SyriCalm CLR (PC)

Product Specification

Characteristics

SyriCalm CLR (PC) is a natural soothing active with strong and broad *in vivo* and *in vitro* support. It is typically useful in the treatment and care of skin which is stressed by external factors. It will help in reducing skin redness, will alleviate skin irritation and will help in normalizing and keeping the skin's natural balance.

INCI Name	**CAS No.**	**EINECS No.**
Water	7732-18-5	231-791-2
Phragmites Communis Extract	84604-02-4	283-278-8
Poria Cocos Extract	168456-53-9	/

Analytical Data

Refractive index n_D^{20}	1.300 – 1.350
Density 20 °C	0.990 – 1.040 g/ml
Color value (Gardner)	< 8
pH value (20°C)	4.30 – 4.90
Dry residue (2 h, 102°C)	2.0 – 4.5 %
Glucose	0.05 – 0.25 %
Fructose	0.05 – 0.25%
Sodium Benzoate	0.4 – 0.6 %
Colony forming units	
Total aerobic microbial count (TAMC)	< 100/ml
Total combined yeasts/moulds count (TYMC)	< 10/ml
	in absence of non-conforming organisms

Physiological Safety

Acute oral toxicity

SyriCalm CLR (PC) is based on ingredients which have a long tradition in food and traditional medicine. SyriCalm CLR (PC) is considered to be non-toxic and safe in cosmetic use at the levels advised by us.

Eye irritation potential

SyriCalm CLR (PC) was tested in pure form on the chorioallantoic membrane of the hen's egg where it produced an irritation index of 0.00 and was classified as "non-irritant".

Skin tolerance
An aqueous solution of 30% SyriCalm CLR (PC), with pH 4.6, was applied on the back of 106 volunteers according to a regimen, comprising 9 sequential 24-hour applications and 2 concurrently conducted 24-hour challenge applications, using partially occlusive patching devices. This solution was found to be neither a clinically significant skin irritant nor a skin sensitizer.

In another study, an O/W cream containing 10% of SyriCalm CLR (PC) was applied on 50 volunteers (among these 25 individuals with normal skin, 6 sufferers from eczema, 3 allergic and 16 individuals with sensitive skin) for 48 hours in a patch test. This test as well showed neither skin irritant nor sensitizing effects. Thus SyriCalm CLR (PC) can be classified as harmless as regards the possibility of skin irritation in the advised dose.

Mutagenicity
According to a reverse mutation assay using bacteria SyriCalm CLR (PC) showed neither on 4 strains of *Salmonella typhimurium* nor on *E. coli* WP2 uvrA any mutagenic action.

Phototoxicity
SyriCalm CLR (PC) was applied at different concentrations (0.3 – 1000 µg/ml) on BALB/3T3 cells for 1 hour and further 50 minutes in absence and presence of a non-toxic dose of UVA light. One day after treatment the cytotoxicity was analyzed (neutral red uptake) and compared to controls. In this study SyriCalm CLR (PC) showed no phototoxic effects.

Mode of action

Negative external influences lead to inflammation and the loss of barrier function of our skin. UV light induced erythema is a well-known example, but other influences like depilation, shaving, daily hygiene can be considered as being equally important. In order to effectively deal with the many external negative influences our skin is exposed to, it is important to focus on both inflammation and the barrier function of the epidermis.

SyriCalm CLR (PC) is based on *Phragmites Communis* and *Poria cocos* with a focus on reducing inflammation and keeping inflammation under control. SyriCalm CLR (PC) also has barrier repairing and barrier maintenance function. All in all SyriCalm CLR (PC) helps the skin become less reactive to negative impacts and it helps the skin in returning to a normal state faster.

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The common name for *Phragmites Communis* is Reed. It is a large aquatic grass native to tropical regions all over the world. Mankind has found many uses for it, including roof thatching and water treatment. The pharmacological values of *Phragmites Communis* were recognized long ago. It has been used in traditional medicine in the treatment of coughs, fevers and even cancer. The Navajo Indians in northern America used *Phragmites* in the treatment of skin ailments.

Poria cocos is a solid fungus also known as Fu Ling, Tuckahoe, Indian bread, or Hoelen, and grows on the roots of pine trees. It is an omnipotent ingredient which has been used in Chinese and other far eastern medicine extensively. Almost 10% of all traditional Chinese medical preparations contain *Poria cocos*. Many beneficial actions have been attributed to *Poria cocos*. Among others it has been used for its immunological, antitumor and anti-inflammatory effects. Other uses of *Poria cocos* are "draining dampness," for insomnia, to balance electrolytes, and "invigorate" the spleen. *Poria cocos* has been traditionally used as a tonic to benefit the internal organs. It easy to see why *Poria* has been known as the "medicine of immortality."

SyriCalm CLR (PC) has a proven beneficial effect on skin cells stressed by UV light. It strongly reduces the loss in cellular energy level, cell viability and potently down regulates the production of pro-inflammatory mediators. This was proven *in vivo* , where SyriCalm CLR (PC) showed a significant acceleration of the reduction of skin redness after being inflamed by UV irradiation. SyriCalm CLR (PC) out performed the positive control which contained an anti-histamine.
SyriCalm CLR (PC) was shown *in vitro* to be able to compensate for the phototoxic effects of Hypericine on cell viability, a well known photoallergen. SyriCalm CLR (PC) reduced the production of TNFα and IL-8, two of the most important pro-inflammatory mediators known to induce skin irritation, after treatment with Hypericine and UV irradiation.
Both *in vitro* and *in vivo* it was shown that SyriCalm CLR (PC) had a significant effect on epidermal homeostasis and barrier function. The importance of this is an underestimated topic in cosmetology and skin which is stressed by external influences. In this *in vivo* study, SyriCalm CLR (PC) performed better than the positive control, a pharmaceutical formulation intended to give relief to strongly inflamed skin.
Another neglected area is the osmotic shock that skin cells are exposed to when the skin is stressed by external factors. SyriCalm CLR (PC) showed its beneficial effects, strongly down regulating the production of pro-inflammatory mediators by osmotically stressed keratinocytes.

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Application

SyriCalm CLR (PC) is intended for application in every day care products and cosmetics for stressed skin. Typically reducing inflammation, soothing and calming and making skin more tolerant to external stresses. It can be used in emulsified, aqueous and aqueous-ethanolic skin care cosmetic formulations.

Dosage

Skin care preparations: 3.0%

Appearance / Odor

Yellow-brownish transparent liquid with weak characteristic odor.
Product may form a slight deposit over time which does not affect its bioactivity.

Solubility

Soluble in water and water-alcohol mixtures with an ethanol concentration not exceeding 50% v/v.

Processing

The development and production of emulsions is possible without any difficulties. During the production process SyriCalm CLR (PC) should not be exposed to temperatures exceeding 40 °C.
SyriCalm CLR (PC) allows a pH range of 3.0 – 8.0 for cosmetic formulations.
SyriCalm CLR (PC) does not affect the color and smell of cosmetic formulations.

Storage

At room temperature (15 - 25 °C), in well-closed containers, protected from light.
SyriCalm CLR (PC) should not be stored for longer than 1 year before processing. Once opened, the packs should be fully used. Any remaining product should be discarded.

Packing

Available pack sizes: 1 kg, 5 kg, 25 kg
Sample size: 50 g