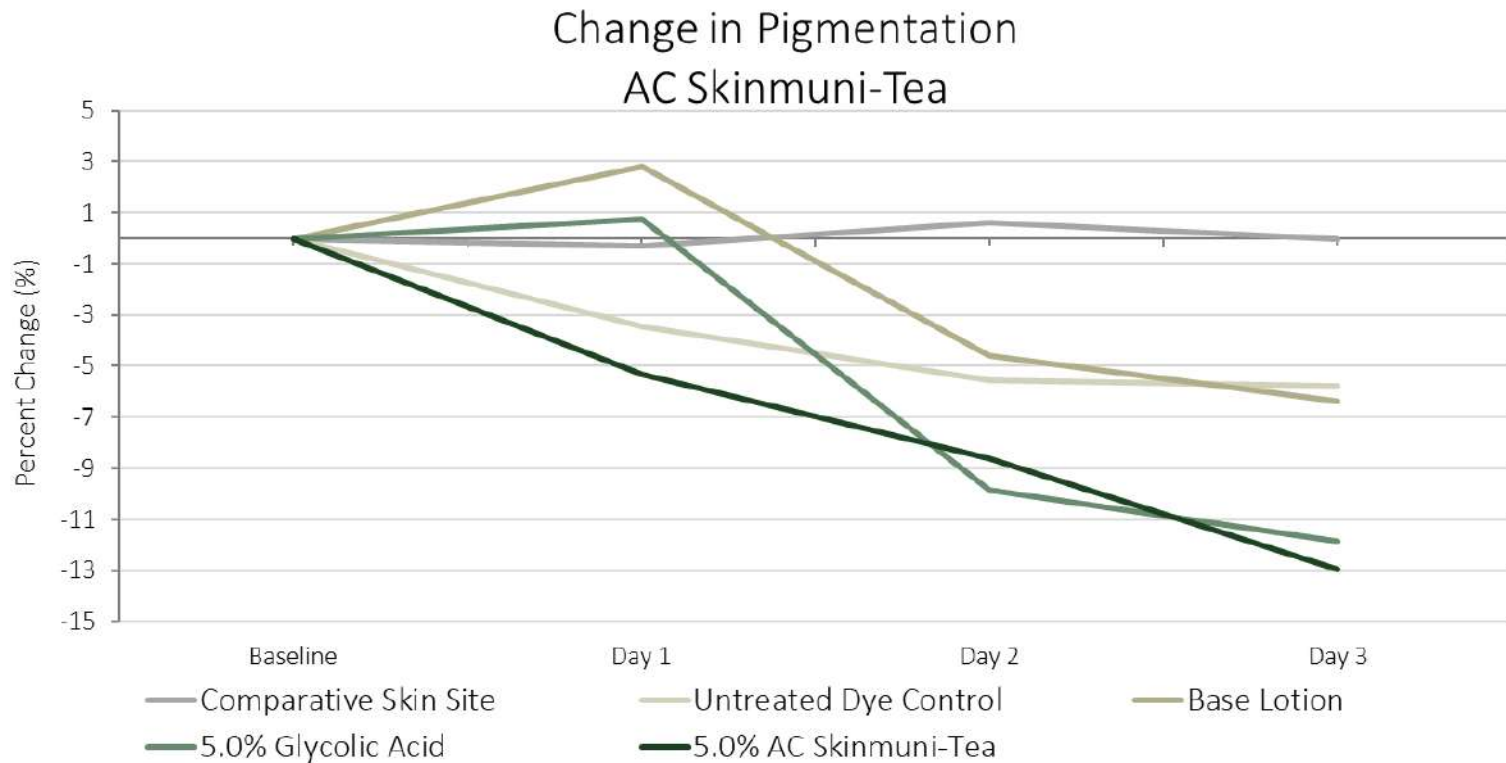


Figure 10. Percent Change in Pigmentation Relative to Baseline Readings.

The constant replacement of cells mitigates the negative long-term effects of UV light damage and other harmful agents on the skin.

A cellular renewal study was conducted to evaluate the ability of AC Skinmuni-Tea to accelerate skin cell replacement by assessing changes in pigmentation.

Ten volunteers between the ages of 22 and 40, who were known to be free of any skin pathologies, participated in this study.

After three days of application, 5.0% AC Skinmuni-Tea elicited a 13% reduction in pigmentation and outperformed the positive control.

Benefits

-13%

AC Skinmuni-Tea accelerates the processes of cellular renewal which can improve the skin's physical appearance with a healthier and more vibrant skin as well as function as a protective barrier to help reverse the signs of aging.

Summary

WHAT.

As the idea of beauty expands, consumers are thinking beyond traditional beauty categories and looking to fulfill their self-care needs. Our aim was to develop an ingredient that enhances mood while also providing skincare benefits.

WHY.

There is an intricate connection between the mind and the body. Stress, anxiety and negative emotions can trigger skin conditions. By improving mood, our goal is to reduce skin inflammation and strengthen skin immunity.

MADE OF.

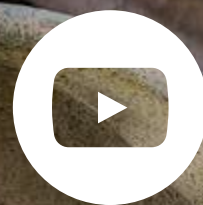
AC Skinmuni-Tea is derived from organic matcha leaves and fermented with *Lactobacillus*. Through the use of biotechnology, we deliver a potent active rich in niacinamide and vitamin C.

ACTION.

AC Skinmuni-Tea improves mood and promotes relaxation. This ingredient supports skin immunity and reduces inflammation. Moreover, it offers antioxidant protection and well-aging support. This ingredient promotes moisture retention and boosts cellular renewal.



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