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AC

WonderShroom

Neuro-boosting

Pro-Aging

Skin Elasticity



VEGAN



SEPHORA
CLEAN



CREDO
CLEAN



COSMOS
COMPLIANT



ISO 16128



THE FEATURES.

Inspired by the profound synergy between mycelial networks and the body's intricate communication systems, AC WonderShroom reshapes beauty standards through adaptogenic and nootropic technology. This advanced formula strengthens the mind-skin connection, combating stress-induced aging while enhancing resilience, balance, and overall well-being. Rooted in nature and backed by science, it unlocks your skin's potential with holistic beauty that nurtures from within.

INCI: *Camellia Sinensis Leaf Extract & Cordyceps
Militaris Extract & Hericium Erinaceum (Mushroom)
Extract & Aureobasidium Pullulans Ferment*

TECHNICAL DATA SHEET.



THE STORY.

Stress is often called the disease of the century¹, but it's far more than just jitters, it's a constant force shaping our health. While stress is a natural response to challenges, prolonged exposure accelerates cognitive decline, triggers inflammation, and weakens skin barriers.

Research links stress to the exposome², showing how environmental and lifestyle factors impact both mental and physical resilience. Chronic stress can lead to the overproduction of pro-inflammatory cytokines, causing neuroinflammation affecting brain function and skin health. The emerging field of psychoneuroimmunology reveals how stress disrupts both the nervous and immune systems, highlighting the skin-brain connection, with conditions like eczema and psoriasis becoming more prevalent among those experiencing cognitive decline. Strengthening the skin barrier helps counteract these effects.

At our core, we understand this evolution: self-care is no longer just about looking good—it's about feeling strong, empowered, and connected. Whether through mindfulness, cognitive enhancement, or skin-strengthening solutions, we are committed to science-backed, nature-inspired innovations that nurture our self inside and out.



THE SCIENCE.

Our approach starts with mycelium, the vast underground fungal network that nourishes and protects its environment—an echo of the brain, which coordinates and connects everything in the body.¹ Through the skin-brain axis, this connection becomes especially relevant for beauty: when the mind is supported, the skin appears more harmonious, resilient, and better able to cope with daily stressors.¹

Mushrooms sit at the heart of this story. They are known to contain antioxidants, anti-inflammatory compounds, and beta-glucans that help defend against oxidative stress and support cellular protection, while many species are also described as adaptogens that help the body respond to stress.² In topical concepts, these attributes are often associated with benefits such as improved hydration, smoother texture, and a calmer-looking, more even-toned complexion.² AC WonderShroom is crafted within this context to address neuroinflammation and help rebalance communication across neurological, immunological, and cutaneous pathways, with the goal of supporting skin elasticity, collagen, hydration, and perceived vitality.³

Within this framework, nootropics and adaptogens play a central role. Nootropics such as L-Theanine and caffeine are studied for their ability to support cognitive functions like thinking, learning, and memory under stress or aging, and are increasingly explored for their potential to influence skin rejuvenation through neurotransmitter modulation, neuroplasticity, and enhanced cellular communication.⁴ Adaptogens—herbs, roots, and mushrooms, are traditionally recognized for helping the body adapt to stress and maintain balance by influencing cortisol dynamics and the stress-response system, which may help buffer the impact of chronic stress on immunity, cognition, skin, and overall well-being.⁵

We introduce AC WonderShroom, our innovative active ingredient that strengthens the mind-skin connection, reduces neuroinflammation, and improves overall well-being. This holistic formula tackles signs of aging and stress, improving skin elasticity, collagen, and hydration while promoting mental clarity and vitality for a youthful, resilient state from within.

THE TECHNICAL DETAILS.

INCI. Camellia Sinensis Leaf Extract & Cordyceps Militaris Extract & Hericium Erinaceum (Mushroom) Extract & Aureobasidium Pullulans Ferment
CAS. 84650-60-2 & 999999-99-4 -2 (or) 68917-13-5 & 999999-99-4 (or) 68917-13-5 & N/A (or) 9057-02-7
EINECS. 283-519-7 & 310-127-6 (OR) N/A & 310-127-6 (OR) N/A & N/A (OR) 232-945-1

Origin. Botanical/Bacteria/Biotechnology
Natural Antimicrobial. Lactobacillus Ferment
Preservatives. None
Solvents Used. Water
Appearance. Slightly Hazy to Hazy Liquid, Colorless to Yellow
EUROPE. Compliant
USA. Compliant
CHINA. Contact Us

THE FORMULATION TIPS.

pH Stability. 3 - 7
Temperature Stability. Lower temperatures reduce browning. Product may darken if temperature is maintained over 50 °C for an extended period of time
Use Level. 1 - 5%

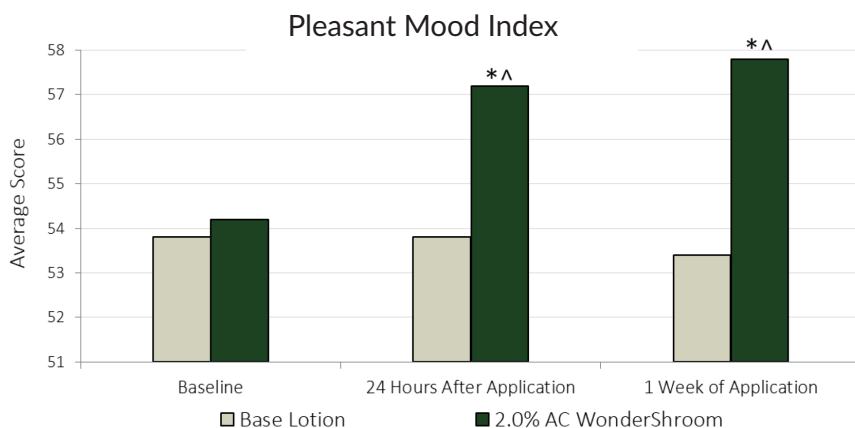
Ionic State. Nonionic
Alcohol Compatibility. Compatible with up to 10% alcohol at 5%
Solubility. Water Soluble
Pro Tips. It is recommended that this product is added to the batch in cooldown to maintain appearance

THE BENEFITS OVERVIEW.

Mental Clarity	Mood Enhancing Survey		Antioxidant	Reactive Oxygen Species (ROS) Assay	
Cognitive Support	EEG Brainwave Study		Anti-Aging	Undereye Study	
Pollution Protection	Airborne Pollutants Assay		Wrinkle Reduction	Neck Wrinkle Study	
Anti-Inflammatory	COX-II Inhibition		Skin Structure	Elasticity Study	
Vascular Health	Endothelial Permeability		Body Support	Cellulite Study	
Energy Production	Oxidative Phosphorylation		Barrier Function	24-Hour Transepidermal Water Loss (TEWL) Study	
Skin Rejuvenation	SA-Beta Gal Assay		Moisturization	24- Hour Moisturization Study	

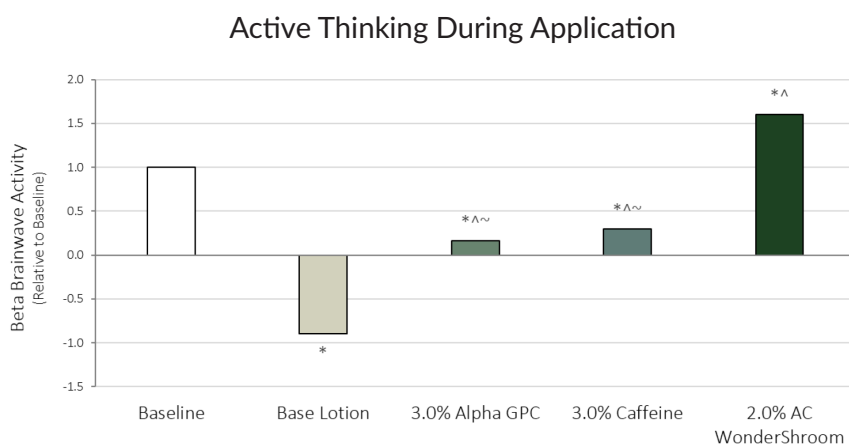
THE EFFICACY.

Mental Clarity
This test evaluates the impact of AC WonderShroom on mood enhancement, using the Pleasant Mood Index (BMIS) to measure shifts in emotional well-being. Higher scores indicate a more pleasant mood, highlighting the ingredient's potential role in emotional self-awareness, stress resilience, and overall well-being.



**Boosts
pleasant mood
by +7%**

Cognitive Support
An EEG brainwave study involving 20 volunteers evaluated the immediate brainwave response during topical application of AC WonderShroom. Brainwave activity was monitored using an EEG headband during a 30-second application period, with Beta activity assessed as an indicator associated with active thinking and alertness. Alpha, Gamma, Theta, and Delta activity were also analyzed to characterize the broader brainwave response during product application.



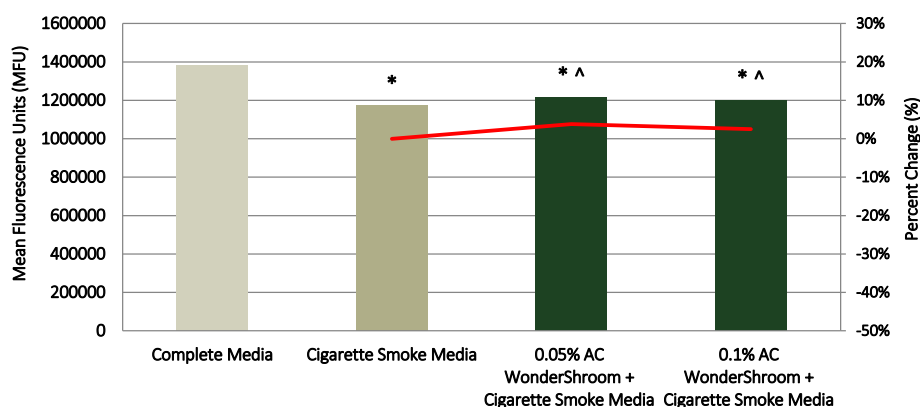
**Increases β
brainwaves by
by +1.6%**

THE EFFICACY CONTINUED.

Pollution Protection

An *in vitro* airborne pollution protection assay evaluated the ability of AC WonderShroom to help preserve cellular viability following exposure to soluble cigarette smoke pollutants. Human dermal fibroblasts were pretreated with 0.05% and 0.1% AC WonderShroom for 24 hours before an 18-hour exposure to cigarette smoke media. Cellular viability was then assessed using a fluorescence-based assay to evaluate protection against pollution-induced cellular stress.

Cellular Viability After Airborne Pollutant Exposure

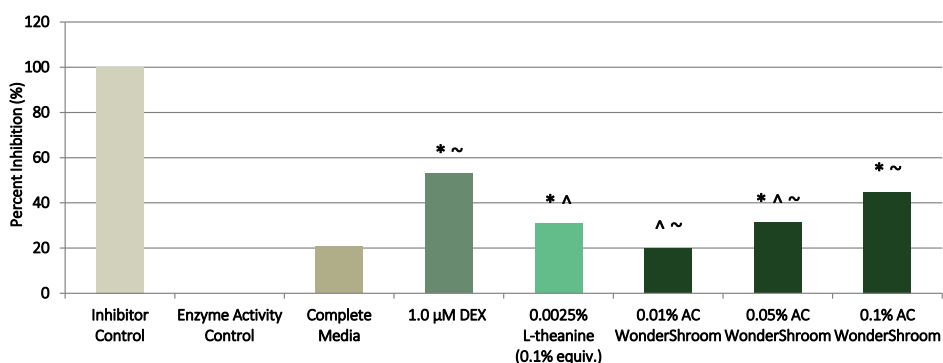


Increases cell viability by +3%

Anti-Inflammatory

An *in vitro* COX-II inhibition assay evaluated the ability of AC WonderShroom to influence an enzyme involved in the production of inflammatory mediators. Human epidermal keratinocytes were incubated with 0.01%, 0.05%, and 0.1% AC WonderShroom for 72 hours, followed by an enzyme immunoassay to assess COX-II inhibition. L-theanine was tested at a concentration equivalent to its maximum standardized level in 0.1% AC WonderShroom to compare the full complex with the isolated component, while dexamethasone served as a positive control.

COX-II Inhibition



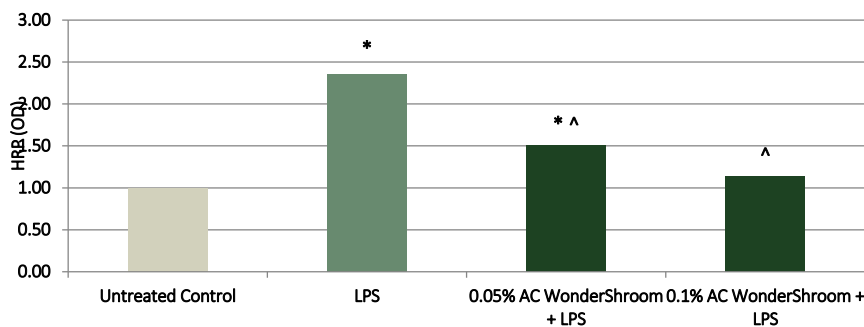
Increases COX-II Inhibition by +44.9%

THE EFFICACY CONTINUED.

Vascular Health

An *in vitro* endothelial permeability assay evaluated the ability of AC WonderShroom to influence vascular barrier function through fibroblast-conditioned media. Human dermal fibroblasts were treated with 0.05% and 0.1% AC WonderShroom for 48 hours, and the collected media was applied to human dermal microvascular endothelial cells challenged with LPS, an inflammatory stimulus. Permeability was then measured using a colorimetric assay to assess the passage of a marker through the endothelial cell layer.

Endothelial Cell Permeability

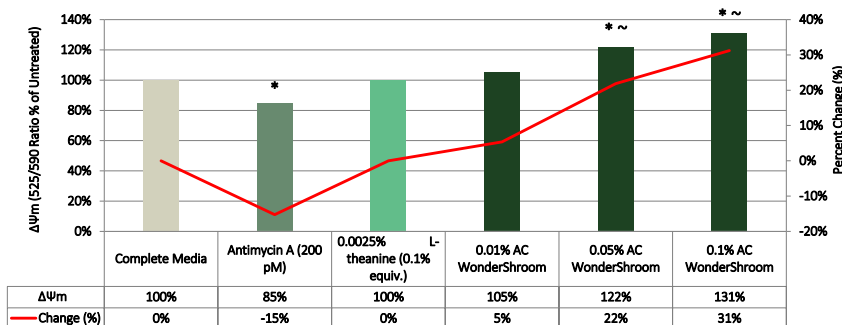


Reduces
endothelial
permeability
by -51%

Energy Production

An *in vitro* assay evaluated the effects of AC WonderShroom on mitochondrial membrane potential ($\Delta\Psi_m$), an indicator of mitochondrial function associated with cellular energy production. Human dermal fibroblasts were incubated with 0.01%, 0.05%, and 0.1% AC WonderShroom for 24 hours, and membrane potential was assessed using a fluorescence-based JC-10 assay. L-theanine was tested at an equivalent standardized concentration to compare the full complex with the isolated component, while Antimycin A served as a control for mitochondrial disruption.

Oxidative Phosphorylation

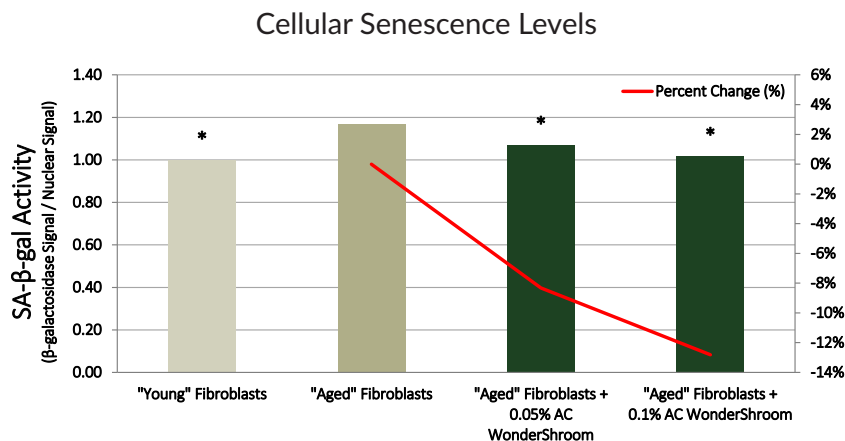


Increases
 $\Delta\Psi_m$
by +31%

THE EFFICACY CONTINUED.

Skin Rejuvenation

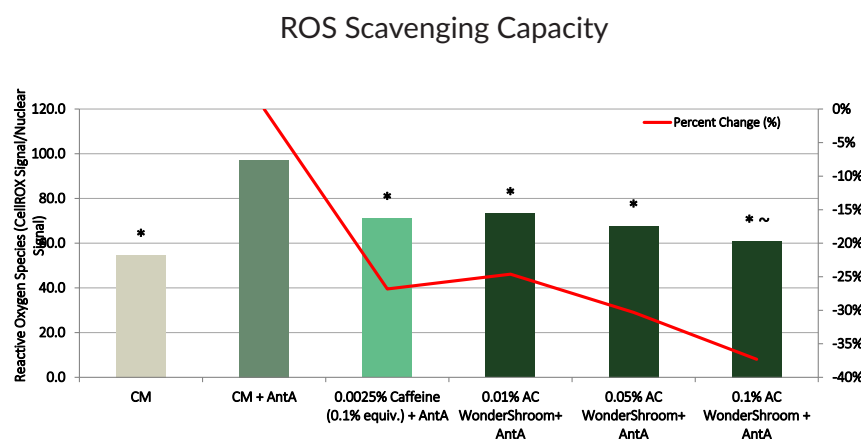
An *in vitro* cellular aging model evaluated the effects of AC WonderShroom on senescence-associated β -galactosidase (SA- β -gal), a marker of cellular senescence. Human dermal fibroblasts at different passage numbers were used to model "young" and "aged" cells. "Aged" fibroblasts were treated with 0.05% and 0.1% AC WonderShroom for 24 hours, and SA- β -gal activity was measured using a fluorescence-based assay, normalized to cell number, and compared with untreated controls.



**Reduces
Senescence
by -13%**

Antioxidant

An *in vitro* reactive oxygen species (ROS) assay evaluated the ability of AC WonderShroom to limit oxidative stress in human dermal fibroblasts. Cells were pretreated with 0.01%, 0.05%, and 0.1% AC WonderShroom for 18 hours before exposure to Antimycin A, an inducer of oxidative stress. Intracellular ROS levels were measured using a fluorescence-based assay and normalized to cell number. Caffeine was tested at a concentration equivalent to its maximum standardized level in 0.1% AC WonderShroom to compare the full complex with the isolated component.



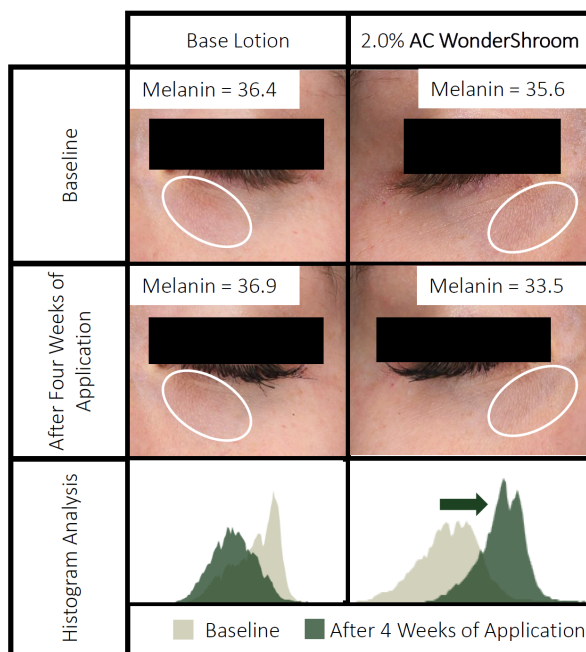
**Reduces
ROS
by -37%**

THE EFFICACY CONTINUED.

Anti-Aging

A four-week *in vivo* study involving 10 volunteers aged 24–45 evaluated the effects of AC WonderShroom on undereye pigmentation and dark circle appearance. Participants applied a lotion containing 2.0% AC WonderShroom to one randomly assigned undereye area and Base Lotion alone to the other twice daily. Measurements were collected at baseline and weekly using a Dermalab pigmentation probe to assess melanin levels and VISIA photographs analyzed with ImageJ software to assess undereye color intensity.

Change in Undereye Pigmentation and Discoloration

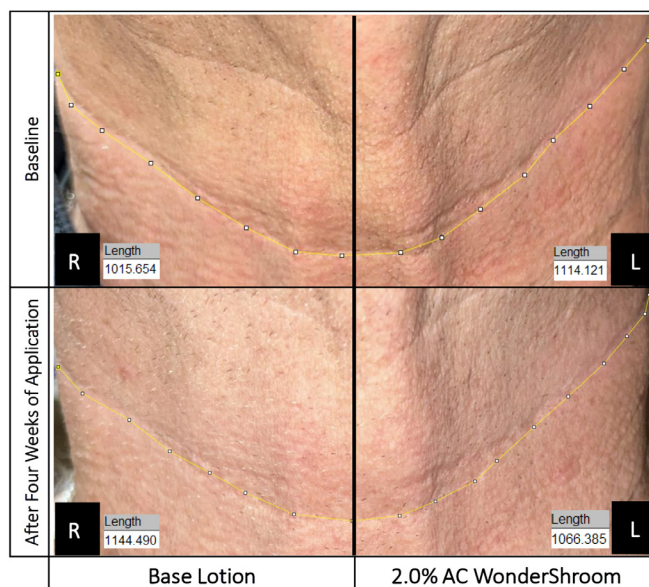


Reduces
undereye
discoloration
by -5%

Wrinkle Reduction

A four-week *in vivo* study involving 10 volunteers aged 23–70 evaluated the effects of AC WonderShroom on visible horizontal neck wrinkles, collagen parameters, and skin elasticity. Participants applied a lotion containing 2.0% AC WonderShroom to one randomly assigned half of the neck and Base Lotion alone to the other twice daily while maintaining their usual skin care routine. Collagen fiber density and dermal collagen thickness were assessed using ultrasound imaging, while skin elasticity was measured using a suction-based probe at baseline and weekly throughout the study. Photographs taken at baseline and after four weeks were analyzed using ImageJ software to measure neck wrinkle length and document changes in wrinkle appearance.

Reduction in Neck Wrinkles



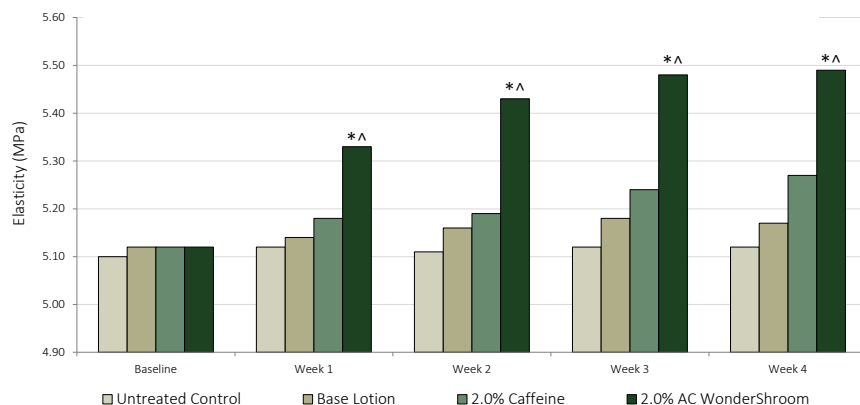
Improves neck
appearance
by +4%

THE EFFICACY CONTINUED.

Skin Structure

A four-week *in vivo* study involving 20 volunteers aged 23–50 with Fitzpatrick skin types I–IV evaluated the effects of AC WonderShroom on skin elasticity. Four randomly assigned forearm sites were designated for untreated skin, Base Lotion alone, 2.0% caffeine in Base Lotion, and 2.0% AC WonderShroom in Base Lotion. Participants applied the test lotions twice daily, and elasticity measurements were collected at baseline and weekly using a DermaLab suction-based probe. The probe assessed the skin's mechanical response to controlled suction and its retraction after release to evaluate changes in elasticity with repeated product use.

Change in Skin Elasticity



Increases
skin elasticity
by +7%

Cellulite

A four-week *in vivo* study involving 10 volunteers aged 23–40 with stage 2–3 thigh cellulite evaluated the effects of AC WonderShroom on cellulite appearance, collagen parameters, and skin elasticity. Participants applied CelluBlue containing 2.0% AC WonderShroom and CelluBlue alone to randomly assigned thigh sites twice daily. Measurements were collected at baseline and weekly using DermaLab ultrasound imaging to assess collagen fiber density and dermal collagen thickness, alongside a suction-based probe to assess skin elasticity. Photographs taken at baseline and after four weeks provided a qualitative assessment of changes in visible cellulite appearance.

Change in appearance of Cellulite

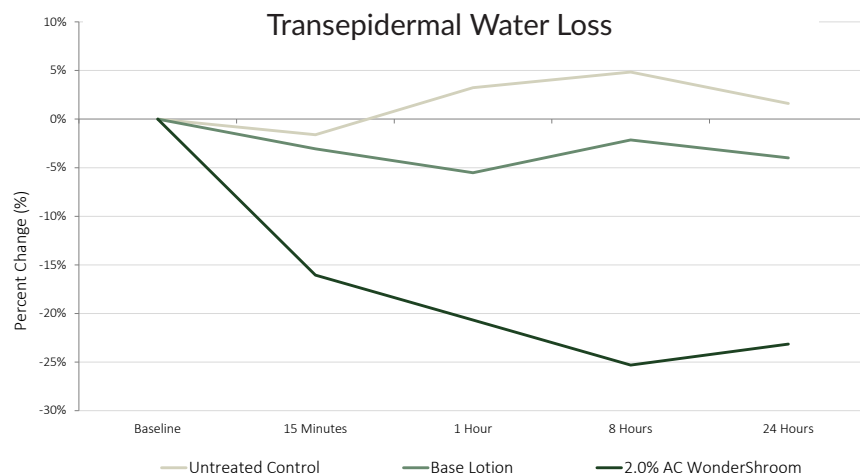


Improves
appearance of
cellulite

THE EFFICACY CONTINUED.

Moisture Retention

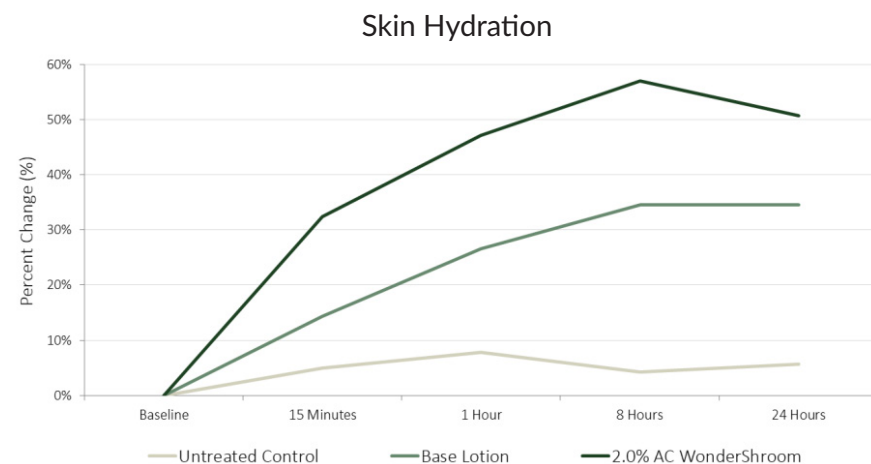
A 24-hour *in vivo* transepidermal water loss (TEWL) study involving 18 volunteers aged 23–45 evaluated the immediate and short-term moisture retention properties of AC WonderShroom. Three randomly assigned forearm sites were designated for untreated skin, Base Lotion alone, and Base Lotion containing 2.0% AC WonderShroom. Following a single application, TEWL measurements were collected at four time points over 24 hours using a DermaLab probe to measure water vapor loss from the skin and assess changes relative to baseline and control sites.



**Reduces TEWL
by -25%**

Moisturization

A 24-hour *in vivo* moisturization study involving 18 volunteers aged 23–45 evaluated the immediate and short-term skin hydrating properties of AC WonderShroom. Three randomly assigned forearm sites were designated for untreated skin, Base Lotion alone, and Base Lotion containing 2.0% AC WonderShroom. Following a single application, hydration measurements were collected at four time points over 24 hours using a DermaLab hydration probe. The probe measured electrical conductance in the upper layers of the skin to assess local hydration and track changes relative to baseline and control sites.



**Increases
moisture by
+57%**

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2. Passeron, Thierry, et al. "Adult Skin Acute Stress Responses to Short-Term Environmental and Internal Aggression from Exposome Factors." *Journal of the European Academy of Dermatology and Venereology*, vol. 35, no. 10, 2021, pp. 1963–1975.
3. Ventura, Luiz M. "Psychoneuroimmunology: Application to Ocular Diseases." *Journal of Ocular Biology, Diseases, and Informatics*, vol. 2, no. 2, 2009, pp. 84–93.
4. Goral, Omer, et al. "Enhancing Interoceptive Sensibility through Exteroceptive-Interoceptive Sensory Substitution." *Scientific Reports*, vol. 14, 2024, article 14855.
5. Innova Market Insights Newsletter. Innova Market Insights, Feb. 2025.
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