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Case Report

Effects of Cosmetic Procedures Incorporating a Phytic Acid Complex and a Customized At-Home Skincare Routine on Facial Skin Aging: A Single-Patient Case Report

Austėja Diržaitė *, Rasa Krasauskė and Eva Šarlota Venckutė

Healthcare Research Center, SMK College of Applied Sciences, Liepų St. 83B, LT-92195 Klaipėda, Lithuania
* Correspondence: austejadirzaite@gmail.com; Tel.: +370-64827000

Abstract

Background: Skin aging processes impair biochemical, structural, and physical properties, leading not only to aesthetic changes but also to the impairment of skin barrier functions. Although the biological efficacy of isolated phytic acid is well documented, the scientific literature lacks data on its effects within specific synergistic complexes. The aim of this study was to evaluate the potential effects of a phytic acid complex combined with a customized at-home skincare routine on facial skin aging, utilizing a single-patient case as an illustrative example of these synergistic mechanisms. **Methods:** A case study was conducted on a 48-year-old woman with facial skin aging and photoaged concerns. The treatment protocol comprised 6 treatments, performed every 7–10 days, using a phytic acid complex (20% phytic acid, 10% glycolic acid, 1% salicylic acid, 1% mandelic acid, and 2% kojic acid; pH 4.5), alongside an individualized home-care routine. Changes in skin parameters (wrinkle depth, hydration levels, hyperpigmentation, and keratinization) were evaluated using non-invasive instrumental diagnostic methods prior to each procedure and 7 days after the final treatment. A structured daily log was implemented to ensure adherence to the customized at-home skincare routine and to track self-reported observations. **Results:** Following the course of treatment, an objectively verified improvement in skin condition was observed in this specific case. A 20.5% reduction in wrinkle depth was recorded, along with a strong humectant effect: skin hydration levels increased by 28.3% in the T-zone and 41.9% in the U-zone. Furthermore, a 39.6% decrease in hyperpigmentation intensity and an 85% reduction in surface keratinization levels were observed. The subject's self-assessment correlated with the instrumental diagnostic data; no adverse long-term inflammatory reactions or skin barrier impairments were reported. **Conclusions:** A course of cosmetic procedures using a phytic acid complex, combined with a customized at-home skincare routine, showed positive structural and functional improvements in aging facial skin by stimulating epidermal regeneration and reducing manifestations of melanogenesis. Due to the illustrative nature of this single-patient case study, the generalizability of these findings is limited. Although these preliminary results highlight promising clinical potential, further randomized controlled trials with larger sample sizes are required to validate these findings across broader populations.

Keywords: skin aging; wrinkles; skin hydration; phytic acid; chemical peel

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1. Introduction

The skin is a multifunctional organ that has been studied in diverse fields, including cosmetics [1]. Skin aging is one of the main topics in dermatology, not only because of its

aesthetic aspects but also due to its broader impact on skin health, function, and susceptibility to disease [2]. Aged skin is a physiological condition that arises with chronological aging and is characterized by specific structural and functional changes caused by endogenous (gene mutations, cellular metabolism, hormonal factors) and exogenous (Ultraviolet—UV rays, air pollution, chemicals, toxins, etc.) [3,4]. According to the authors, as the skin ages, the number of fibroblasts, which synthesize collagen and elastin fibers, and blood vessels supplying blood to the skin decreases, leading to increased skin sagging and the formation of wrinkles. Although skin aging is a continuous process, data indicate that it progresses through distinct stages: the 43–47-year age range is recognized as the rapid aging period—a critical transition characterized by a sudden decrease in skin elasticity, reduced sebum production, increased pigmentation, and localized thinning of the epidermis [5]. Following this critical period, starting at age 48, the stable aging period begins, during which a compromised protective barrier, reduced moisture, increased roughness, and prominent fine lines and hyperpigmentation dominate the clinical picture [5]. This phenotype is largely driven by biological processes, such as the gradual decline in estrogen levels typically initiated from age 45, which fundamentally alter skin structure, while external factors such as UV radiation, air pollution, and lifestyle choices (e.g., diet, smoking) further accelerate these processes [6,7]. Table 1 highlights the main changes in the structural processes occurring in the skin:

Table 1. Structural changes in aging skin (compilation based on [4,8,9]).

Skin Layer	Processes in the Skin
Epidermis	Slowed cell regeneration leads to thinning of the epidermis (keratinocyte turnover decreases, resulting in a 50% increase in the time it takes for them to migrate from the basal layer to the stratum corneum). Although the epidermis generally thins, the stratum corneum thickens; keratinocyte regeneration and desquamation processes slow down, and skin texture changes. The lipid content in the stratum corneum decreases (due to reduced sebaceous gland activity), which disrupts the skin's barrier function and increases transepidermal water loss (TEWL).
Dermis	Collagen fibers in the dermis become fragmented and less organized, resulting in reduced skin tensile strength and elasticity. Elastin fibers, which are responsible for the skin's elasticity, change their structure as we age; they shorten and their number decreases, leading to a loss of skin elasticity. The density of blood vessels in the skin decreases, leading to a deterioration in the supply of nutrients and the removal of waste products.
Hypodermis	The subcutaneous fat layer thins with age, facial volume decreases, and the cheeks and eye areas become sunken. As subcutaneous fat diminishes, the skin becomes thinner and less resistant to injury.

Thus, aging is associated with two overlapping processes: one is progressive cellular degeneration (cells gradually and irreversibly die), and the other is the loss of regenerative capacity (the body becomes increasingly less able to repair or generate new cells) [3]. With age, skin thickness decreases by approximately 20%, and age-related changes in skin cellularity can affect skin sensitivity, thermoregulation, firmness, moisture retention,

and immune function [8]. Although these changes occur in both sexes, hormone-related skin aging is generally more pronounced in women, particularly with menopause, than in men [2]. It is generally accepted that collagen density decreases with age in both the papillary and reticular layers of the dermis due to a decrease in collagen synthesis and/or an increase in collagenase activity, at a rate of approximately 1–1.5% per year throughout an adult's lifetime [9,10]. Age-related changes impair the skin's barrier function, slow wound healing, reduce resistance to mechanical and thermal stress, and increase susceptibility to infections and tumors [2]. Thus, signs of skin aging manifest as reduced skin elasticity, wrinkles, slower regeneration, decreased moisture retention, and changes in texture and pigmentation [5,6,11].

Biological processes and theories related to aging seek to explain how and why the body loses functional capacity with age and experiences increased health problems [12]. According to the authors, the aging process is not a collection of individual factors, but rather a complex interaction of these elements—mechanisms, biochemistry, physiology, and social habits (Table 2). It is stated that internal (chronological) aging is primarily determined by telomere shortening, oxidative stress, DNA damage, and reduced autophagy [2]. The contribution of genetic factors to skin aging varies across specific aging-related traits [12]. Extrinsic aging, often referred to as photoaging, is primarily caused by chronic environmental exposure, particularly UV radiation and air pollution, while lifestyle habits, such as smoking or poor nutrition, further exacerbate the aging process by causing chronic inflammation and accelerating oxidative damage [2].

Table 2. Biological processes in the skin and theories of biological aging (compilation based on [11–13]).

Theory of Aging	Biological Processes
Telomere shortening	Telomeres are protective structures located at the ends of chromosomes, and their primary function is to preserve the integrity of genetic material in cells during replication. Telomere shortening is a fundamental biological process closely associated with cellular and organismal aging. During each cell division cycle, telomeres shorten because DNA polymerase cannot fully replicate the ends of chromosomes; when telomeres become too short, the cell enters senescence or apoptosis, leading to the loss of tissue and organ function.
Oxidative stress	Oxidative stress is a mechanism that plays a significant role in the aging process and the development of age-related diseases. It occurs when there is an imbalance between the production of reactive oxygen species (ROS) and the body's ability to neutralize them with antioxidants. ROS are chemically reactive molecules that are formed as byproducts of various cellular processes, including metabolism. Some ROS are free radicals—oxygen molecules with an unpaired electron that steal electrons from other (healthy) components.
Cellular aging and DNA damage	Cell senescence is a biological phenomenon in which cells lose their ability to divide and replicate. Senescence is also associated with changes in gene expression resulting from epigenetic changes, DNA damage, and/or genomic instability. Throughout the entire process of cellular senescence, the capacity for DNA repair decreases due to reduced protein levels.

Table 2. *Cont.*

Theory of Aging	Biological Processes
Reduced autophagy	Autophagy is a crucial mechanism of cellular self-digestion that transports damaged proteins, lipids, and other cellular components to lysosomes for enzymatic degradation. Autophagic processes prevent stress-induced cellular aging and extend the replicative lifespan of cells. Aging is characterized by reduced functionality of autophagic systems.
Hormonal changes	With age, hormone synthesis and circulating hormone levels decrease, which affects cellular metabolism and interacts with gene expression and protein synthesis. Menopause causes significant hormonal changes, particularly a decrease in estrogen levels, which are essential for maintaining skin thickness, hydration, and elasticity. In men, declining testosterone levels with age can lead to dry skin and a loss of elasticity.
Glycation	Glycation is a non-enzymatic process in which sugars react with proteins, resulting in the formation of advanced glycation end products (AGEs). Glycation affects skin proteins such as collagen and elastin, disrupting their structure and function, and causes oxidative stress and inflammation, further accelerating skin aging.
UV radiation	UV radiation emitted by the sun is the primary external factor contributing to skin aging. UV radiation damages skin cells by generating free radicals, which cause oxidative stress and DNA damage.
Air pollution	Environmental pollutants, including polycyclic aromatic hydrocarbons (PAH), particulate matter (PM), heavy metals, and volatile organic compounds (VOCs), have a harmful effect on the skin. These pollutants penetrate the skin and cause oxidative stress, leading to inflammation and cellular damage.
Lifestyle habits (harmful habits, sleep, diet, physical activity)	Lifestyle factors have a significant impact on skin health and aging. Smoking accelerates skin aging by reducing blood flow and oxygen supply to the skin, depleting essential nutrients, and increasing the production of free radicals. Excessive alcohol consumption dehydrates the skin and disrupts its barrier function, causing dryness and accelerated aging, while also promoting inflammation and oxidative stress. Poor sleep quality and duration are associated with increased signs of aging, such as dark circles, wrinkles, and reduced skin elasticity. Excessive dietary fat intake can damage collagen structure and promote skin inflammation, while refined sugar is associated with glycation.

Although telomere shortening, oxidative stress, and other endogenous factors are a natural part of aging, lifestyle factors (chronic stress, poor diet, lack of physical activity, smoking, etc.) and environmental factors (UV radiation, toxins, etc.) can influence the rate of aging [12]. Adverse exogenous factors act synergistically, exacerbating oxidative, inflammatory, and structural damage to the skin [2]. However, a healthy lifestyle—including an anti-inflammatory diet, adequate physical activity, social engagement, and stress management—can contribute to the prevention or reversal of aging [12].

According to the authors, a holistic approach to aging recognizes the importance of caring not only for physical health but also for mental, emotional, and social well-being. The future of anti-aging dermatology lies in personalization [2].

By applying interdisciplinary methods and utilizing cutting-edge technologies, it is possible to advance anti-aging medicine and skincare, ultimately improving people's quality of life around the world [11]. According to the authors, skincare practices are also crucial for slowing down skin aging. Modern cosmetology employs innovative device-based procedures and active ingredients designed to promote skin regeneration and restore its structure [13]. Energy-based devices, biostimulators, and advanced delivery systems (e.g., microneedle patches, exosome-based therapy) offer increasingly precise and synergistic anti-aging solutions [2]. Skincare products containing retinoids, acids, antioxidants, peptides, and sunscreen protect against environmental damage, stimulate cell turnover and collagen production, and improve skin texture and hydration [2,11]. Topical products containing moisturizing agents (e.g., glycerin, hyaluronic acid), emollients, and ingredients that restore the protective barrier (e.g., ceramides, cholesterol, fatty acids) play an additional role in supporting the skin and enhancing the effectiveness of anti-aging products [2].

The goal of topical anti-aging therapy is to mitigate the effects of skin aging by supporting skin repair, stimulating collagen synthesis, and improving structural characteristics associated with youthful skin [14]. One exceptional active ingredient is phytic acid, which is capable of addressing several issues simultaneously, from reducing oxidative stress to improving skin texture [15–17]. According to the authors, phytic acid is an organic compound characterized by antioxidant and anti-inflammatory properties and the ability to inhibit melanogenesis; it also enhances the penetration of active ingredients, improves skin hydration, regulates sebum secretion, and strengthens blood vessels. Phytic acid has a unique skin-lightening effect due to two main mechanisms of action: it blocks the copper ions necessary for melanin synthesis, thereby inhibiting the production of new pigment, and it inhibits the oxidation of melanin itself, preventing existing spots from darkening [17,18].

A separate safety assessment concluded that phytic acid is safe for cosmetic use under the reported conditions and concentrations assessed [19]. Previous studies have investigated the effects of combination peels containing phytic acid; however, the clinical evidence regarding their efficacy has been mixed [20]. When phytic acid is combined with other active ingredients, such as azelaic acid and vitamin C [15], glycolic acid and additional soothing agents [21], tranexamic acid, niacinamide, and butylresorcinol [22], positive results have been achieved in reducing wrinkles, lightening hyperpigmentation, and increasing moisture levels. This specific case study aims to evaluate the potential effects of a phytic acid complex combined with a customized at-home skincare routine on facial skin aging, utilizing a single-patient case as an illustrative example of these synergistic mechanisms. The growing interest in self-care transcends the boundaries of age, gender, and ethnic origin, as both men and women of various ages are actively seeking solutions to maintain or improve the appearance of their skin, regardless of their geographic location [4,10,23].

2. Materials and Methods

This single-case study design combining quantitative objective skin measurements, visual observation, and qualitative clinical assessment. The participant was selected based on predefined inclusion criteria, specifically presenting with characteristic features of facial skin aging and photoaging, to provide a detailed, holistic evaluation of the combined protocol within a real-world clinical context [23]. The literature shows that case study research provides valuable clinical insights and demonstrates practical application in dermatological practice [10,23,24]. This study was approved by the Research Ethics Committee

of SMK College of Applied Sciences at its meeting, protocol No. ESK-TEK(25)-0001, dated 5 February 2025.

The study participant is a 48-year-old woman who works as an accountant and spends a lot of time at the computer; she complains of skin dehydration, a pigmented spot on her right cheek, and fine lines at the corners of her eyes; for her daily skincare routine, she uses only a mild cleanser and a moisturizing cream. The study participant also notes that she gets little physical activity in her daily life, often has trouble sleeping, and experiences stress frequently. A skin analysis revealed a dry skin type and phototype II; the main skin concerns are dehydration, wrinkles, and hyperpigmentation.

Based on the participant's facial skin presentation, the phytic acid complex was selected for evaluation because it was intended to address age-related changes. Following the manufacturer's recommended protocol, a course of 6 treatments is performed every 7–10 days during the study, using a phytic acid complex designed to correct age-related changes and suitable for sensitive, dry, dehydrated, and wrinkled skin, with the goal of regenerating the skin without causing active flaking. Before beginning the treatment, it is important to consider the contraindications for the phytic acid complex: individual intolerance, compromised skin integrity, active skin inflammation, herpes virus in the active stage, and the use of retinoids.

At each treatment session, the participant's skin parameters (wrinkle depth, moisture level, hyperpigmentation, and keratinization) are measured using the dpLite2 skin analysis device (DAVI & CIA, Barcelona, Spain). The following skin parameters were assessed: wrinkle depth in the right periorbital (eye) area, moisture level (in the T-zone on the forehead and the U-zone on the left cheek), hyperpigmentation, and keratinization. The data obtained were systematized, evaluated using scale units, and subsequently converted into percentage values based on proportional calculations. For example, if the number of scale units for wrinkle depth was 39 before the course of procedures and 38 before the second procedure, then the change is calculated as follows: $(38 - 39)/39 \times 100 = -2.6\%$.

The assessments of wrinkle depth, moisture level, hyperpigmentation, and keratinization in scale units are performed in accordance with the criteria established by the manufacturer of the diagnostic device, which allow for the evaluation of wrinkle depth and the intensity of their appearance (Table 3). The scales allow for the objective monitoring of changes in the skin aging process and the evaluation of the effectiveness of applied procedures in reducing the visibility of expression lines, particularly in sensitive areas such as the under-eye zone; changes in the condition of the epidermal barrier, and an assessment of how the applied procedures affect the skin's ability to retain water; changes in hyperpigmented lesions on the skin's surface and their response to cosmetic procedures and home care; and dynamics of stratum corneum renewal on the skin's surface and the epidermal barrier's response to cosmetic procedures and at-home care using keratolytic agents.

Table 3. Classification of skin parameters according to the device scale.

Skin Parameter	Classification	Scale Units
Wrinkle depth	Deep wrinkles	51–100
	Medium-deep wrinkles	16–50
	Fine lines	1–15
Skin hydration level	Normal	67–100
	Dehydrated	34–66
	Severely dehydrated	1–33
Hyperpigmentation level	Severe hyperpigmentation	51–100
	Moderate hyperpigmentation	16–50
	Minimal hyperpigmentation	1–15

Table 3. *Cont.*

Skin Parameter	Classification	Scale Units
Keratinization level	Severe hyperkeratinization	51–100
	Moderate hyperkeratinization	16–50
	Normal keratinization	1–15

Each procedure is performed according to the same protocol: after cleansing the skin with a cleansing foam, a facial skin analysis is conducted using the same device; an additional deep cleansing is performed—exfoliation with a gel containing glycolic acid (2 mL of the product is applied evenly to the skin, left on for up to 8 min, and rinsed off) removes dead skin cells and prepares the skin for the main stage of the procedure; the skin is degreased with a cleansing lotion to ensure the active ingredients act more evenly and effectively; main step—a phytic acid complex (3 mL, pH 4.5), consisting of 20% phytic acid, 10% glycolic acid, 1% salicylic acid, 1% mandelic acid, and 2% kojic acid (the product is applied evenly to the skin, left on for up to 10 min, and is not rinsed off); balancing lotion; the procedure is completed with a soothing emulsion containing hyaluronic acid and shea butter, plus a cream with SPF 50. The cosmetic products used during the procedures, including their full INCI ingredient lists, are presented in Appendix A (Table A1).

After each treatment, daily at-home skincare products are prescribed according to the manufacturer's recommendations. Cleansing with foam twice daily; toning twice daily; morning routine—a moisturizing cream enriched with hyaluronic acid and Centella asiatica stem cells, and a protective cream with SPF 50; evening routine—a nourishing cream with phospholipids; special treatment: a serum with Centella asiatica. The cosmetic products recommended for home care, including their full INCI ingredient lists, are presented in Appendix A (Table A2). To ensure consistent use of the products, the study participant was provided with a structured diary containing questions about frequency of use and sensations. The questionnaire was completed in three stages: 1 week, 3 weeks, and 6 weeks after the start of the treatment course and the use of the products.

3. Results

The results presented in this study derive from a single-case study (n = 1), aimed at evaluating the potential effects of a phytic acid complex combined with a customized at-home skincare routine on facial skin aging. A course of 6 treatments was performed every 7–10 days. Skin parameters were monitored using a diagnostic device before the first treatment, before each of the six treatments, and seven days after the entire course of treatments, to assess the effects of the treatments following cellular re-epithelialization.

The wrinkle depth results obtained during the study were analyzed individually, evaluating the difference before each procedure and seven days after the last procedure. Figure 1 graphically illustrates the changes in wrinkle depth in the right periorbital (eye) area of the study participant.

An analysis of the results showed a consistent reduction in wrinkle depth in the right periorbital (eye) area throughout the entire course of treatment (Figure 1). The initial measurement before the first procedure recorded a value of 39 units, which decreased to 31 units after a cycle of six procedures. Wrinkle depth was classified as medium-deep both before and after the treatment course, while wrinkle-depth amplitude decreased by 20.5%.

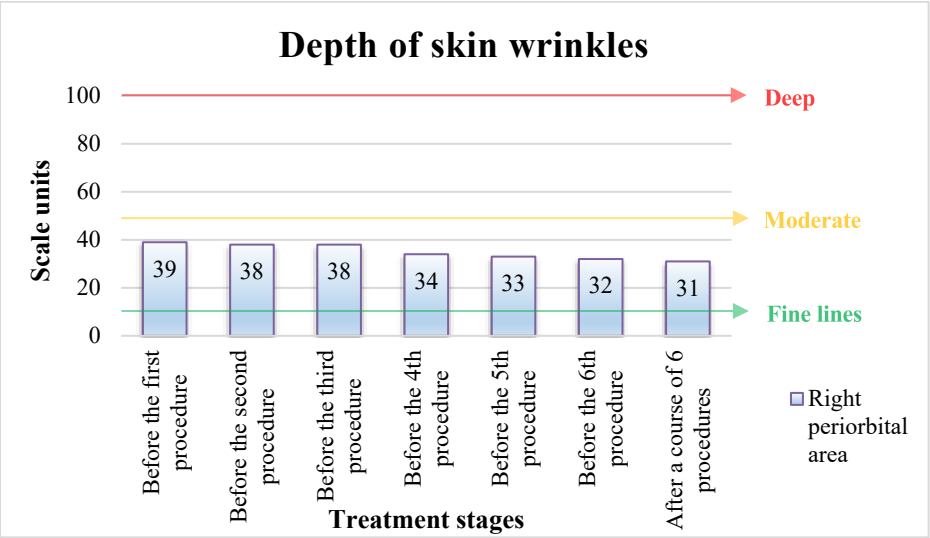


Figure 1. Changes in wrinkle depth.

The moisture results obtained during the study were analyzed individually, evaluating the difference before each procedure and seven days after the last procedure. Figure 2 graphically presents the changes in moisture levels in the T (forehead) and U (left cheek) zones of the study participant.

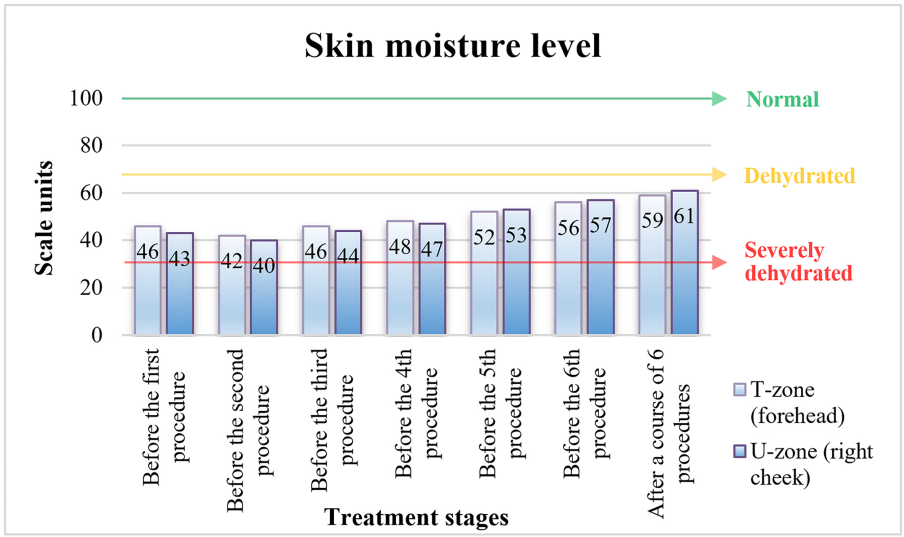


Figure 2. Changes in facial skin moisture levels.

The analysis of epidermal hydration in the T (forehead) and U (left cheek) zones revealed a consistent positive trend throughout the study (Figure 2). Initial measurements in both zones (46 and 43, respectively) indicated a dehydrated skin condition. A minimal decrease in moisture levels was observed after the first treatment, but a substantial increase in moisture levels was noted after a cycle of six treatments: a positive change of 28.3% was recorded in the T zone and 41.9% in the U zone. The final results (59 and 61) indicate that the upper limit of dehydration has been reached and that the skin is clearly approaching physiological balance (the starting point for normal moisture levels is 67 units on the scale).

The hyperpigmentation results obtained during the study were analyzed individually, evaluating the difference before each procedure and seven days after the last procedure. Figure 3 graphically illustrates the changes in the study participant's hyperpigmentation.

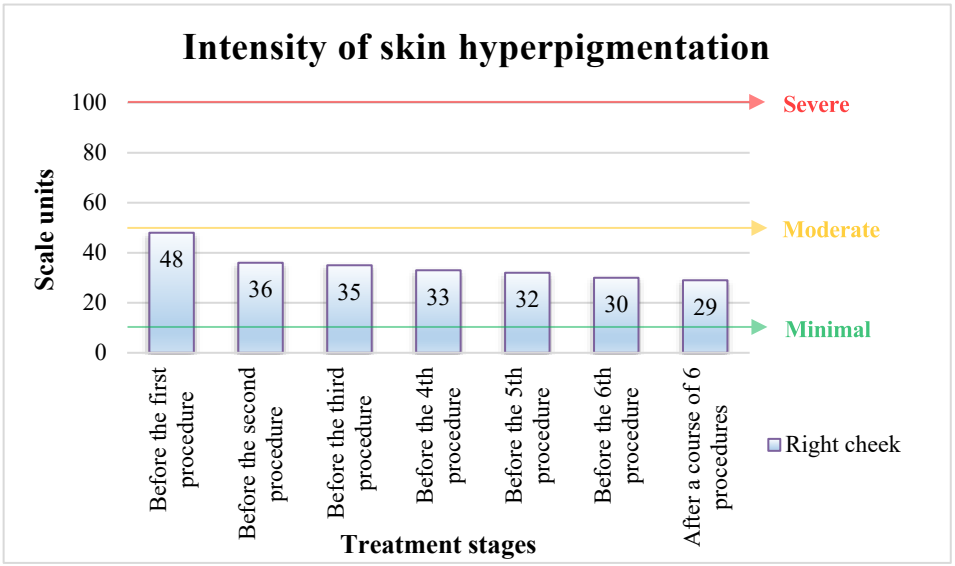


Figure 3. Changes in skin hyperpigmentation intensity.

The analysis of hyperpigmentation intensity revealed a consistent positive trend throughout the entire treatment cycle (Figure 3). The initial measurement before the first procedure recorded a value of 48 units, which represents moderate hyperpigmentation but is close to the threshold for severe hyperpigmentation. After a course of six procedures, the value decreased to 29 units, corresponding to a 39.6% reduction. The final value of 29 scale units was close to the threshold for minimal hyperpigmentation.

The keratinization results obtained during the study were analyzed individually, assessing the difference observed before each procedure and seven days after the last procedure. Figure 4 graphically illustrates the changes in the keratinization process of the study participant, indicating the effectiveness of epidermal exfoliation.

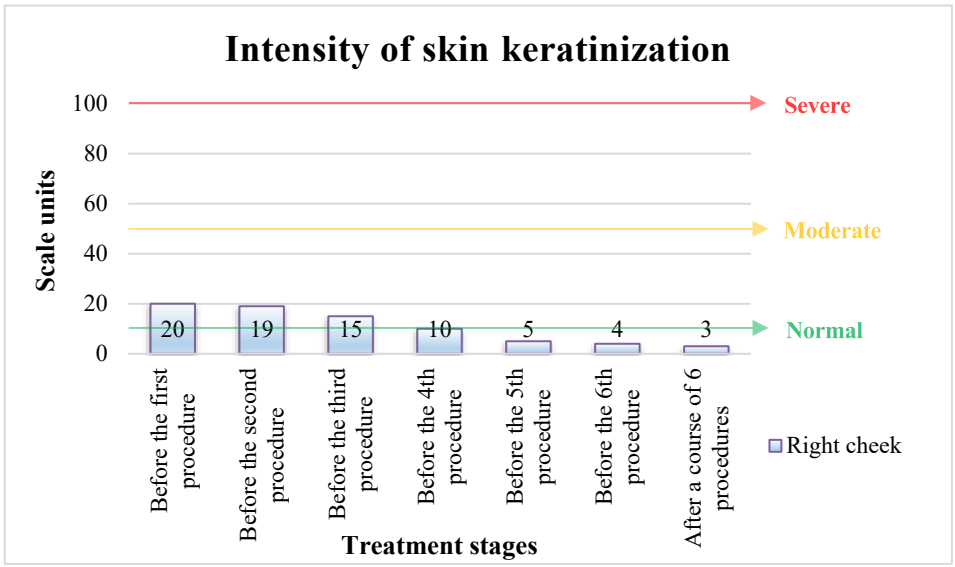


Figure 4. Changes in skin keratinization levels.

Changes in epidermal keratinization in the right cheek area were observed over the course of the study (Figure 4). The initial measurement (20 units) showed a slight deviation from the physiological norm toward the moderate keratinization zone; however, after a cycle of six procedures, the index decreased to 3 units and shows normal keratinization range. The measured hyperkeratinization value decreased by 85% over the study period.

The participant's diary responses regarding adherence to the home-care recommendations and skin condition are summarized in Table 4. The responses were systematized and grouped into thematic categories: facial cleansing, facial toning, specialized facial care (serum), daytime facial care (moisturizing cream and protective cream with SPF 50), and nighttime facial care (nourishing cream).

Table 4. Participant-reported adherence to the post-procedure skincare plan and subjective skin condition across the study period.

Area of Care Evaluated	Phase 1 (After 1 Week)	Phase 2 (After 3 Weeks)	Phase 3 (After 6 Weeks)
Cleansing the epidermis (cleanser/mild nonionic surfactants)	Adherence: Inconsistent (washed with water only in the mornings due to time restrictions; missed applications were recorded in the evenings). Skin condition: Short-term tightness and dryness of the epidermis observed after washing, in the absence of further care.	Adherence: Complete (regimen stabilized in the morning and evening using a reminder prompt). Skin condition: Subjective sensation of clean and soft skin; initial signs of dryness have disappeared.	Adherence: Complete (a consistent hygiene routine has been established without exceptions). Skin condition: The skin remains fresh and moisturized immediately after washing, with a long-lasting feeling of comfort.
Restoration of pH homeostasis (toning/weak organic acids)	Adherence: Inconsistent (more frequent use in the evening; systematic omissions in the morning). Skin condition: A short-term sensation of freshness during application, but no long-term changes in the epidermis were observed.	Adherence: Complete (the product is integrated into a comprehensive skincare routine). Skin condition: Noticeable improvement in skin texture, lightening of pigment spots, and a subjective reduction in wrinkle depth.	Adherence: Complete (used twice daily). Skin condition: Restored skin tone has become even; a long-lasting soothing and moisturizing effect has been achieved.
Special care (serum/low-molecular-weight active ingredients)	Adherence: Inconsistent (applied only 2 times per week, in violation of the protocol). Skin condition: No objective response; a minimal reduction in skin irritation was observed after application.	Adherence: Partial (frequency increased to 3 times per week; application time stabilized). Skin condition: Increased skin turgor, a radiant skin surface, and increased firmness were observed.	Adherence: Complete (daily, consistent application achieved). Skin condition: The visibility of fine wrinkles in the periorbital area decreased, pigmented spots noticeably lightened, the skin regained its natural radiance.
Daytime routine (maintaining hydration with humectants and protective cream with SPF 50)	Adherence: Inconsistent (systematic omissions in the morning due to time restrictions). Skin condition: A short-term feeling of softness is noticeable after application, but the skin tightness caused by TEWL returns in the afternoon.	Adherence: Complete (the product is applied every morning). Skin condition: Continuous skin moisture balance was maintained throughout the day, and irritation caused by working at the computer was eliminated.	Adherence: Complete (daily use after the toner and serum steps). Skin condition: Dryness is completely eliminated; the skin remains supple and deeply hydrated until the evening, with no signs of roughness.

Table 4. *Cont.*

Area of Care Evaluated	Phase 1 (After 1 Week)	Phase 2 (After 3 Weeks)	Phase 3 (After 6 Weeks)
Nighttime routine (barrier regeneration with emollients/ occlusives)	Adherence: Inconsistent (frequent omissions in the evening due to subjective fatigue). Skin condition: In the morning after application, the skin appears visually smoother; however, due to the lack of consistency, a recurrence of dehydration is noticeable.	Adherence: Complete (regimen followed for two weeks without any missed applications). Skin condition: In the morning, a pronounced skin regeneration effect is observed, along with a radiant complexion and a subjective feeling that the skin is "rested."	Adherence: Complete (the evening application has become a regular part of the daily routine). Skin condition: Full homeostasis of the hydrolipid layer has been achieved. In the morning, the skin is soft and elastic, and the initial moisture deficiency has completely disappeared.

According to the structured diary, adherence was inconsistent during Phase 1 and complete during Phases 2 and 3. The participant reported tightness and dryness after cleansing in Phase 1, while later entries described the skin as clean, soft, fresh, and moisturized (Table 4).

4. Discussion

The data obtained suggest that, in this specific case, the combination of the phytic acid complex treatment course and a customized at-home skincare routine demonstrated marked effectiveness in correcting the structural parameters of aging skin, based on the premise that aging skin in a single subject can be studied as a distinct case to develop a comprehensive, holistic understanding of the phenomenon within the specified context. Evaluating a 48-year-old participant is particularly relevant here, as research shows the late 40s as a major transition point [5,7]. At this stage—moving from the rapid aging period (ages 43–47) into the stable aging period (ages 48–60)—wrinkles and age spots increase, skin tone darkens, and skin texture changes [5]. A participant at age 48 therefore provides an accurate model for evaluating targeted interventions for these exact skin parameters. Optimal concentrations of chemical peels, aimed at maximizing therapeutic benefits and minimizing side effects, must be selected on an individual basis to balance efficacy with skin sensitivity [25,26]. Overall, these findings highlight that combining targeted professional cosmetic procedures with a structured, individualized at-home skincare regimen provides a supportive environment for maintaining epidermal homeostasis and optimizing skin structural parameters in this subject.

When evaluating the results, it is important to consider individual lifestyle and daily care factors, which have a direct impact on the initial condition of the skin and its response to the treatments applied. The study participant has a sedentary job working at a computer, engages in little physical activity in her free time, often experiences sleep disturbances, and feels constant chronic stress. At the start of the study, the participant's daily routine was minimal—she used only a superficial cleanser and a moisturizing cream, which did not provide adequate protection against environmental factors, deeper hydration, or stimulation of epidermal regeneration.

The long-term effects of an unhealthy lifestyle on the body stimulate cortisol production, which inhibits collagen synthesis and increases inflammatory processes in the skin; this can lead to a weakening of the skin's barrier function, increased sensitivity, itching, slower wound healing, and the formation of wrinkles [2]. Both solar UV radiation and blue light emitted by electronic devices are associated with premature skin aging, a

process previously thought to be driven solely by ultraviolet radiation [27]. Sunscreen is essential for preventing photoaging; it acts as an additional barrier that absorbs or reflects UV radiation and protects the skin from harmful effects [28]. The results of other studies reveal that, to protect the skin from blue light, it is very important to include additional antioxidant measures in your daily skincare routine [29], such as phytic acid in cosmetics, which not only has strong antioxidant properties but also photoprotective, antimicrobial, and anti-inflammatory properties [15,16].

Throughout the study, the participants' at-home skincare routines were supplemented with daily products to ensure the effectiveness of the treatments. Cleansing with foam twice daily; toning twice daily; morning care—a moisturizing cream enriched with hyaluronic acid and Centella asiatica stem cells, which attracts and retains moisture in the skin, protecting against dehydration and promoting collagen synthesis, helping to restore the skin's structure and elasticity [30]; protective cream with SPF 50 to shield the skin from UV rays and prevent post-inflammatory hyperpigmentation [17,28]; evening care—a nourishing cream containing phospholipids, which are a major component of cell membranes and strengthen the skin barrier, and triglycerides, which activate metabolism, thereby increasing the synthesis of collagen and other tissue proteins [31]; special care: a serum with Centella asiatica, which activates skin renewal processes, promotes collagen synthesis, modulates inflammatory processes, and provides antioxidant protection [30]. After professional regenerative treatments, the skin becomes more sensitive, so it is important to restore the protective barrier and moisture balance, and to protect the skin from UV rays [17,25,26]. Antioxidants and anti-inflammatory agents modulate skin barrier homeostasis, wound healing, and inflammation [32].

The study focused on a phytic acid complex designed for photo-aged, sensitive, dry, dehydrated, and wrinkled skin. The therapeutic advantage and uniqueness of this specific treatment protocol stemmed from the synergistic action of the acid complex, in which phytic acid, acting in combination with lower-molecular-weight keratolytics, played a key role in addressing photoaging issues. Due to its chemical structure and high molecular weight, phytic acid has a limited ability to independently penetrate an intact barrier; therefore, its pharmacodynamic efficacy in this complex depended on the synergy with glycolic acid and other acids [17]. At the beginning of the procedure, low-molecular-weight acids disrupted the corneodesmosomal junctions in the superficial layers and reduced the barrier resistance of the stratum corneum, thereby paving the way for deeper penetration of phytic acid [17]. Once it reached the target layers of the epidermis, phytic acid exhibited its bioactivity: it acted not only as a powerful organic humectant capable of effectively binding water molecules, but also as a potent chelator—by blocking copper ions, phytic acid directly inhibits the activity of the tyrosinase enzyme in melanocytes [15–18]. This molecular mechanism provides a scientific rationale for the positive changes in skin condition parameters recorded instrumentally by diagnostic equipment, as well as the participant's subjective self-assessments.

4.1. Effect on Wrinkle Depth

After a 6-week course of treatments, wrinkle depth decreased by 20.5%; although the parameter remained in the "Medium-deep wrinkles" category, this reflects positive epidermal regeneration and potential strengthening of the dermal matrix. The study participant noted in her diary that the visibility of fine wrinkles had decreased and that her skin remained elastic throughout the day. The reduction in wrinkle depth suggests that the cosmetic procedures using a phytic acid complex may have exerted a stimulating effect on fibroblast activity, thereby promoting collagen and elastin synthesis and reducing skin micro-relief irregularities: glycolic acid, due to its low molecular size, is able to

effectively penetrate deeper layers of the skin, activate cell renewal processes, and stimulate the synthesis of collagen and elastin [17,21,25], while phytic acid primarily enhances the effectiveness of the other acids used in the complex—it neutralizes the free radicals generated by glycolic acid, thereby reducing damage to surrounding tissues [17,18]. In complex formulations, these acids provide balanced exfoliation due to their synergistic effect, reducing skin irritation [25]. Furthermore, a structured at-home skincare regimen ensuring consistent hydration and protection contributed to optimized skin recovery between professional sessions [2,26].

4.2. Effects on Skin Moisture Levels and the Skin Barrier

Skin moisture levels in the T (forehead) and U (left cheek) zones varied differently—a positive change of 28.3% was recorded in the T zone, while the U zone showed a positive change of 41.9%. Although a decrease in moisture levels was observed after the first treatment, subsequent measurements showed a consistent increase in moisture levels in both zones. The slight decline in moisture levels after the first treatment can be attributed to an initial disruption of the epidermal barrier function caused by chemical peels, which can temporarily increase transepidermal water loss (TEWL) [26]. However, continued therapy with a phytic acid complex and the targeted use of humectants in home care promoted epidermal regeneration and optimized the skin's ability to retain water [2,17,26]. Moisture levels in the assessment area before and after the course of treatments remained within the range of dehydrated skin but came very close to normal moisture levels and physiological skin balance. The study participant noted in her diary that, after a course of 6 treatments, her skin remained moist immediately after washing, she experienced a long-lasting feeling of comfort, her skin remained hydrated until the evening with no signs of roughness, and in the morning, her skin was soft, with the moisture deficit completely resolved. Although a temporary disruption of the epidermal barrier function and increased TEWL were observed in the initial stage, the final analysis of the results reflects a successful trend toward restoring epidermal hydration and stabilizing the hydrolipidic mantle. These outcomes suggest not only an aesthetic improvement in skin texture but also a functionally supported epidermal renewal cycle and an improved ability of the skin to maintain homeostasis [21].

4.3. Effect on Skin Hyperpigmentation

Before beginning the course of treatments, the study participant's hyperpigmentation was assessed as moderate in intensity and was very close to the threshold for severe hyperpigmentation; after a course of 6 treatments, the hyperpigmentation decreased by 39.6% and approached the threshold for minimal hyperpigmentation. In her diary, the study participant noted that the pigmented spots had noticeably lightened and her skin had regained its natural glow. Alpha-hydroxy acids act by weakening the bonds between corneocytes on the stratum corneum, promoting a brighter, smoother, and more even skin tone [25]. Specifically, in this study, phytic acid played a key targeted role due to its documented capacity to reduce existing hyperpigmentation and inhibit new melanin synthesis [17,18].

4.4. Effect on Skin Keratinization

After a course of 6 procedures, the keratinization index dropped from the moderate range to the normal range, decreasing by as much as 85%. After the course of treatments, the study participant noted that her skin felt moisturized until the evening with no signs of roughness; in the morning, her skin was soft and elastic, and full homeostasis of the hydrolipid layer had been achieved. This result finds theoretical support in the capacity of phytic acid and other acids within the complex to induce controlled exfoliation of corneocytes while preserving deeper epidermal layers [17,26]. These observations suggest

not only an enhancement of skin surface relief and texture, but also an optimization of barrier function and more favorable conditions for humectant penetration [17].

When evaluating the dynamics of the treatment course over time (based on the data in Table 4), a distinct pattern emerges: even with a mild phytic acid complex, the intense keratolytic process in the initial phase induced a temporary shift in skin barrier homeostasis. During the first phase, one week after the first procedure, the study participant reported short-term tightness and dryness after cleansing. This suggest that, in the initial stage, the exfoliative stress induced by the acids in the complex may have temporarily exceeded the skin's endogenous regenerative capacity. This transient imbalance in the initial phase was further confounded by the study participant's inconsistent adherence to the post-procedure skincare regimen, which led to a deficit in the protective lipid barrier and a resurgence of TEWL throughout the day.

An analysis of the participant's subjective sensations reveals a consistent progression from an initial imbalance in the epidermal barrier (recorded in the first week as "a sensation of skin tightness") to the restoration of stable homeostasis in the sixth week ("skin is moist and soft"). The face washing and toning steps not only ensured the restoration of physiological pH but also successfully prepared the skin for the absorption of active ingredients. The day cream, combined with a protective sunscreen, effectively helped retain moisture and protect the skin from UV rays and blue light throughout the day; the sensation of tightness and dryness disappeared, and the skin became smoother and softer. Using the night cream helped restore the skin's balance; in the mornings, the skin looked radiant, and its texture and comfort were noticeably improved.

Summarizing the results, it can be noted that the reduction in wrinkle depth, increased skin hydration, more even melanin distribution, and regulated keratinization process corresponded well with the study participant's subjective experience—the positive skin changes recorded in her diary log were an increased sense of skin comfort, improved firmness, and enhanced aesthetic appearance. This alignment between instrumental data and the participant's self-evaluation suggests that the course of treatments using the phytic acid complex, combined with a customized at-home skincare routine, supports not only superficial structural changes but also tangible aesthetic improvements. A holistic analysis of this case allowed for an in-depth evaluation of the intervention, demonstrating that the complementary interplay between professional procedures and daily maintenance is key for managing signs of skin aging in this subject.

4.5. Limitations

The main methodological limitation of this study is its single-subject design ($n = 1$). Accordingly, this case report should be viewed as generating a hypothesis for further investigation. The positive changes in skin condition parameters observed cannot be automatically generalized to the entire population, as individual factors, such as genetic predisposition, endogenous hormonal background, epidermal thickness, the initial condition of fibroblasts, and overall health may influence acid penetration and the skin's regenerative response [14,23]. Furthermore, as the 48-year-old participant exhibited initial structural changes and early signs of aging, these outcomes cannot be directly extrapolated to older age groups or individuals with advanced skin aging.

Additional variables include the participant's lifestyle (dietary habits, stress levels, sleep patterns, etc.) and environmental factors (fluctuations in UV radiation and other atmospheric changes), which may modulate free radical production and accelerate or slow down photoaging processes regardless of the therapy applied [12,23]. A split-face design could have helped account for some of these influences by providing an internal control through comparison of both sides of the face within the same participant. Because no

such comparison was made, the observed changes cannot be clearly distinguished from seasonal variation, natural fluctuations in skin condition, or the effects of the at-home skincare routine.

In addition, because the professional procedures and the at-home routine were applied together, their individual contributions to the observed outcomes cannot be determined, nor can it be established whether the outcomes depended on their combined use. The participant's inconsistent adherence to the post-procedure skincare regimen was associated with temporary fluctuations in the data obtained, demonstrating that participant compliance remains a difficult-to-control variable when assessing treatment outcomes.

Given these limitations, it would be advisable in the future to conduct larger-scale, randomized controlled trials comparing the effects of the phytic acid complex across different age groups and assessing the long-term sustainability (e.g., 6–12 months) of the results achieved, while implementing standardized monitoring of participants' adherence to the skincare regimen and relevant behavioral factors.

5. Conclusions

A course of cosmetic procedures using a phytic acid complex, combined with a customized at-home skincare routine, showed positive structural and functional improvements in aging facial skin, based on the analysis of a specific individual case. After a course of six treatments, instrumental diagnostic methods recorded a reduction in wrinkle depth, increased skin hydration, more even melanin distribution, and a regulated keratinization process, which corresponded well with the study participant's subjective experience—positive skin changes documented in her diary, including an increased sense of skin comfort, a feeling of firmness, and an improvement in aesthetic appearance. The use of a structured diary ensured the subject's consistency and adherence to a regular at-home skincare routine, and the results confirm the importance of a holistic approach—the integration of professional treatments and controlled at-home skincare, in achieving changes in skin condition. The results of this case study provide valuable practical insights for cosmetologists, laying the foundation for the implementation of personalized, safe, and comprehensive skin rejuvenation protocols as well as for further research. Although the results of this specific case study illustrate positive therapeutic potential, further randomized controlled trials with a larger sample size are needed to confirm this hypothesis and generalize the findings.

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Informed Consent Statement: Informed consent was obtained from the subject involved in the study. Written informed consent has been obtained from the patient to publish this paper.

Data Availability Statement: The data supporting the findings of this case study are available from the corresponding author upon reasonable request. The datasets are not publicly available due to ethical restrictions and patient privacy regulations.

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Appendix A

Table A1. Products used during the procedure and their INCI ingredient lists.

Procedure Step	Product Name	Manufacturer	INCI
Cleansing	Cleanser Foam (normal/dry skin) SYSTEM+	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Water, Cocamidopropyl Betaine, Glycerin, Decyl Glucoside, Sodium Lauroyl Sarcosinate, Lactic Acid, Glycerin & Actinidia Chinensis (Kiwi) Fruit Extract, Glycerin & Ribes Nigrum (Blackcurrant) Fruit Extract, PEG-12 Dimethicone, Phenoxyethanol (And) Ethylhexylglycerin, Sodium Hydroxide, Arbutin, Potassium Sorbate, Fragrance
Deep cleansing	Peeling Gel AHA OXYGEN	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Aqua (Water), Glycolic Acid, Propylene Glycol, Sd Alcohol, Lactic Acid, Sodium Hydroxide, Polysorbate 20, Urea, Hydroxyethylcellulose, Salicylic Acid, Arctostaphylos Uva Ursi Leaf Extract, Phytic Acid, Allantoin, Phenoxyethanol, Ethylhexylglycerin, Azelaic Acid, Imidazolidinyl Urea, Mandelic Acid, Fragrance, Kojic Acid, CI 42090
Application of cleansing lotion	Lotion Toner for oily skin and acne skin DM	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Water (Aqua), Alcohol, Glycerin, Polysorbate 20, Phenoxyethanol, Salicylic Acid, Camphor, Triethanolamine, Lavandula Angustifolia (Lavender) Oil, Eucalyptus Globulus Leaf Oil, Allantoin, Citric Acid, Ethylhexylglycerin, Juniperus Communis Fruit Oil, Mentha Arvensis Leaf Oil, Citrus Limon (Lemon) Fruit Extract, Saponaria Officinalis Leaf/Root Extract, Sodium Benzoate, Potassium Sorbate, Linalyl Acetate, Linalool, Pinene, Menthol, Limonene, Beta-Caryophyllene, Terpinolene, Terpineol, Alpha-Terpinene, Geraniol, CI 42090, CI 19140
Application of phytic acid complex	Phytic Peel PMT Anti-aging	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Ingredients listed on the product label: Phytic Acid, Triethanolamine, Mandelic Acid, Kojic Acid, Glycolic Acid. Additional active ingredient reported in the manufacturer's product documentation: Salicylic Acid. Complete INCI list not independently verified
Toning	Brightening parsley solution PR	ONmacabim—Judean Desert Herbs Ltd., Bnei, Brak, Israel	Water, SD Alcohol 40B, PEG-4, Lactic Acid, Kojic Acid, Butylene Glycol, Morus Bombycis Root Extract, Arctostaphylos Uva-Ursi Leaf Extract, Glycyrrhiza (Licorice) Root Extract, Glycolic Acid, Glycerin, Carum Petroselinum (Parsley) Extract, Triethanolamine, Saponaria Officinalis Leaf Extract, Polysorbate 20, Phenoxyethanol & Ethylhexylglycerin, Salicylic Acid, Allantoin, Citric Acid, Ascorbic Acid, Fragrance (Supplement), Hexyl Cinnamal, Butylphenyl Methylpropional, Linalool, Citronellol, Alpha-Isomethyl Ionone

Table A1. *Cont.*

Procedure Step	Product Name	Manufacturer	INCI
Application of cream	Vitality moisturizer SPF-15 OXYGEN	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Water (Aqua), Cyclopentasiloxane, Ethylhexyl Methoxycinnamate, Benzophenone-3, Propylene Glycol, Glyceryl Stearate & PEG-100 Stearate, Cetearyl Alcohol & PEG-20 Stearate, Isononyl Isononanoate, Cetearyl Ethylhexanoate, Butyrospermum Parkii (Shea Butter), Vitis Vinifera (Grape) Seed Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Sodium Hyaluronate, Phenoxyethanol & Caprylyl Glycol, Calendula Officinalis Flower Oil, Allantoin, Phenylpropanol, Chlorphenesin, Fragrance, CI 42090
Application of sunscreen (SPF30)	HYBRIDE DEFENSE cream SPF-50	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Aqua (Water), Diethylamino Hydroxybenzoyl Hexyl Benzoate, Homosalate, Ethylhexyl Methoxycinnamate, Octocrylene, Ethylhexyl Salicylate, Ethylhexyl Triazone, Butyl Methoxydibenzoylmethane, Titanium Dioxide, Stearyl Alcohol, Propylene Glycol, Cetyl Alcohol, Potassium Cetyl Phosphate, Polyglyceryl-10 Pentastearate, Dimethicone, Sodium Stearoyl Lactylate, Nylon-12, Parfum (Fragrance), Helichrysum Italicum Flower Oil, Benzyl Alcohol, Aloe Barbadensis (Aloe Vera) Leaf Juice, Allantoin, Benzoic Acid, Citric Acid, Dehydroacetic Acid, Tocopherol, Lecithin, Ascorbyl Palmitate, Glyceryl Oleate, Glyceryl Stearate, Hexyl Cinnamal, Limonene, Linalool, Alpha-Isomethyl Ionone, CI 77491, CI 77492

Table A2. Products recommended for home care and their INCI ingredient lists.

Product and Recommended Use	Product Name	Manufacturer	INCI
Cleanser—twice day	Cleanser Foam (normal/dry skin) SYSTEM+	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Water, Cocamidopropyl Betaine, Glycerin, Decyl Glucoside, Sodium Lauroyl Sarcosinate, Lactic Acid, Glycerin & Actinidia Chinensis (Kiwi) Fruit Extract, Glycerin & Ribes Nigrum (Blackcurrant) Fruit Extract, PEG-12 Dimethicone, Phenoxyethanol (And) Ethylhexylglycerin, Sodium Hydroxide, Arbutin, Potassium Sorbate, Fragrance
Toner—twice day	Brightening parsley solution PR	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Water, SD Alcohol 40B, PEG-4, Lactic Acid, Kojic Acid, Butylene Glycol, Morus Bombycis Root Extract, Arctostaphylos Uva-Ursi Leaf Extract, Glycyrrhiza (Licorice) Root Extract, Glycolic Acid, Glycerin, Carum Petroselinum (Parsley) Extract, Triethanolamine, Saponaria Officinalis Leaf Extract, Polysorbate 20, Phenoxyethanol & Ethylhexylglycerin, Salicylic Acid, Allantoin, Citric Acid, Ascorbic Acid, Fragrance (Supplement), Hexyl Cinnamal, Butylphenyl Methylpropional, Linalool, Citronellol, Alpha-Isomethyl Ionone

Table A2. *Cont.*

Product and Recommended Use	Product Name	Manufacturer	INCI
Serum—twice day	Stem cells serum STCELLS	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Aqua (Water), Anthemis Nobilis (Chamomile) Extract, Malva Sylvestris (Mallow) Extract, Plantain (Plantago Major) Extract, Polysorbate 20, Cetyl Alcohol, Olea Europaea (Olive) Oil, Glycerin, Bees Wax, Ascorbic Acid (Vitamin C), Butyrospermumparkii (Shea Butter), Grape Seed Oil, Glyceryl Stearate, Simmondsia Chinensis (Jojoba) Seed Oil, Hamamelis Virginiana (Witch Hazel) Extract, Daucus Carota Sativa (Carrot) Root Extract, Carbomer, Evening Primrose (Oenothera Biennis) Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Centella Asiatica Leaf Extract, D-Panthenol, Aloe Barbadensis Gel, Lemon (Citrus Medica Limonum) Oil, Imidazodinyl Urea, Phenoxyethanol, Tocopheryl Acetate (Vitamin E), Citrus Limon (Lemon) Peel Oil, Citric Acid, Linalool, Limonene, Citral
Moisturizing cream—morning	Moisturizer for normal to dry skin STCELLS	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Aqua (Water), Anthemis Nobilis (Chamomile) Extract, Malva (Mallow) Extract, Plantain (Plantago Lanceolata), Green Tea (Green Tea) Extract, Cetyl Alcohol, Polysorbate 20, Jojoba (Simmondsia Chinensis) Oil, Bees Wax, Witch Hazel (Hamamelis Virginiana) Extract, Glycerin Mono Stearate, Borago Officinalis (Borage) Oil, Ceteareth-20, Olea Europaea (Olive) Oil, Butyrospermum Parkii (Shea) Butter, Glycerin, Carbomer 940, Pomegranate Seed Oil, Sweet Almond (Prunus Amygdalus Dulcis) Oil, Triethanolamine, Fragrance, Allantoin, D-Panthenol, Centella Asiatica Leaf Extract, Daucus Carota Sativa (Carrot) Root Extract, Phenoxyethanol, Hyaluronic Acid, Tocopheryl Acetate (Vitamin E), Imidazodinyl Urea
Sunscreen (SPF 50)—morning	HYBRIDE DEFENSE cream SPF-50	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Aqua (Water), Diethylamino Hydroxybenzoyl Hexyl Benzoate, Homosalate, Ethylhexyl Methoxycinnamate, Octocrylene, Ethylhexyl Salicylate, Ethylhexyl Triazone, Butyl Methoxydibenzoylmethane, Titanium Dioxide, Stearyl Alcohol, Propylene Glycol, Cetyl Alcohol, Potassium Cetyl Phosphate, Polyglyceryl-10 Pentastearate, Dimethicone, Sodium Stearoyl Lactylate, Nylon-12, Parfum (Fragrance), Helichrysum Italicum Flower Oil, Benzyl Alcohol, Aloe Barbadensis (Aloe Vera) Leaf Juice, Allantoin, Benzoic Acid, Citric Acid, Dehydroacetic Acid, Tocopherol, Lecithin, Ascorbyl Palmitate, Glyceryl Oleate, Glyceryl Stearate, Hexyl Cinnamal, Limonene, Linalool, Alpha-Isomethyl Ionone, CI 77491, CI 77492

Table A2. *Cont.*

Product and Recommended Use	Product Name	Manufacturer	INCI
Nourishing cream—evening	Nourishing night cream STCELLS	ONmacabim—Judean Desert Herbs Ltd., Bnei Brak, Israel	Aqua (Water), Anthemis Nobilis (Chamomile) Extract, Malva Silvestris (Mallow) Extract, Plantain (Plantago Major) Extract, Polysorbate 20, Cetyl Alcohol, Isopropyl Myristate, Butyrospermum Parkii (Shea Butter), Glycerin, Bees Wax, Hamamelis Virginiana (Witch Hazel) Extract, Simmondsia Chinensis (Jojoba) Seed Oil, Vitis Vinifera (Grape) Seed Oil, Olea Europaea (Olive Fruit) Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Panthenol, Lecithin, Carbomer, Lemon (Citrus Medica Limonum) Oil, Xanthan Gum, Aloe Barbadensis Gel, Daucus Carota Sativa Root Extract, Centella Leaf Extract, Citrus Limon (Lemon) Peel Oil, Xanthan Gum, Tocopheryl Acetate (Vitamin E), Phenoxyethanol, Citric Acid, Imidazodinyl Urea, Chlorphenesin, Caprylyl Glycol, Didecyldimonium Chloride.

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