

Research article

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KALON LUEUR AD facewash : A Revolutionary Approach to provide nutritive solution to face with new age nanocosmeceutical technology.

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ABSTRACT

India has become a dumping ground for the products which are banned in Europe and USA, whether it is FMCG products or popular drugs. One such thing is Face wash with harmful chemical ingredients, some of the popular Face wash brands available in Indian market contain ingredients dangerous for our health. Ingredients found in these Face wash brands may pose a threat to our health. Research has shown that various chemicals lurking inside popular Face wash brands may induce serious health risks, like memory loss, eye and skin irritation, skin damage that can lead to memory loss, and even cancer. Propylene glycol is main ingredient of Face wash. It can cause allergic reactions. Sodium lauryl sulfate and ammonium lauryl sulfate are common causes of eye irritation as well as cancer. They can also damage skin. When absorbed into the body from continuous contact, they can bring on asthma attacks. Synthetic fragrances contain hundreds of chemicals, some of which have been known to cause headaches, dizziness, rash, hyper pigmentation, coughing and vomiting. Diethanolamine (DEA) is readily absorbed through the skin and can also be toxic to the brain. KALON LUEUR AD Face wash, A Revolutionary Approach to provide nutritive solution to face with new age nanocosmeceutical technology developed by scientists of pugos nutrition research centre Hyderabad with NO harmful chemical ingredients with new age nanocosmeceutical technology provides nutritive healthy solution to face.

Keywords: KALON LUEUR AD Face wash, NO harmful chemical ingredients, new age nanocosmeceutical technology.

INTRODUCTION

KL A&D Face Wash

Perfect Glow





OVERVIEW: Kalon Lueur® Nano Cosmeceutical Astaxanthin & Vitamin D Face wash developed for active transport into the skin surface, results in immediate & long term moisturizing properties. These nano particles make skin leading to velvety touch & feel bouncy. Our product with naturally derived surfactants & enhance mildness, reduce irritancy & provide 3D hydration to skin. Regular use helps to restructure as healthy skin.

STORAGE: Store in a cool & dry place. Keep away from direct sunlight.

INSTRUCTION: Keep out of reach of children. Avoid to contact with eyes. Rinse thoroughly with water if irritation occurs. **FOR EXTERNAL USE ONLY**

USAGE: Splash some water on your face and neck. Squeeze a coin sized amount on your palms & apply all over your face & neck. More from the base of your neck to the jawline & then upwards to the cheeks, nose & forehead. Massage for 1 minute & then rinse throughly

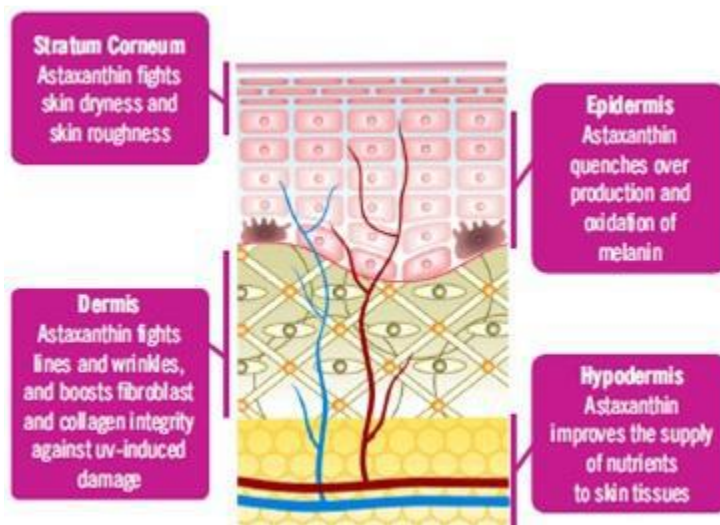
BENEFITS: A mild excellent non irritating cleanser & foaming face wash which is suitable to all skin types. Helps to moisturize, tightens the skin & leaves a silky & smooth feel. Helps to reduce sun related damage, inflammation & oxidation. A PH stable & heat stable face wash with multifunctional ingredients decreases fine lines, wrinkles, stringiness with high

INGREDIENTS: Aqua, Caprylyl/Capryl Glucoside, Cocamidopropyl Betaine, Decyl Glucoside, Glycerin, Sodium Cocoamphoacetate, Sorbitan Oleate Decylglucoside Crosspolymer, Xanthan Gum, Cocamidopropyl PG-Dimonium Chloride Phosphate, Parfum, Propanediol, Glyceryl Caprylate (and) Glyceryl Undecylenate, Citric Acid, Cholecalciferol PEG-12 Ether, Haematococcus Pluvialis Extract, Potassium Sorbate, Xylitylglucoside (and) Anhydroxylitol (and) Xylitol, Fructooligosaccharides (and) Beta Vulgaris (Beet) Root

NO

Sulfates, Parabens, Phthalates, Silicon, Sodium Chloride, GMO's, Glycol, Harsh Preservatives, Cruelty, Colour, Gluten

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The human skin is the outer covering of the body. In humans, it is the largest organ of the integumentary system. The skin has up to seven layers

of ectodermal tissue and guards the underlying muscles, bones, ligaments and internal organs.^[1]

Human skin is similar to most of the other mammals skin, and human skin is very similar to pig skin.^{[2][3]} Though nearly all human skin is covered with hair follicles, it can appear hairless. There are two general types of skin, hairy and glabrous skin (hairless).^[4]

Because it interfaces with the environment, skin plays an important immunity role in protecting the body against pathogens^[5] and excessive water loss.^[6] Its other functions are insulation, temperature regulation, sensation, synthesis of vitamin D, and the protection of vitamin B folates. Severely damaged skin will try to heal by forming scar tissue. This is often discolored and depigmented.

In humans, skin pigmentation varies among populations, and skin type can range from dry to oily. Such skin variety provides a rich and diverse habitat for bacteria that number roughly 1000 species from 19 phyla, present on the human skin.^{[7][8]}

Structure of Human Skin

Skin has mesodermal cells, pigmentation, such as melanin provided by melanocytes, which absorb some of the potentially dangerous ultraviolet radiation (UV) in sunlight. It also contains DNA repair enzymes that help reverse UV damage, such that people lacking the genes for these enzymes suffer high rates of skin cancer. One form predominantly produced by UV light, malignant melanoma, is particularly invasive, causing it to spread quickly, and can often be deadly. Human skin pigmentation varies among populations in a striking manner. This has led to the classification of people(s) on the basis of skin color.^[9]

In terms of surface area, the skin is the second largest organ in the human body (the inside of the small intestine is 15 to 20 times larger). For the average adult human, the skin has a surface area of between 1.5-2.0 square meters (16.1-21.5 sq ft.). The thickness of the skin varies considerably over all parts of the body, and between men and women and the young and the old. An example is the skin on the forearm which is on average 1.3 mm in the male and 1.26 mm in the female.^[10] The average square inch (6.5 cm²) of skin holds 650 sweat glands, 20 blood vessels, 60,000 melanocytes, and more than 1,000 nerve endings.^[11] The average human skin cell is about 30 micrometers in diameter, but there are variants. A skin cell usually ranges from 25-40 micrometers (squared), depending on a variety of factors.

Skin is composed of three primary layers: the epidermis, the dermis and the hypodermis.^[10]

Epidermis, is the outermost layer of the skin. It forms the waterproof, protective wrap over the body's surface which also serves as a barrier to infection and is made up of stratified squamous epithelium with an underlying basal lamina.

The epidermis contains no blood vessels, and cells in the deepest layers are nourished almost exclusively by diffused oxygen from the surrounding air^[12] and to a far lesser degree by blood capillaries extending to the outer layers of the dermis. The main type of cells which make up the epidermis are Merkel cells, keratinocytes, with melanocytes and Langerhans cells also present. The epidermis can be further subdivided into the following *strata* the outermost layer: corneum, lucidum (only in palms of hands and bottoms of feet), granulosum,

spinosum, basale. Cells are formed through mitosis at the basale layer. The daughter cells move up the strata changing shape and composition as they die due to isolation from their blood source. The cytoplasm is released and the protein keratin is inserted. They eventually reach the corneum and slough off (desquamation). This process is called "keratinization". This keratinized layer of skin is responsible for keeping water in the body and keeping other harmful chemicals and pathogens out, making skin a natural barrier to infection.

Components of skin

The epidermis contains no blood vessels, and is nourished by diffusion from the dermis. The main type of cells which make up the epidermis are keratinocytes, melanocytes, Langerhans cells and Merkel cells. The epidermis helps the skin to regulate body temperature.

Layers

Epidermis is divided into several layers where cells are formed through mitosis at the innermost layers. They move up the strata changing shape and composition as they differentiate and become filled with keratin. They eventually reach the top layer called *stratum corneum* and are sloughed off, or desquamated. This process is called *keratinization* and takes place within weeks. The outermost layer of the epidermis consists of 25 to 30 layers of dead cells.

Sublayers

Epidermis is divided into the following 5 sublayers or strata:

- Stratum corneum
- Stratum lucidum
- Stratum granulosum
- Stratum spinosum
- Stratum germinativum (also called "stratum basale").

Blood capillaries are found beneath the epidermis, and are linked to an arteriole and a venule. Arterial shunt vessels may bypass the network in ears, the nose and fingertips.

Genes and proteins expressed in the epidermis

About 70% of all human protein-coding genes are expressed in the skin.^{[13][14]} Almost 500 genes have an elevated pattern of expression in the skin. There are less than 100 genes that are specific for the skin and these are expressed in the epidermis.^[15] An analysis of the corresponding proteins show that these are mainly expressed in keratinocytes and have functions related to squamous differentiation and cornification.

Dermis

The dermis is the layer of skin beneath the epidermis that consists of connective tissue and cushions the body from stress and strain. The dermis is tightly connected to the epidermis by a basement membrane. It also harbors many nerve endings that provide the sense of touch and heat. It contains the hair follicles, sweat glands, sebaceous glands, apocrine glands, lymphatic vessels and blood vessels. The blood vessels

in the dermis provide nourishment and waste removal from its own cells as well as from the Stratum basale of the epidermis. The dermis is structurally divided into two areas: a superficial area adjacent to the epidermis, called the *papillary region*, and a deep thicker area known as the *reticular region*.

Papillary region

The papillary region is composed of loose areolar connective tissue. It is named for its fingerlike projections called *papillae*, that extend toward the epidermis. The papillae provide the dermis with a "bumpy" surface that interdigitates with the epidermis, strengthening the connection between the two layers of skin.

In the palms, fingers, soles, and toes, the influence of the papillae projecting into the epidermis forms contours in the skin's surface. These epidermal ridges occur in patterns (*see: fingerprint*) that are genetically and epigenetically determined and are therefore unique to the individual, making it possible to use fingerprints or footprints as a means of identification.

Reticular region

The reticular region lies deep in the papillary region and is usually much thicker. It is composed of dense irregular connective tissue, and receives its name from the dense concentration of collagenous, elastic, and reticular fibers that weave throughout it. These protein fibers give the dermis its properties of strength, extensibility, and elasticity. Also located within the reticular region are the roots of the hairs, sebaceous glands, sweat glands, receptors, nails, and blood vessels.

Subcutaneous tissue

The subcutaneous tissue (also *hypodermis* and *subcutis*) is not part of the skin, and lies below the dermis of the cutis. Its purpose is to attach the skin to underlying bone and muscle as well as supplying it with blood vessels and nerves. It consists of loose connective tissue, adipose tissue and elastin. The main cell types are fibroblasts, macrophages and adipocytes (subcutaneous tissue contains 50% of body fat). Fat serves as padding and insulation for the body.

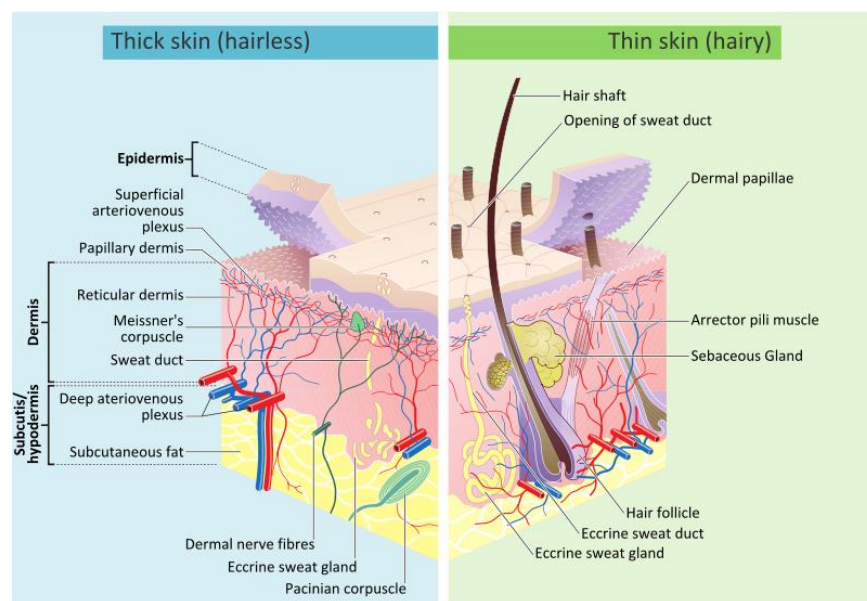


Fig 1: T.S of structure of skin

Functions

Skin performs the following functions:

1. **Protection:** an anatomical barrier from pathogens and damage between the internal and external environment in bodily defense; Langerhans cells in the skin are part of the adaptive immune system.^{[5][6]} Perspiration contains lysozyme that break the bonds within the cell walls of bacteria.^[28]
2. **Sensation:** contains a variety of nerve endings that react to heat and cold, touch, pressure, vibration, and tissue injury.
3. **Heat regulation:** the skin contains a blood supply far greater than its requirements which allows precise control of energy loss by radiation, convection and conduction.
4. **Control of evaporation:** the skin provides a relatively dry and semi-impermeable barrier to fluid loss.^[6] Loss of this function contributes to the massive fluid loss in burns.
5. **Aesthetics and communication:** others see our skin and can assess our mood, physical state and attractiveness.
6. **Storage and synthesis:** acts as a storage center for lipids and water, as well as a means of synthesis of vitamin D by action of UV on certain parts of the skin.
7. **Excretion:** sweat contains urea, however its concentration is 1/130th that of urine, hence excretion by

sweating is at most a secondary function to temperature regulation.

8. **Absorption:** the cells comprising the outermost 0.25–0.40 mm of the skin are "almost exclusively supplied by external oxygen", although the "contribution to total respiration is negligible".^[12] In addition, medicine can be administered through the skin, by ointments or by means of adhesive patch, such as the nicotine patch or iontophoresis. The skin is an important site of transport in many other organisms.
9. **Water resistance:** The skin acts as a water-resistant barrier so essential nutrients are not washed out of the body.

As skin ages& also due to several changes in environmental conditions such as pollution,UV radiations, it becomes thinner and more easily damaged. Intensifying this effect is the decreasing ability of skin to heal itself as a person ages. skin aging is noted by a decrease in volume and elasticity. There are many internal and external causes to skin aging. For example, aging skin receives less blood flow and lower glandular activity.

A validated comprehensive grading scale has categorized the clinical findings of skin aging as laxity (sagging), rhytids (wrinkles), and the various facets of photoaging, including erythema (redness), and telangiectasia, dyspigmentation (brown discoloration), solar elastosis (yellowing), keratoses (abnormal growths) and poor texture.^[24]Cortisol causes degradation of collagen, accelerating skin aging.^[25]

What are cleansers?

Face cleansers are designed to thoroughly and deeply cleanse our skin's pores. Unlike regular soap and water (which can actually dry out your skin and strip away protective oils), cleansers are specially formulated products that have ingredients that imbue them with a number of benefits.

Well-made cleansers can: clean out our pores of dirt, debris and skin oil

remove sebum: a mixture of oil and debris that's naturally formed throughout the day. clean away dead skin cells which collect over time

provide nutrients and moisturizing elements to your deeper skin layers while cleaning at the same time

Foaming cleansers

Foaming cleansers are also easy to understand; they are cleansers that have a foaming agent, turning sudsy or bubble as you lather them onto your skin. The foaming quality is part of what makes them so great. As the foamy cleanser digs in your skin, the foaming particles can lift dirt and debris out of the deeper parts of your pores and affect an even greater cleaning action leaving your skin feeling revitalized.

What skin type are they good for?

In general, foaming cleansers are great for oily and acne-prone skin, specifically because of their pore penetrating capabilities. If you want to get rid of acne or excess oil/sebum, you need a

cleanser that can go deep in your pores and get rid of the gunk without too much effort. Foaming cleansers are perfect at this job.

As mentioned earlier, they can also be good if you have sensitive skin provided that the foaming cleanser in question doesn't contain SLS.

Pros:

Makes a tingling sensation

Can be great for oily or acne-prone skin

Some foaming cleansers are good for sensitive skin

Provides a deep clean every time

Many can provide antioxidants to deeper skin layers

Cons:

Cleansers with SLS can be bad for some skin types

A little messier than gel cleansers

Gel cleansers

Gel cleansers are totally different from foaming cleansers in both texture and appearance; they are usually thicker and translucent or lightly colored. They only provide a small amount of foam (if any) and generally affect a lighter cleansing experience. As you can imagine, this makes them a great choice for most sensitive skin.

gel cleansers as cleaning out our skin and pores without stripping them away so much of skin cells or helpful oils. They're a little less effective at cleaning out the deeper layers of our pores but can still do a great job without making our skin feel as raw or open as a foaming cleanser does.

Gel cleansers are water-based and usually have milder ingredients, deriving their benefits from flower extracts, a tree or other essential oils, and other natural elements. These ingredients provide extra positives for this cleanser category; for instance, many excellent products can imbue our skin with a fantastic fragrance or can help our skin's color and brightness. gel cleansers can help balance our skin's pH.

What skin type are they good for?

Many gel-based cleansers have antiseptic qualities because of their ingredients. For acne that goes crazy because of bacterial elements, this can be a perfect solution since the antiseptic ingredients will fight the bacteria directly.

gel cleansers are perfect for sensitive skin, and especially skin that tends to dry out easily after being cleaned. Gel cleansers are water-based so they're much less likely to dry our skin out even while cleaning it and can even help to maintain more hydrated skin over the course of the day.

Benefits :

Very gentle on every type of skin

Usually contains good hydrating qualities

Most are made with natural ingredients

Can still clean thoroughly without being as harsh

Pharmacological properties of ingredients in KalonLueur Face Wash-

Main ingredients

Natural astaxanthin, tocopherol, Aquaxyl, COQ 10 complex.



Natural astaxanthin:

- Helps to Protect skin from ROS
- Helps to Reduce pigmentation
- Helps to Keeps skin hydrated for longer time
- Helps to Keeps skin smooth.

Tocophersolan:

- Helps to Enhance penetration and absorption of skin lipids
- Helps to Locks moisture
- Helps for Enhanced absorption and bioavailability of other nutrients
- Helps to Prevents loss of moisture

Coq 10 complex:

- Helps to Stimulate collagen production
- Helps to Rejuvenate skin by stimulating skin cell activity

Aquaxyl:

- Helps to Moisturize and Restructures the skin

Benefits

1. Helps to cleanse deeply and remove dead skin cells.
2. Helps to Soothe and heal the skin and reduce sun damage.
3. Helps to repair skin, stimulate collagen production, rejuvenate skin & wound healing.
4. Helps to provide skin immunity, skin healing, skin purification & deep cleansing.

5. Helps to protect skin from damage & sun damage.
6. Helps to restructure the skin, look & feel beautiful & plump.
7. Helps to provide skin brightening, refreshment, relaxation, incredible penetration, hydration, revitalizing cleanse & luxuriously feeling.
8. Helps in penetration enhancement, absorb skin lipids, enhance absorption & bioavailability of other nutrients.
9. Helps to Locks moisture, helps to reduce pigmentation and Keeps skin hydrated for longer time.
10. A mild excellent antiseptic non irritating cleanser and foamier acts as face cum body wash which is suitable to all skin types.
11. Protects, moisturizes, tightens the skin and leaves a silky and smooth feel.

SUMMARY AND CONCLUSION

Gel cleansers can be effective cleaning agents for anyone's skin. In KalonLueur Face Wash Gentle clouds of frothy foams infused with the goodness of natural astaxanthin and tocophersolan Astaxanthin is great for skin brightening and improving our skin's texture — it's just 6,000 times more potent than Vitamin C. There's nothing better than a refreshing, revitalizing cleanse to wake us up, and a relaxing, luxuriously thorough routine. It penetrates incredible layers down, infusing it with nutrients and hydration so that it looks and feels beautifully plump.

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