

ACETYPOL™ COSMETIC WOMEN'S QUALITY OF LIFE



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QUALITY OF LIFE

The appearance of the skin affects the way a person is perceived and treated by other members of society. It is not minor thing. Self-esteem and self-confidence are a must for women in this condition. The primary purpose of skin, is to act as a border between the body and its surroundings, protecting the human body against mechanical, thermal, microbial, and chemo-radiation threats, this makes the skin itself vulnerable to both external and internal stresses. The skin's ability to sense cold, heat, pain and touch serves as a warning against severe trauma, burns or hypothermia. Another frequently overlooked function is its aesthetic function. This aesthetic appearance can be degraded by alterations in the skin characteristics, which are skin reaction and make skin red, or darker in darker skinned people. It can also be sore, itchy, look like sunburn and it might peel and blister. Skin reactions don't develop straight away but gradually throughout the course of radiotherapy. A great deal of cosmetic manufacturers is how deal with the challenges in appearance, either by prevention or restoration from cancer skin damages.



LET'S BEGIN BY DISCUSSING HOW TO PROPERLY CARE FOR SKIN AFTER CANCER TREATMENT.

When tissue hygiene, injured, a regeneration process begins. Healthy skin has an excellent regeneration capability because it is well vascularized and contains a pool of epidermal stem cells able to proliferate and regenerate. However, some factors may interfere with the normal healing process. For cancer patients' simple task as clean hands, face, scalp, or body, is not an easy matter, they cannot use regular soap bars or wash liquid soaps, require mild soap specially formulated to their concern, with regular soap bar make worst dryness, because astringent ingredients and not mentioned pain for wash altered skin by radiation, these concerns of consumers with oncology treatment, requires cosmetics to mask and also benefit with dedicated cosmetics formulations necessary to restore the skin. Here at AMB WELLNESS, we strongly believe that everyone, including those facing cancer or in the process of recovery, should have the opportunity to enjoy cosmetics while undergoing non-invasive beauty treatments. There is a small bunch of beauty companies, who already are offering cosmetics products to clients going through cancer treatment, be one to wish offering compassionate and considerate care to all individuals, particularly those utilizing products such as cancer treatments and want to offer in their beauty regimens.



When providing care to the cancer patient, it is necessary to distinguish the different phases, since the cosmetic products (and aesthetic care) that can be applied will vary in each of them. Thus, most of the guidelines of the cancer treatment centers indicate that hydration and emollience are necessary. Recently, cosmetic brands are focused on skin care regimen, including hygiene, moisturizing and sun care products should be safe and effective in helping to minimize these events and improve skin conditions such as xerosis, pruritus, erythema and photosensitivity.



Three main groups of skin care cosmetics can be established: cleansers, moisturizing and maintenance products, and sun-screens. In addition, hair cleansers (shampoos) and cosmetics are used to repair the hair structure and to maintain the scalp. For nails, emollient products are used; for the maintenance of the nail plate, and in post-oncological care, toxic-free decorative cosmetics could be included.

It is well known that the improvement of the cancer patient's well-being and self-esteem contributes positively to their recovery. That is why the use of suitable cosmetics for oncological skin care is of increasing interest given the benefits it offers. Several studies on quality of life (QoL) in which patients who received cosmetic care increase mood state and self-perception of the disease.

Quality of life (QoL) is a concept which aims to capture the well-being, whether of a population or individual, regarding both positive and negative elements within the entirety of their existence at a specific point in time, improvement in facial attractiveness is associated with positive changes in emotional and social dimensions of one's life, such as personality, interpersonal relationships, and self-esteem. Although most clinical research on cosmetic intervention focuses on psychological benefits of cosmetic camouflage, the additional benefits of facial attractiveness achieved with makeup should not be neglected because they may affect someone's life positively. People whose physical appearance has been altered because of a transient or chronic clinical condition, such as pigmentary disorders, are at a higher risk of negative emotional distress due to their altered facial characteristics. To mask their dermatological conditions, these patients may resort to simple makeup application, such as concealing oily skin or acne. For example, common facets of QoL include personal health (physical, mental, and spiritual), relationships, education status, work environment, social status, wealth, a sense of security and safety, freedom, autonomy in decision-making, social-belonging and their physical surroundings. All these studies report significant improvement in patients' well-being after their cosmetic intervention.

THE IMPACT OF ROUTINE SKIN CARE ON THE QUALITY OF LIFE

Consumers purchase a wide variety of consumer products and encounter these products daily. Manufacturers invest deeply in developing new products or improving existing products, to produce a positive impact on the lives of consumers and the impact of over-the-counter skin care products on the quality of life (QoL) of female consumers. Developers of consumer products can benefit greatly from QoL cosmetics of skincare to define product attributes that would be valued by the consumer. However, evaluating the impact of consumer products on QoL presents a unique challenge to reduce psychological morbidity (Psychological morbidity, that is, anxiety combined with depression), also increase self-esteem, promote more adaptive patterns of perfectionism, and recognize the role of age perception are needed to improve women's QoL.



Those include facial skin care regimen formulated to improve elasticity, firmness and hydration, and to correct age- and sun-related skin color. It is not just offering a cosmetic line for skin care, but also improving feelings of empowerment, happiness and self-esteem. There is relative importance of product characteristics that can be used to provide guidance toward developing products that improve comfort and odor containment, and better meet the needs of the consumer regarding discretion and fit.

Skin care products represent a large category of consumer products. In 2018, sales of skincare products in the US grew by 13% to an estimated USD 5.6 billion. Recent decades have seen the emergence of cosmeceuticals, or products that have therapeutic effects capable of affecting the condition of the skin beyond the duration of application. The skin care products can be evaluated using several measures. Instruments are readily available to measure improvements in skin elasticity and firmness, increases in hydration, improvements in barrier function and hyperpigmentation. However, an additional important measure to determine the overall effectiveness of skin care products is the effect(s) of such products on the self-esteem and quality of life of the consumer.



KEY PLAYERS AND COMPETITION OF CHEMO SKINCARE PRODUCT LINE

The skincare industry is dominated by big players such as Lindi, MÊME cosmetics, laroche-posay, Johnson & Johnson, NeoGenesis, Avene, Oncoderm, Dermavitality, Shiseido, and Camwell. However, many smaller brands have also gained traction, thanks to their unique value propositions and targeted marketing strategies. To compete effectively, product managers must stay updated on industry developments and evaluate their competition's strengths and weaknesses.

As consumers become more interested in a holistic approach to beauty, they may choose to spend their money on products that address multiple areas of concern. Overall, the skincare industry is constantly evolving, and product managers must stay up-to-date on market trends, competition, and regulatory requirements to succeed. By understanding consumer needs and values, and by differentiating themselves from the competition, skincare brands can build loyal customer bases and thrive in a competitive market.



SKINCARE PRODUCT DEVELOPMENT PROCESS

Developing a skincare product is a complex process that requires careful planning, attention to detail, and a deep understanding of consumer needs. The skincare product development process and the key steps involved, process begins with ideation and concept creation. This is where product managers work closely with research and development teams to generate ideas that meet consumer needs, align with the brand's values, and adhere to regulatory requirements. The goal is to create a unique and compelling product that stands out in a crowded market. During this stage, product managers conduct market research to identify gaps in the market and consumer needs that are not being met. They also analyze trends and competitor products to ensure that their product is innovative and unique. Once they have a clear idea of what they want to create, they work with R&D teams to develop a concept that meets these needs, this is the case for cosmetics that improve women's quality of life during and after cancer treatments.



FORMULATION AND INGREDIENT SELECTION

Once a concept is approved, product managers work with formulation and ingredient teams to create the product's formula. The ingredients should be carefully selected to ensure efficacy, safety, and compliance with regulatory requirements. For example, plant-based ingredients may be chosen to meet the preferences of customers seeking natural and organic skincare products. Formulation is a critical stage in skincare product development, as it determines the product's effectiveness, texture, and scent. Formulators must balance the efficacy of the product with the sensory experience it provides to ensure that customers will enjoy using it. They also need to consider the stability of the product to ensure that it will not break down or lose effectiveness over time.

EXPANDING PRODUCT LINES AND DIVERSIFICATION

Product managers can create revenue growth opportunities as cosmetics for improve Quality of Life (QoL) of brand loyal consumer with this concern, by expanding their skincare product lines and diversifying their offerings. This can involve creating new product variants or entering new product categories. For example, a skincare brand that previously only sold facial products can explore the body care or hair care market. Expanding product lines and diversifying offerings can help brands reach new customers and increase revenue. However, it is essential to ensure that new products align with the brand's values and are of high quality to maintain customer loyalty.



THE IMPACT OF ROUTINE SKIN CARE ON THE QUALITY OF LIFE

Consumers purchase a wide variety of consumer products and come into contact with these products on a daily basis. Manufacturers invest deeply in developing new products or improving existing products, in order to produce a positive impact on the lives of consumers. Quality of Life's consumer products can contribute to overall well-being, and an increase in various aspects of QoL during use provides holistic product benefits to meet the overall needs of our consumers. The key active in skin care products is aloe vera acemannan. This material is known to be effective in improving skin texture, elasticity, fine lines and wrinkles, red blotchiness, hyperpigmentation, sun damage and sallowness seen with ageing and significant improvement in skin hydration, skin barrier function, and skin elasticity of product use. Other concerns of consumers are aging skin looks thinner, paler, and dryer, and becomes increasingly more prone to show wrinkles and age spots, younger women during management treatment, often feel that their time is filled with care for their children, and their own appearance is not a priority. During this the skin care regimen provided the opportunity to spend time on themselves to improve their skin and appearance. Additionally, this younger individuals, appearance may be more an important factor in how they present themselves to the outside world, compared to women in the older age group, who may view skin care regimen as something they do for themselves, regarding feeling attractive, improving significantly in feeling confident with less make-up.



The improvement in the Self-Image and Self-Competence are driven by changes directed at themselves, such as feeling good about themselves, and feelings about their physical appearance, feeling confident, and the ability to take care of themselves, this includes positive changes in outwardly directed social activities and make female consumers group feel better about attending functions, engaging in activities, and enjoying time with friends and family. Investigations have shown that physical attractiveness is an important determinant of interpersonal relationships, especially in the early stages. The use of make-up is widely portrayed as a tool for improving facial attractiveness. Women use cosmetics for a variety of reasons ranging from feeling less self-consciousness about their appearance, feeling more assertive and confident, or appearing healthier. A skin care regimen can have a positive impact on the QoL of consumers. Routine skin care with quality products that are effective in addressing skin concerns also contributes to improving self-esteem and has positive effects.

Dry skin is a very common condition characterized by a scaly and flaky appearance. Many factors can precipitate dry skin and if it worsens, there may be erythema and fissures. Dry skin is oftentimes exacerbated by environmental factors such as chemotherapy, frequent washing, use of harsh soaps or cleansers, central heating or air conditioning, and cold and dry weather, that contribute to loss of skin hydration.

Dry skin often accompanies pruritus which may lead to scratching that may increase the risk of infection and aggravate other skin diseases, as well as negatively impact a patient's quality of life (QoL). A 'dry skin cycle' has been proposed for dry skin conditions to describe its induction and propagation. Dry skin is initiated by decreased water content in the stratum corneum and is further exacerbated by destruction of the normal barrier lipid lamellae during bathing. Mild inflammatory hyperkeratosis is a key feature of dry skin that leads to defective keratinocyte differentiation, change in epidermal lipid profiles particularly in ceramide biology, loss of natural moisturizing factor (NMF) and reduced activity of desquamatory enzymes resulting in scaling. Skin care products with predominantly moisturizing features and targeted for sensitive skin can have dramatic beneficial effects on dry skin and break the dry skin cycle.

Dry hands and irritant hand dermatitis are a risk due to frequent hand washing and the use of hand sanitizers, other skin reactions relatives from sun sensitivity, this may cause allergic rashes and excessive sunburns that create skin injury. Nails and cuticles can become brittle, which can make nails fragile. Dry skin is associated with a disturbed skin barrier and reduced formation of epidermal proteins and lipids. During recent years, skin-barrier-reinforcing properties of some botanical compounds that specifically improve skin barrier and/or promote keratinocyte differentiation in vivo after topical application. The topical application of Aloe vera (leaf gel) increased skin hydration reduced the transepidermal water loss or promoted keratinocyte differentiation in humans in vivo. Aloe vera gel acemannan stimulated keratinocyte differentiation and display skin-barrier-reinforcing properties that may be used in dermocosmetics for dry skin.

The outermost layer of the epidermis, the stratum corneum, represents a thin physical, chemical and immunological barrier that protects the organism from the entry of xenobiotics and minimizes water loss from the epidermis. The stratum corneum has also been identified as a powerful first line of antioxidant defense that is mainly mediated by the small proline-rich family of cornified envelope precursor proteins. Aloe vera has antioxidant activities.



The proliferation and differentiation of the epidermis is tightly regulated to maintain its physiologic homeostasis. Injury or disturbed function of the epidermal barrier results in increased transepidermal water loss (TEWL) and the development of dry skin. The pathophysiology of an impaired epidermal barrier is characterized by disturbed keratinocyte differentiation and proliferation, changes in epidermal protein and lipid content and a decreased amount of natural moisturizing factors. The discovery of common loss-of-function mutations of the epidermal barrier protein filaggrin in atopic dermatitis has improved our knowledge about the role of epidermal proteins in the barrier function of diseased and normal skin. Besides proteins, epidermal lipids also play an important role in the formation and maintenance of the cornified envelope and the barrier function of the stratum corneum.

The hydrophobic extracellular lipid network of the stratum corneum is mainly composed of ceramides, cholesterol and free fatty acids that contribute to the physical and antimicrobial barrier. The interaction of epicutaneously applied lipids with the stratum corneum is very complex and depends, inter alia, on the presence and amount of water and emulsifiers. The effect of topically applied lipids on the barrier function may vary, depending on the treated skin condition. Also, the pH of the skin surface plays a great role in both the epidermal barrier formation and cutaneous antimicrobial defense.

THE BENEFITS OF USING GOOD SKIN CARE ACTIVE INGREDIENTS

This cosmetic skin care line focus on Female Quality of Life.

- Contains a high concentration of botanical, marine, and biological extracts
- Has no artificial fragrances
- Contains high-quality active ingredients
- Is suitable for highly sensitive and allergy-prone skin

Despite the broad use of health related QoL, very few companies have been developed to evaluate the impact of consumer products on quality of life. Consumers purchase a wide variety of products and come into contact with these products on a daily basis.



Cosmetic manufacturers need to take a look at developing new products or improving existing products in order to produce a positive impact on the lives of consumers on treatment. Developers of consumer products can benefit greatly from QoL to define product attributes that would be valued by the consumer. The goal is to restore and incorporate these individuals into a normal life, means help them to have good mood, positive outlook, calm and peaceful, feel good about self, self-confidence, physical appearance, sex life, attend public functions, do enjoyable activities, sports/recreation, retake hobbies, enjoy friends/family, recover social life with confidence and good appearance, look and feel pretty, can complete household chores, attend family needs, have family reunion, recover routines as Personal hygiene, Go to work or to school, shopping or go where want/need to go. All of those means Quality of Life (QoL).



The skin is our largest organ, protecting us from germs, allergens, and irritating substances. During chemotherapy, skin cell turnover is reduced, and our skin is drier and more fragile remission after chemo; exposure to allergens and irritants in skin care products or harsh chemicals penetrates more readily and skin moisture is lost faster. Germs also pose a greater threat, and medicines can have skin side effects. By strengthening skin barrier with hydrating gentle skin care products, protecting our skin from UV rays, and treating all skin wounds promptly, we can reduce our risk of skin problems finish cancer treatment.

COSMETICS FOR SKIN CARE MANAGEMENT



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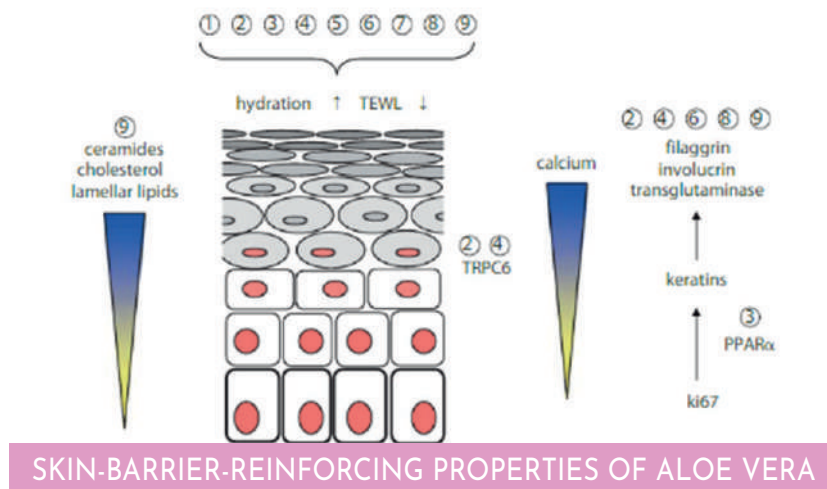
NOURISHING SKIN CARE AFTER RADIOTHERAPY

The time during cancer treatment is very much about soothing the skin from the common side effects of chemotherapy, but also nourishing it so that it can recover well once treatment finishes. Once treatment has stopped, and are either in remission or living with cancer, you can introduce a broader range of ingredients which can make skincare more luxurious, using Acetypol™.



Products can also focus on proactive skin recovery, restoring your natural youthfulness and glow. Management of adverse reactions differs considerably between cosmetic companies for “between areas”, include the use of washing soaps, creams, and deodorants and in the management of dry and moist desquamation, saline soaks, gel or occlusive dressings, and topical ointments with painkillers as cortisone. There are a few companies globally with skin care products to follow treatment product portfolio, specifically designed for these customers, which skin reaction interferes with normal hygiene can be very distressing, making them feel socially unacceptable at a time when social support is very important. The risk of dry and moist desquamation should not increase if skin care products are applied between treatments. When customers in oncology treatments try to moisturize with regular one product when using radiation, the customers no find easily the right one, recently skin care market are more interested skin care products with natural ingredients, instead of synthetic pharma drug, for maintain good hygiene standards and to wash with pH-neutral synthetic cleansers.

A new trend in cosmetic formulations is the use of polysaccharides plant-based as Acemannan in Aloe Vera, which are supposed to enhance cell renewal, improve skin hydration and micro-relief. All polysaccharide-based formulations enhance skin hydration. Formulations with isolated or combined active substances improved skin barrier function as compared to placebo, formulations containing these substances are important for protection of the skin barrier function. The use of cosmetics as skin cleansers, moisturizers and sunscreens is well established. Therefore, preventative strategies are recommended, including topical barrier-protecting agents, moisturizers, and sunscreen protection.



Skin hydration and cutaneous barrier improvement are essential to epidermal homeostasis and differentiation and to the control of side effects in oncology treatments. Polysaccharides-based formulations induced a TEWL reduction which suggests that the daily use of these substances is important to protect the skin barrier function, since immediate effects observed in the short term, maintenance of the cutaneous barrier is essential to normal skin and that it improves results of dermatological treatments and maintains skin homeostasis.

The epidermis has 2 different levels of water, separated by the interface between the stratum granulosum (SG) and the stratum corneum (SC). Water present in the deeper epidermal layers goes upward to hydrate cells in the SC, and in part, it is lost by evaporation. Hydration of the upper skin layers decreases when the SC water is lost less quickly than that arrived from the lower layers of the skin.



Aloe vera displays interesting skin-barrier-reinforcing properties. The improvement in skin hydration, reduction of TEWL, stimulation of keratinocyte differentiation, and production of epidermal lipids and proteins predestines polysaccharides of aloe vera have a role as new actives in dermocosmetics for dry skin. Cosmetic active polysaccharides are role by the ability of biopolymer plant-based or hydrocolloid mobilizing water to the contacted skin.

Cosmetic manufacturers must take care of skin products during management of treatment, adjusting formulations to protect skin-barrier-reinforcing. The pH of the skin follows a sharp gradient across the stratum corneum, which is suspected to be important in controlling enzymatic activities and skin renewal. The skin pH is affected by a great number of endogenous factors, e.g., skin moisture, sweat, sebum, anatomic site, genetic predisposition and age.

In addition, exogenous factors like facial cleansers with astringent action, removing lipids from skin may affect skin integrity. Therefore, the use of skin cleansing agents, especially hands liquid soap or soap bars with a pH of about 5.5, may be of relevance in the prevention and treatment of dry skin diseases. Aloe Vera has a low pH 4.0 to 5.0 suitable for all topical skin products. The active ingredient of Aloe Vera is known as Acemannan and have proven biological action in skin; to improve skin integrity (barrier function/hydration and other factors) while relieving skin symptoms.

Use of hydrating gentle skin care routine daily. The key to a simple health-promoting skin care routine during chemo is to use gentle hypoallergenic skin cleansers followed by deeply hydrating hypoallergenic moisturizers every day. Avoid formulating unnecessary allergens (such as fragrance) and irritants (such as many acne and anti-aging ingredients). Keep skin care simple and hydrating to maintain comfortable skin during chemotherapy. This in turn helps to fend off skin dryness, which will reduce skin fragility, facial flaws and skin tautness. Skin cleansers with pH-balanced meet pH of skin (5.0), free from fragrance and exfoliating ingredients, bar soap, liquid cleansers.

THE DETRIMENTAL EFFECTS OF PROLONGED WATER EXPOSURE ON SKIN ARE WELL KNOWN

Information on the effects of short-term exposure, e.g., during bathing, showering, and hand washing, on Natural moisturizing factors (NMF) levels, significant decreases in NMF levels after soaking, (NMF) is essential for appropriate stratum corneum (SC) hydration, barrier homeostasis, desquamation, and plasticity. Aloe vera aids to reduce exposure to water alone produces significant changes in the SC. Always the skin soap for rinse, is critical to protect the lipids and protein that make up its fragile skin barrier layer, soap cleanser remove lipids and eventually damage keratin protein, paying particular attention in hands, the skin under rings and between fingers, are places where irritant hand dermatitis often starts. Every rinse skin after every washing skin cleansing equates to loss of intercellular lipids in skin's barrier layer. Skin moisturization is very crucial for maintaining the flexibility, viscoelasticity, and differentiation of the epidermis and its deprivation causes several diseases from dry skin to dermatitis. Aloe vera, a miracle plant has diverse medicinal properties including skin moisturization effects.

Hydrating gentle skin care routine product line to help heal many types of skin problems such as a rash from a medication allergy, peeling fingers or toes from chemotherapy medicines, chapped skin from harsh weather, etc. This is a skin care routine that helps heal any disruption in your skin's epidermal barrier. The epidermal barrier is composed of keratin protein-filled living cells that transition to dead cells in the stratum corneum (the outer layer of the epidermis). Throughout the epidermis, these cells are mortared together by lipids. The epidermis compromises the skin's important barrier layer that protects it to help to maintain a healthy epidermis and heal rashes.



Sun care protection. The skin needs to prevent photoallergic drug reactions from sun exposure. The bottom line is that during cancer treatment they are given a lot of medicines, some of which will be photosensitizers. Sun protection lowers the risk of a photosensitive reaction. Protection covers of exposed skin with a mineral zinc oxide broad spectrum SPF 50 or higher sunscreen on uncovered skin.

While receiving chemotherapy, the skin is exposed to germs, allergens and irritating substances, skin cell turnover is reduced, and our skin is drier and more fragile than before treatment; exposure to allergens and irritants in skin care products or harsh chemicals penetrates more readily and skin moisture is lost faster. Germs also pose a greater threat, and medicines can have skin side effects. By strengthening the skin barrier with hydrating gentle skin care products protecting skin from UV rays. Alterations can be treated are hand-foot syndrome, nail damage, edema, xerosis, rash, and radiodermatitis, and the aesthetics treatments were manicure and pedicure with anti-flakiness cream, massage, emollient oil, nourishing and lenitive emulsion. Camouflage makeup is useful for masking skin changes, improving quality of life scores regardless of age, diagnosis, and site of skin changes.

ALOE VERA AS NATURAL MOISTURIZING FACTOR (NMR)

Aloe vera is the primary humectant in Natural Moisturizing Factor found in your skin. Your skin is the barrier that protects you against dehydration, infection and puncture wounds; therefore, it is very important to keep your skin healthy. Natural moisturizing factor is one of the ways your body keeps your skin healthy. The NMF is a collection of water-soluble compounds that act as humectants to hold water in your skin. Aloe Vera is a key component within your skin humectant in Natural Moisturizing Factor. A natural moisturizing factor is in the outer layer of your skin called the Stratum Corneum. It comes from enzymes breaking down a protein called Filaggrin. When Filaggrin is broken down it generates amino acids which go on to form pyrrolidone carboxylic acid or PCA. Over time these key components are lost with natural aging and exposure to the environment. To help you keep your skin healthy, fortify with organic Aloe Vera ACETYPOL.



Incorporating Acetypol to your formula contributes to hydrate and helps to keep skin hydrated and healthy, maintain hydration of the skin, keep your skin pliable to help protect it from outside damage, helps the normal peeling-off or shedding (desquamation) of epithelial cells, optimizes the Stratum corneum barrier (outer most layer) to keep moisture in and environment agents out (bacteria, chemicals etc.) and keep skin healthy.



ALOE VERA

There are many natural extracts like plant extract, herbal extract, animal extract and yeast extract that can be used as the active ingredients in cosmetic products. Natural phytochemicals have been reported to possess a wide range of biological activities. Dry skin, or Xerosis, is a common condition experienced by most people and it becomes more prevalent with increasing age. There are lots of moisturizers available to treat and improve symptoms of xerosis and it can be categorized into emollients, occlusive and humectant. Emollients will soften and smooth the skin; occlusive provides a barrier that sits on the surface of the skin and prevents transepidermal water loss; and humectants, which bind and hold water in the stratum corneum. Aloe vera has a good moisturizing effect and can be used as a complement in the treatment of dry skin.



Aloe vera based products have been used widely nowadays especially in cosmetic products. The constituents of aloe vera especially mucopolysaccharides and Acemannan. make it beneficial to be used especially in dermatological aspects. The inner parenchymal cell, which is a colorless aloe gel, is important as it consists of more than 75 active ingredients including vitamins, minerals, enzymes, lipid, phenolic compounds, sterols, lignin, amino acids, and salicylic acid. The main feature of Aloe leaf is their high-water content. There are approximately $97.42 \pm 0.13\%$ moisture contents in the aloe leaf.

Aloe Vera can improve skin moisture and hydration through humectant mechanism. It can increase the water content of the stratum corneum by attracting water from the dermis below and keeping this water bounding the stratum corneum. In addition, the presence of mucopolysaccharide also helps to bind moisture which will make the skin moist. This mechanism can increase the water content of the stratum corneum to improve skin hydration. Aloe vera is effective to be used as the ingredient in moisturizing creams to increase the hydration in the skin. It is not similar results with low % of aloe vera solids with natural aloe vera juice at 0.5% aloe solids, instead of 1%, 1.50% in formulation, and different benefits are for only use mucopolysaccharides of aloe vera with higher % of polysaccharides or Acemannan.

During recent years, a variety of botanical extracts have been identified that improve the skin barrier by modulating the metabolism of keratinocytes. Aloe vera gel extracts from Aloe vera (syn. *A. barbadensis*) rich in polysaccharides, is a natural moisturizing factor to barrier-reinforcing actives in cosmetics for dry skin.

Aloe vera is often used in cosmetics and over-the-counter drugs for the treatment of burns, sunburn, wounds and skin inflammation. In a randomized vehicle-controlled study on 20 volunteers, the effect of different concentrations of Aloe vera concentrate powder on skin hydration and TEWL was assessed. After 2 weeks of application, all tested A. vera concentrations 0.5% significantly improved skin hydration as opposed to the vehicle.

CURRENTLY PROPOSED COSMETICS AND SKIN CARE PROCEDURES

The dermal absorption process of various biologically active substances, both cosmetic and non-pharmaceutical, can be divided into three stages: penetration, permeation, and resorption, a preventative and supportive skin care approach to assist customers undergoing oncology treatment and their caregivers to choose the most suitable products for daily skin care, all anticancer therapy-related cutaneous adverse events are linked to skin barrier dysfunction. Hence, maintaining skin barrier function using appropriate skin care products may control the severity of these symptoms. AMB Wellness introduce a unique and specialty ingredient called Acetypol™, which concentrated aloe vera acemannan aid faster skin repair ingredient in



your skin cosmetic products, helps to nourish and support the skin, with anti-inflammatory activity may help the skin restore repair itself in between treatments. Acetypol, which is highly isolated acemannan and polysaccharides contents get better results. Skin care for radiation therapy customers is crucial and requires extensive care. ALOE VERA is a natural and active moisturizing ingredient to develop full cosmetic protection care for sensitive and irritated skin due oncology treatment and may help skin recover and heal from the damage caused by therapy. Formulate a whole skin care line, formulated by Acetypol™, skin care active ingredient, specifically for oncology customers for specific skin reaction. AMB Wellness Acetypol™ is an isolated Acemannan, extracted without any solvent or chemical used. It is mainly focused on the formulation of skin dermocosmetic to cover treatment for post-radiotherapy for topical use.

WHAT IS ACEMANNAN USED FOR?

When Acetypol is integrated into cosmetic products, it contributes to reducing dryness, desquamation, rash, itching sensations and to space severe dryness attacks for atopic-prone skin, and to improve comfort for skin. Skin problems from oncology treatments may lead to an impairment in interpersonal and emotional well-being. In recent years, a category of products known as cosmetics for skincare has risen to prominence.



These products can be defined as skincare solutions incorporating active ingredients that directly improve symptoms of various skin conditions (beyond any expected vehicle effects). The active ingredients in these products have a measurable biological action in skin; they typically improve skin integrity (barrier function, hydration, and other factors) while relieving skin symptoms. Topical moisturizers and emollients help maintain skin hydration, reducing the likelihood of fissures and cracks. Protecting epidermal barrier function can also reduce the risk of xerosis.



Acetypol™ by AMB Wellness, is a novel and powerful raw material, for skin moisturizing ingredient, in powder form, totally water soluble, to give best results to making cosmetics after oncology treatment skin damages. Acemannan in Acetypol™ is ideal to use in skin care to alleviate erythema, reduce the feeling of skin dryness, increase moisturizing of the skin, and achieve higher satisfaction of customers. Barrier films are skin protectors that physically prevent the loss of skin moisture and reduce skin trauma and thus decrease skin damage caused by radiation. Aloe polysaccharides are well known for aid re-epithelialization faster by promoting migration of epithelial cells, the effect of moisture vapor permeable (MVP) dressing which permit evaporation and retain moisture in the treatment of RD in the phase of moist and dry desquamation.

ALOE VERA AS PENETRATION ENHANCER

Skin hydrating polysaccharides are derived from several natural sources. This biopolymer is constructed with simple sugar building blocks that are easily hydrated in an aqueous environment, thereby creating the gel structure called biopolymer plant-based or hydrocolloid. Polysaccharide, a biodegradable polymer is excellent in compatibility with biological tissues and largely meeting the consumers' preferences toward natural products.

These skin penetration enhancers are molecules which reversibly remove the barrier resistance of the stratum corneum and allow compounds to penetrate more readily to the viable tissues and thus enter the systemic circulation.



MECHANISM OF ACTION OF ALOE VERA AS SKIN PENETRATION ENHANCER

Aloe vera gel increased the in vitro skin penetration of compounds depending on their molecular weights, with an apparent inverse correlation between enhancement ratio and molecular weight of the compound. Some constituents of the Aloe vera gel itself also penetrated the skin and this was interestingly dependent on the molecular weight of the co-applied compounds. Thus, the penetration enhancement effect of the aloe gel was explained by a probable pull effect of complexes formed between the compound and the enhancing agent within the aloe gel.



MUCOPOLYSACCHARIDES A SECRET ALOE'S WEAPON

Polysaccharides make up most of the dry matter of the Aloe vera parenchyma. A storage polysaccharide, acetylated glucomannan, is located within the protoplast of the parenchyma cells and a variety of polysaccharides are present in the cell wall matrix. An overall carbohydrate analysis of the alcohol insoluble residues showed that the cell walls in the fillet of the aloe leaf hold mainly mannose containing polysaccharides, cellulose and pectic polysaccharides whereas the skin of the leaf contains in addition significant quantities of xylose-containing polysaccharides. Many investigators have identified partially acetylated mannan (or acemannan) as the primary polysaccharide of the gel, while others found pectic substance as the primary polysaccharide.

ACEMANNAN

AMB Wellness® developing innovative purification and insulating and concentrating five times mannose glycoconjugates plant-based from aloe vera inner gel. AMB Wellness® formulate its new restorative skin a biopolymer plant-based Acetypol™.

Aloe seems to increase penetration deeply into the deep layers of the epidermis. Aloe Vera has an element called "Lignin" which helps it to penetrate right down to the cellular level. It also has another element called "Saponin" which works as a natural cleansing agent. Both these elements working in conjunction reach the cellular level of the skin. In addition to this, it also nourishes the skin and replenishes it with the much-needed nutrition that it requires.



Acetypol by itself is a skin delivery system can be formulated with micellar or lamellar, micro, or nano emulsions, and get transcutaneous, transdermal, or trans follicular penetration of the active molecules. In this way, it is possible to formulate multifunctional cosmetics capable of performing their action at the level of specific skin layers, e.g. sunscreens must act on the stratum corneum, antioxidants and anti-aging on the epidermis and dermis, deodorants on sweat glands, anti-hair loss or shampoos or similar products on hair, whitening products on melanocytes. Thus, it is possible with Acetypol to obtain cosmetics and cosmeceuticals that can be used for UV protection, for hair care, but mainly to moisturize, rejuvenate, and whiten the skin, and finally to repair it in case of lesions. Acetypol™ can protect from the oxidative phenomena, increasing in their effectiveness and reducing side effects. have proven to have a repairing and anti-aging effect, not only on the skin, but also on the scalp, penetrating the hair scales, bind to keratin, and repair its fibers in depth.

Acetypol™ contains specialty isolation extract from Aloe Vera as polysaccharides and Acemannan (concentrated 10-25% range), as functional agent in formulation to improve efficacy in cosmetics to mask damages after finishes radiotherapy treatment and aid to improve life quality, better skin and help to repair after oncology treatments, and may promote skin renewal through a series of cellular processes including the differentiation and proliferation of keratinocytes and fibroblasts, the increase of their activity, the production of collagen, lipids and other Extracellular Matrix (ECM) proteins constituents



There are three version of concentration of acemannan:

- Acetypol 1015 (contains a range between 10% to 15% of acemannan measured by NMR or Orto-Acetyl methods.
- Acetypol 1520 (contains a range between 15% to 20% of acemannan measured by NMR or Orto-Acetyl methods.
- Acetypol 2025 (contains a range between 20% to 25% of acemannan measured by NMR or Orto-Acetyl methods.

AMB Wellness with proprietary extraction process, can be ensuring the concentration of acemannan and has property to be used in formulas with adequate solubilization in the final vehicle, whether in gels, creams, shampoos, serums, mild soap for body wash, special makeup remover wipes, hydrating lipstick and nail polish with stability tests. Our formula guarantees the absence of lumps and effective dissolution. Additionally, quantities were carefully adjusted to deliver the necessary oncological benefits and ensure a shelf life of 2 years.



Acetypol™ is dedicated to inhibiting impaired skin barrier function, which is a firm structure on the surface of the skin, the skin barrier can limit water loss and maintain an important shielding function and consists of the stratum corneum and sebaceous membrane, with the increase in the content in the skin, is developed skin problems such as yellowing, browning, poor elasticity, and deeper wrinkles.

Acetypol™ is appropriate to use in non-pharmaceutical, but for cosmetic skin care management Quality of Life (QoL) approach associated with radiotherapy and systemic chemotherapy, including epidermal growth factor inhibitors. The management of cutaneous side effects and hence quality of life for oncology customers. systemic cancer therapy, and radiotherapy, or a combination thereof, has improved the management of many malignancies as well as oncology survivors. Therefore, managing these reactions is becoming an increasingly market opportunity.

Our biopolymer plant-based named Acetypol™ can be used as part of your formulations, including personal hygiene, cleansing, moisturizing, and photoprotection using natural extracts, nonpharmaceutical or cosmetic ingredients. The cosmeceutical realm is composed of functional cosmetics designed to adorn the face and body without changing the structure of the human form. After cancer treatment, particularly chemotherapy, skin can become extremely (and cumulatively) sensitive.

Aloe vera has many unique glycobiological functions that closely align with modern applications. These functions may include the following: physical protection and tissue elasticity, lubrication, physical expulsion of pathogens, diffusion barriers, protection from proteases, cell migration and wound healing, modulation of membrane receptor signaling, depot (hydrophilic) functions, protection from immune recognition, epigenetic histone modifications, prebiotic support, antigen recognition, uptake, and processing, and intercellular signaling. In the increasingly dynamic discussion at the interface of plant-based foods, glycobiology, and health, Aloe vera is unique. These salutary health effects more than likely can be attributed to putative bioactive glycan components in Aloe vera which may behave individually or in an entourage manner; however, while highly likely, the safety and superiority to standard oral and transdermal interventions for a variety of health problems have yet to be shown unequivocally. Dry skin, sunburn, wound healing, dental, and oral hygiene are among the most common topical applications.



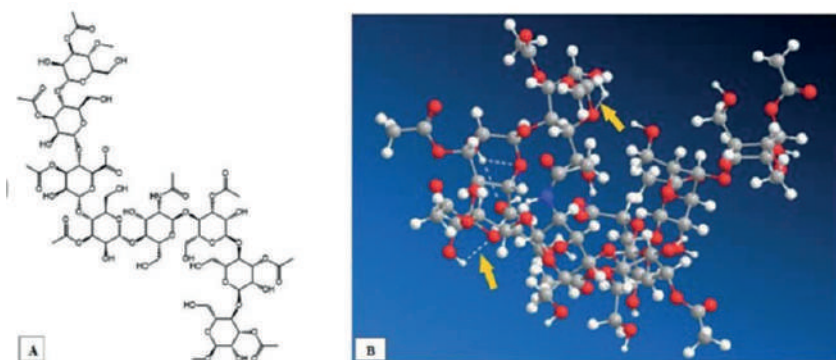
Combined with the accelerating power of genomics and glycomics, the field has now reached a point where the numerous biological roles of glycans have been elucidated at least to the extent that research and development efforts appear emphatically justified. The real excitement and therapeutic potential of Aloe vera products lie at this point with the hitherto under explored potentials of the glycans, the polymannans polysaccharides, like Acemannan. Acemannan is a $-\beta (1\ 4)$ -acetylated Polymannose present in the inner leaf gel of Aloe vera plant, a medicinal plant. Acemannan has been described by its multifunctional properties such as immunomodulatory activity, antiviral, antioxidant, and antibacterial actions.



Therefore, Acemannan acts as a bioactive molecule, exerting an immunostimulatory effect by activating macrophages, Acemannan Stimulates Gingival Fibroblast Proliferation; Expressions of Keratinocyte Growth Factor-1, Vascular Endothelial Growth Factor, and Type I Collagen; and Wound Healing actions. Recent studies demonstrated that Acemannan stimulated dental pulp fibroblast proliferation, periodontal tissue regeneration and bone marrow stromal cell proliferation and differentiation in vitro. These suggested that Acemannan is a therapeutic agent for tissue repair.

Therefore, it has been observed that aloe vera is an excellent inhibitor of AGE skin deterioration. The synergistic effect of the two biopolymers has been exploited for the design of a new medical material. Polysaccharides from Aloe Vera gel, confers mechanical support, which in contact with the skin damage, gradually resorbed, facilitating re-epithelialization. This biopolymer plant-based barrier/repair as part of your preparation for creams might represent a new, effective approach to skin protection.

The Aloe standard must contain acemannan, or the beta 1-4 acetylated glucomannans, can be accurately labeled as aloe vera. Acemannan is a naturally occurring polysaccharide present in aloe vera and used as an identifier of the botanical by analytical means. Products that do not contain acemannan are not considered to be pure aloe vera based on this standard. This product is made through a proprietary process of AMB Wellness made from insulated polysaccharides present in the inner Aloe Vera Gel by micro filtering, retaining polysaccharides 0.5 μ microns. The final product has an Acemannan content from 10% to 25% range measured by Ortho-Acetyl Method. The defining characteristic of Acetypol™, is its high concentration of acetylated Polymannose, the immunomodulatory active ingredient of Aloe Vera with an optimal distribution of molecular weight and excellent ingredient to boost skin results faster than regular Aloe Vera powder.



Glucomannan and Acemannan have been proved to accelerate wound healing, activating macrophages, stimulating immune system as well antibacterial and antiviral effects. Aloe Vera is anti-viral and antibacterial, Aloe not only provides vigorous overall immune system support, but aids directly in the destruction of intravascular bacteria. The reason is Aloe's unique polysaccharide component.

For more information, visit our website www.amb-wellness.com or contact our global sales manager Oscar Lozano at email oscar@amb-wellness.com or by WhatsApp +52 1 871 315 4092.

Warning:

*The statements contained herein have not been evaluated by the FDA. The products discussed are not intended to diagnose, mitigate, treat, cure, or prevent a specific disease or class of diseases. You should consult your family physician if you are experiencing a medical problem

* The products mentioned here are for cosmetic use and are not intended use as medicament or cure. Customers should seek advice from their cancer treatment teams to determine the necessary products for their treatment at any stage. These dermo-cosmetic products are not a substitute for any medicines prescribed by their doctors or any other prescribed treatments.

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