Scientific Validation of ASEA RENU Advanced Skin Care

ASEA'S COMMITMENT TO RESEARCH

Research and testing are integral to any successful product or brand, which is why ASEA has committed to investing in science since its founding. Research is a critical and vital measure we take to ensure the safety and efficacy of our products. Through these research efforts, our associates and consumers can take note that systematic investigation, which includes research development, testing, and evaluation, has been done to demonstrate the benefits of redox signaling supplementation, both internally and externally. While aging is inevitable, ASEA continues investigates ways to support healthy aging and prevent or delay the appearance of age-related decline through patented topical redox signaling technology.

BIOAGILYTIX REDOX CERTIFICATION

BioAgilytix Labs specializes in large molecule bioanalysis for pharmaceutical and biotech companies. Headquartered in North Carolina, BioAgilytix is a global leader in outsourced laboratory services developing, optimizing, and conducting bioanalytical testing and third-party validation, supporting pharmaceutical discovery, pre-clinical, and clinical development and manufacturing. As a leading contract research organization (CRO lab) specializing in large-molecule needs, BioAgilytix enables scientific innovators to develop and deliver game-changing biologic products through their expertise in cell-based assays, biomarkers, immunogenicity, and pharmacokinetics.

BioAgilytix LABORATORIES REDOX CERTIFIED

BioAgilytix's team of PhD-level experts validates the existence of redox signaling molecules in ASEA's redox products. ASEA provides a regular product sampling of ASEA RENU 28 and RENU Serum to maintain a BioAgilytix certification.

DERMATEST FIVE-STAR ACCREDITATION

Each product in the RENU Advanced family has received the coveted 5-star accreditation—the highest possible—by leading European dermatological research institute, Dermatest. Dermatest offers an extensive portfolio of standard and individual test designs to assess the safety and efficacy of cosmetic products for the cosmetic and pharmaceutical industry.

ORIGINAL dermatest® excellent 5-star-guarantee.de CLINICALLY TESTED

This five-star evaluation provides the highest level of assurance and standards for proven skin tolerance, effectiveness, and application safety. With five-star seals of approval, Dermatest proves the quality and efficacy our skin care products.

EFFECT OF RENU ADVANCED ANTI-AGING FACE CARE SYSTEM ON HUMAN SKIN

ASEA commissioned Stephens Associates to perform a clinical dermatological evaluation to analyze the effect of the RENU Advanced Anti-aging Face Care system in improving the severity of common aging issues.

Study Protocol

A total of 40 panelists enrolled in an eight-week clinical trial to investigate how the use of RENU Advanced Skin Care supports healthy aging and prevents or delays the onset of age-related decline. Researchers used the Stephens Wrinkle Imaging using Raking Light (SWIRL) for an objective and quantitative assessment of facial imagery

of before and after treatment from cosmetic products.

The SWIRL method analyzes the wrinkle severity at multiple areas on the face, such as the crow's feet, under-eye, forehead, and upper lip areas. This approach has been validated through clinical studies and demonstrates excellent correlation with clinical grading.

Participants applied the RENU Advanced system twice per day for eight weeks following the prescribed directions. Investigators evaluated facial imagery taken at the beginning of the study, at four weeks and eight weeks. Panelist completed product evaluation at the conclusion of the assessment. These clinical trials followed Good Clinical Practice (GCP) regulations and guidelines and Institutional Review Board (IRB) regulations.

Results Summary

SWIRL analysis measured the following results.

- Fine lines decreased an average of 20%
- Visible photo damage decreased an average of 10%
- Skin smoothness improved an average of 19%

Panelist Survey Results

- 100% reported a visible decrease in numerous, deep fine lines
- 100% reported measurably smoother skin
- 95% reported noticeably firmer skin
- 90% indicated a decrease in visible photo-damaged skin
- 90% reported more radiant skin
- 85% noted a visible decrease in number and depth of wrinkles

EFFECT OF RENU ADVANCED ULTRA REPLENISHING MOISTURIZER ON PRODUCT SAFETY AND SKIN HYDRATION IN ADULT MEN AND WOMEN

Dermatest, performed a clinical-dermatological application and hydration assessment verify the safety and efficacy of RENU Advanced Ultra Replenishing Moisturizer.

Study Protocol

In a four-week study 19 male and female panelists applied RENU Advanced Ultra Replenishing Moisturizer once per day to the face and neck. Skin moisture measurements were taken by a Corneometer® at the beginning and at the conclusion of the study. A Corneometer is the most used method to reproducibly and accurately determine the hydration level of the skin surface. The accuracy of other hydration measurement instrumentation is typically assessed against the standard of the Corneometer.

In the clinical-dermatological application test, researchers screened and subjected participants to an initial dermatological examination before the clinical trial commenced. Individuals who show no signs of pathological changes in the skin are selected for the testing. Participants are instructed not to use any other similar formulations on the test site. Following the application period, the participants undergo another dermatological examination to ascertain whether the trial product has caused any irritation to the skin.

Results Summary

Corneometer analysis measured an increase in skin moisture by 43% over four weeks.

EFFECT OF RENU ADVANCED INTENSIVE REDOX SERUM ON PRODUCT SAFETY AND WRINKLE DEPTH IN WOMEN 45 AND OLDER

Researchers Dermatest performed a dermatological report on the Optical 3D-Measurement of the surface of the skin. The purpose of this study determined safety, efficacy and depth of one single wrinkle in the eye area.

Study Protocol

Over a 4-week study period, researchers asked ten adult female participants 45 years of age and older to apply RENU Advanced Intensive Redox Serum once per day under the eye. Scientists used a 3D optical scanner with

a structured light projection method (PRIMOS) portable to acquire skin surface images.

This optical scanner obtains 3D in vivo measurements of microscopic and macroscopic skin surface structures. The structured light projection method is applied by the PRIMOS camera to get a 3D surface image. The method provides many advantages, such as a standardized capture distance and high-speed scan. High-speed capture is necessary for skin surface measurements due to the inevitable movements of the subject.

Results Summary

The specialist dermatological report from Dermatest confirms this skin-smoothing effect. Measurement of the wrinkle depth of the under eye area revealed an average improvement of 18.66% by using the Redox Serum once per day for 4 weeks. Measurement of the depth of creases prior to and 30 minutes following product application manifested smoother-looking skin.

- Wrinkle depth in eye area decreased an average of 18.66%
- No undesired reactions or pathological skin effects indicated
- No skin irritation or sensitizing characteristics recorded
- Received the Dermatest 5-star rating

30 Minute Benefits Reported

- Smoother-looking skin that eases the appearance of fine lines, wrinkles and puffiness.

EFFECT OF RENU ADVANCED GENTLE REFINING CLEANSER ON PRODUCT SAFETY AND SKIN SEBUM BALANCE IN ADULT MEN AND WOMEN

Researchers at Dermatest performed both a dermatological expertise on a clinical-dermatological application test to thoroughly check the compatibility of the formulation based on clinical-dermatological criteria. The study also included a dermatology specialist expertise analysis on sebum (skin fat) using RENU Advanced Gentle Refining Cleanser.

Study Protocol

Over a 4-week study period, 20 adult male and female participants cleansed their face with the product RENU Advanced Gentle Refining Cleanser once per day. Skin sebum (fat) was measured using Sebumetry in three spots on each panelist's face before and after 4 weeks.

Sebumetry is used to quantify the fat content of the skin. A semi-transparent synthetic film becomes transparent at the point of contact with the skin's sebum. Once the probe presses against the skin, a light is projected through the synthetic film and reflected by a mirror. The transmission of the light is captured by a photocell and then measured. The luminous intensity recorded is an indication of the sebum content of the skin at the test site.

Results Summary

- Skin sebum (fat) balanced with an average decrease of 16.94% over four weeks.
- Dermatological assessment found no undesired reactions or pathological skin effects
- No skin irritation or sensitizing characteristics were associated with the product

ANTI-AGING EFFECTS OF RENU 28 REVITALIZING REDOX GEL ON FEMALE SUBJECTS OVER AGE 45

The influence was of RENU 28 was measured over 4 weeks in the most common parameters concerning aged skin.

RENU 28 Revitalizing Redox Gel has active redox signaling molecules that can be applied directly onto the skin to improve and revitalize it at the cellular level.

ASEA commissioned a clinical trial to quantify the results of this revitalization.

Study Protocol

Over the 4-week study period, researchers examined 20 adult female panelists over the age of 45 for skin hydration, eye wrinkle depth, face appearance, and elasticity. Each panelist applied RENU 28 Revitalizing Redox Gel twice a day (morning and evening) over the 4-weeks period.

Researchers used corneometry to measure the hydration of the outer layer of the epidermis. The PRIMOS 3D optical portable, hand-held device captured in vivo measurements of eye wrinkle depth and skin roughness. Cutometry assessment provided the measurement of skin elasticity. High-resolution photographs of the subject's face using the VISIA™ complexion analysis system provided imagery for digital image face appearance comparison.

Results Summary

	AVERAGE IMPROVEMENT OF SUBJECTS IN 4 WEEKS
SKIN TEXTURE	22%
SKIN SMOOTHNESS	23%
SKIN ELASTICITY	20%

STUDY – EFFECT OF RENU 28 REVITALIZING REDOX GEL ON CELLULITE AND ADIPOSE LOBULES

Dermatest provided dermatological expertise on a 12-week clinical-dermatological application test including Cellulite determination average values of length and breadth of adipose lobules using Skin Scanner DUB simple.

The influence of the product RENU 28 Revitalizing Redox Gel was examined concerning the dimension of adipose tissue lobules in the area of thighs, as well as the tolerance after a period of 12 weeks in-use test according to clinical-dermatological criteria.

Cellulite forms when fat lobules press against the skin and create a bulge with an accompanying depression next to the bulge. Dermatest conducted a 12-week study on the effects of RENU 28 Revitalizing Redox Gel on cellulite.

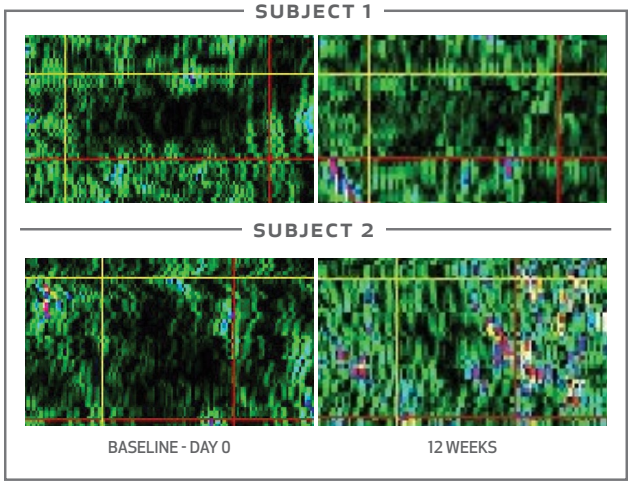
Study Protocol

In a 12-week assessment, researchers evaluated 30 female participants using skin ultrasound measurements conducted before the study, at 6-weeks, and after 12-weeks. Each test subject applied the product RENU 28 Revitalizing Redox Gel twice a day (morning and evening) in the thigh region. For 30-60 seconds participants massaged the gel into the targeted areas of the skin.

Results Summary

	WEEK 6	WEEK 12
LENGTH OF ADIPOSE (FAT) LOBULES	12.24% decrease	15.81% decrease
BREADTH OF ADIPOSE (FAT) LOBULES	10.75% decrease	14.73% decrease

These results show an actual decrease in the size of fat lobules. As indicated in the study RENU 28 works with the body's natural cellular communication to reduce fat deposits, whereas other cellulite treatments use inflammation and fillers for a temporary effect.



Images from the study show two different subjects. The dark area represents an actual fat lobule, and vertical and horizontal lines are used for measurement. It is evident in the image on the left that the fat lobule in each subject measures significantly larger than in the picture on the right, after using RENU 28 for six weeks.

EFFECT OF RENU 28 REVITALIZING REDOX GEL ON ELASTICITY OF HUMAN THIGH SKIN

Specialist dermatological expertise on elasticity of human thigh skin.

Study Protocol

Investigators at Dermatest provided analysis of skin elasticity by use of cutometer. Measurements were obtained for 30 female subjects before the study, after 6 weeks and after 12 weeks. Both a RENU 28 application area and untreated control area were tested.

Each test subject applied the product RENU 28 Revitalizing Redox Gel twice a day (morning and evening) in the region of the thigh test area. Subjects massaged into skin for 30-60 seconds.

Results Summary

	% ELASTICITY IMPROVEMENT IN GEL APPLICATION TEST AREA	% ELASTICITY IMPROVEMENT IN CONTROL TEST AREA	% ELASTICITY IMPROVEMENT AFTER DEDUCTION OF CONTROL
AFTER 6 WEEKS	16.62%	0.68%	15.94%
AFTER 12 WEEKS	24.17%	3.26%	20.91%

Throughout the 12-week evaluation subjects demonstrated significant progressive improvements (up to 24%) in skin elasticity.

RENU 28 REVITALIZING REDOX GEL SKIN CELL RENEWAL AND CELL TURNOVER

ASEA commissioned Stephens & Associates to study the effects of redox signaling on blood flow and cell turnover, with specific emphasis on the skin. Stephens & Associates answered two important questions in their research:

1. Will RENU 28 Revitalizing Redox Gel stimulate skin cell renewal and turnover?

2. Will RENU 28 Revitalizing Redox Gel increase blood flow in the skin?

Skin cell renewal, and the rate at which cells renew, is the essence of anti-aging. Because redox signaling molecules work at a cellular level, with messages that signal cell turnover, ASEA commissioned a study that shows the way RENU 28 can affect the rate of skin cell renewal.

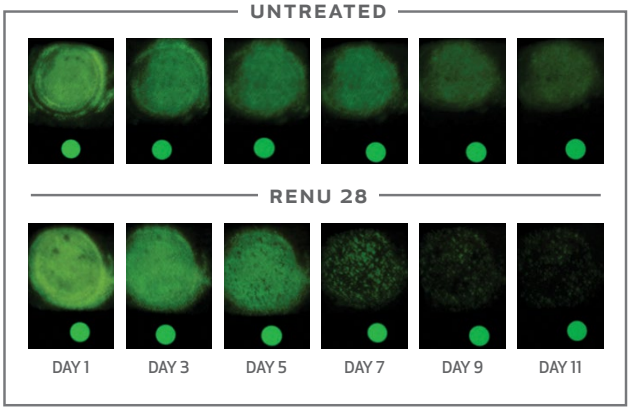
Study Protocol

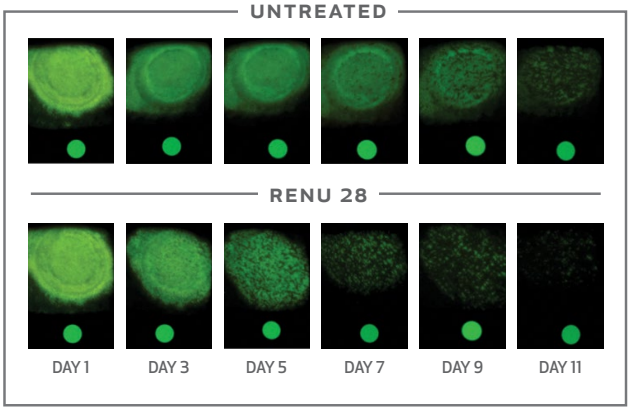
Participants applied RENU 28 to one forearm twice each morning and twice each evening for two weeks. At that point, a fluorescent dye was applied to the RENU 28 forearm and the control forearm. Each arm was then photographed under UV light and quantified. Over the next two weeks, participants continued to apply RENU 28 as before. The fading of the dye indicated skin cell renewal and turnover. The findings are compelling.

Results Summary

After 30 Days, the results were measured on participants' forearms. RENU 28 arm dye faded to zero in 13.2 days. Control arm dye faded to zero in 15.3 days. Typical cell turnover is 28–42 days. Applying the 16% faster cell turnover rate shown in the study, typical turnover time with RENU 28 is estimated at 24–36 days,

RENU 28 showed 16% faster skin cell renewal rate
RENU 28 decreased cell turnover time by four to six days





RENU 28 REVITALIZING REDOX GEL BLOOD FLOW

As the largest organ in the body in terms of both surface area and weight, the skin protects the body from the elements, regulates body temperature and fluid balance, and is an organ of sensation. All of these functions require proper blood flow. As blood flow decreases with age, a number of conditions can arise.

The benefits of blood flow and can be seen in the following ways:

- Healthy and radiant skin
- Even complexion
- Relief from dry skin
- Stretch mark reduction
- Decreased appearance of cellulite
- Reduction in appearance of spider veins
- Better circulation in hands and feet
- Reduced swelling and water retention

Study Protocol

Participants applied RENU 28 to one forearm twice each morning and twice each evening. Microcirculation in the skin on each arm was measured with a Laser Doppler Flowmetry (LDF) immediately after RENU 28 application, then again at one hour and three hours. Then, continuing the same morning/night applications, microcirculation was measured at 48 hours and again at 96 hours. The test was performed before RENU 28 application each morning so that results for that day would not reflect the latest application.

Results Summary

The following results were measured on participants' forearms, comparing the arm where RENU 28 was applied to the control arm:

- 49% blood flow increase within 15 minutes of first application
- 34% blood flow increase one-hour post initial application
- 35% blood flow increase three hours post initial application
- 44% blood flow increase 48 hours into the study
- 55% blood flow increase 96 hours into the study