KISHIMOTO COMPANY LTD.

Norn Akihabara Building 5 Floor
2-13-1 Kanda Sudacho
Chiyoda-Ku, Tokyo, Japan
101-0041

Factory:

Asahi Kamakazu
Industrial Complex
9163-34 Kamakazu
Kawanishi, Ichiban
Asahi City, Chiba
Japan

Email: kishimoto.co.ltd@h6.dion.ne.jp
eleanor-kishimoto.co@s6.dion.ne.jp

Makers of the following:

SQUALENE

SQUALANE – NATURALLY BEAUTIFUL

SHARK LIVER OIL

AVOCADO OIL

WHAT AND HOW IT WORKS

APPLICATION

Squalene: ($C_{30}H_{50}$)

The triterpene Squalene is highly unsaturated aliphatic hydrocarbon which is highly distributed in nature. It is found in small quantities in many vegetable oil, and in larger amounts in certain fish oils.

Interest in its medical and cosmeto-dematological significance was intensified when squalene was found in human sebaceous secretions, as a precursor to cholesterol, and when its possible anti-carcinogenic effect was described.

It is the principal hydrocarbon of human surface lipids amounting up to 11 percent of the surface fat. Its occurrence has been reported in dermoid cysts, cerumen, hair fat,and sebum.

Studies in relation to its presence in ovarian dermoid cysts and depot fat of women led to its identification in vernix caseosa It was then postulated that Squalene plays an important part of embryological development. The main site of Squalene synthesis is in the sebaceous gland. These glands are appendages of hair follicles and open to the skin surface through the pilosebaceous canal.

Male sex hormones increase sebum production, as observed at time of puberty. With age, the production of sebum decreases.

Dark skinned persons secrete more sebum than light skinned. And males more than females. Sebum cools as it approaches the surface, tending to solidify at the near surface temperature (30ºC), at which point its viscosity increases abruptly.

With the formation of a holocrine secretion, epiderman cells die. Keratin and sebum are accumulations of these dead cells. The most important metabolic process is epidermal cells are devoted to the manufacture of lipids or fibrous proteins.

Squalene in fish oils was first isolated and identified by Tsujimoto in 1916. Tsujimoto identified it as a constituent of a natural oil and named it Squalene. While this work was going on, Chapman identified independently isolated an unsaturated hydrocarbon which he named Spinacene. Further work proved that SQUALENE and SPINACENE were identical.

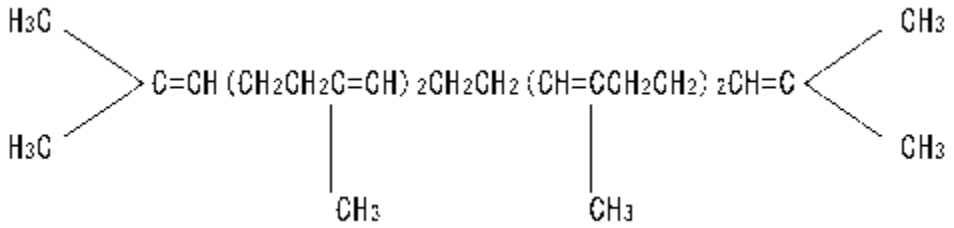
Many uses were suggested for Squalene. These included lubricating and finishing oils, printing oils, and carriers of perfumes.

Because of its origin, the biochemical role of Squalene was further investigated. Studies indicate the presence of metabolically active Squalene in humam blood plasma. Squalene has been isolated from human brain. In more resent studies, 9% Squalene was found present in lipids of vernix carseosa. Resent research has further proved that Squalene is an intermediate of the biosysnthesis of sterols. A more recent work proves Squalene a major component in the surface lipids of man, it occurs in traces, if at all, in those of other animals. Human facial surface lipids before puberty contains upwards to 6.6% squalene, while in the adult in increases to 10.5%.

Squalene = C30H50 = molecular weight : 410.7

Appearance: colorless, transparent oily liquid

Chemical Structure:



Squalene - (spinacene; 2,6,10,15,19,23, hexamethy 2, 6, 10, 14, 18, 22 tetracosahexaene)

- Biogenic Origin- **Unique to man**
- Present in amounts up to 11% in human sebum
- Accelerates precutaneous penetration
- Increases skin respiration
- Intermediate of biosynthesis of sterols and Vitamin D
-

Squalane and Squalene have been identified as natural components of human sebum. Both ingredients are used at concentrations raging from ≤0.1 to ≥ 50 percent in a variety of cosmetics containing squalane and squalene are applied to all body Surfaces, these compounds may

potentially enter the body through the skin, eyes, lungs, mouth, or other routes.

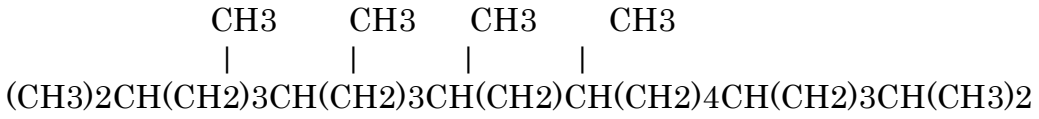
The acute toxicity of these ingredients by all routes in animals is low. At 100 percent concentrations, both compounds are non-irritants to rabbit skin and eyes. According to clinical evidence of formulations containing Squalane , the compound is not a significant skin irritant or sensitizer. Limited contact sensitization tests indicate that Squalene is not a significant contact allergen or irritant.

On the basis of the available information presented in this report, the Expert Panel concluded that both Squalane and Squalene as safe as cosmetic ingredients in the present practices of use in concentration.

SQUALANE- (C30H62)

Molecular weight: 422.82

A unique saturated hydro carbon (also known as spinacane, dodechydrosqualen, pentahydrosqualene, and 2, 6, 10, 15, 19, 23, Hexamethyltetracosane)



Squalane is a saturated hydrocarbon obtained by hydrogenation of squalene, an aliphatic triterpene occurring in some fish oil.

The commercially available product is colorless, odorless, tasteless, transparent, stable, inert homogeneous liquid oil.

Squalane a unique stable derivative of Squalene.

Produced by the total hydrogenation of Squalene, squalane is the only chemically saturated product know that remains as a free flowing liquid.

Squalane is miscible with vegetable and mineral oils, organic solvents, lipophilic substances and human sebum. It is slightly miscible with glacial acetic acid. It can be made miscible with some anhydrous alcohols by coupling with pristine or squalene. It is non – rancid, non-drying, non-oxidizing, non-congealing and non-decomposing.
Squalane has found uses as precision lubricating oil, chromatographic oil and heat transfer and cooling fluid.
Squalane is a normal constituent of human skin surface lipids, present in relatively large amounts, up 2.6%, next to squalene, it is the largest hydrocarbon in these lipids. The body is capable of saturating squalene and therefore Squalane is a biogenic product. Vaccine may be potentiated by emulsification with Squalane.

When Squalane is applied to horny layers with whitish discoloration caused by defatting or to nails with white spots due to incomplete keratinization, or air bubbles, the discolored areas assume a normal appearance. These observations prove that Squalane can penetrate horny layer in vivo as well as in vitro and is capable of filling our spaces in loose horny structure. On the skin it can restore the pliability of the defatted surface.

Squalane, the natural moisturizer - Moisturizers are topically applied products intended to remain in intimate contact with the skin over a prolonged period of time.

Their function is to promote smoothness by relieving dryness and roughness. The best type of moisturizer is a product which combines the softening effect of emollients with the moisturizer – retaining action of humectants and the coating activity of lubricants. This combination counteracts the effect of moisture loss to keep the skin soft, smooth and supple. Dryness is caused mainly y loss of water from the horny layers and not being replenished by moisture entering osmotically through the dermal layer.

The first and foremost function of the skin is protection against mechanical injury, cold, heat, ultraviolet light, chemical agents, and infection.

Sebum secreted by the sebaceous gland acts as a waterproofing material, a protective agent against chemical substances, and a barrier to bacteria. Where there is a deficiency of sebum secretion the skin has a tendency to dry and crack, losing both its resilience and its power toward off harmful

organisms and substances. This is usually the case in old age where decreased sebum secretion combines with a loss of muscle tone to produce wrinkles and cracked skin. In some persons there is an inborn sebum-producing deficiency as well. For them continued health of the skin requires the rubbing on of oils that will take the place of the natural body secretion.

In the cosmetic literature, "dry" skin may mean a low sebum secretion. Its opposite is the so-called oily skin. Reduced sebaceous secretion and low water content may go hand in hand as the dry cold winter climate of our country. In the common use of the term, dry skin is one which contains little water.

Application: for skin care, hair care, soaps, cosmetic application and Lubricant and will play major role in cosmetic manufacturing.

SHARK LIVER OIL - Purely Natural

Contains Vitamins A and D

A bland faintly odored pale yellow to amber colored oily liquid. It is expressed from fresh shark livers of centrophorus family species. Tasteless flavor and Blandish fish oily odor.

Stable at a normal temperature and pressures

It is skin protectant in many usages. Large amount is used for Heath Food supplement.

Composition:

Natural Triglycerides of Fatty Acids

INCI NAME: SHARK LIVER OIL

SQUALENE CONTENT: 60% - 70 %

Shark Liver Oil

The main source of Squalene and Squalane.

Packing and storage - preserve in well closed containers in

Packed in Tin cans and in Steel New Drums

In capsule form available.

Reference:
Biological Role and Practical Uses of Squalene and Squalane:
Maurice L. Rosenthal

AVOCADO OIL

Another natural product from Avocado fruit refined and winterized Application is for Skin Care, Hair Car, Soaps, Health Food and Cosmetic.

It is clear and Brilliant yellowish in color and has blant in taste. It is soluble In Oil and Insoluble in Water and Alcohol.

Safe and natural guaranteed from Avocado Fruit.