

## Salicylic acid

Salicylic acid is a beta-hydroxy acid with keratolytic and antimicrobial properties, used in dermatology for its ability to promote desquamation and prevent contamination by bacteria and fungi.

It also acts as a regulator of skin oil. It is considered a hydroxy acid of fundamental importance for the improvement of aging skin. Salicylic acid has been found in other plants such as birch and wintergreen leaves.



### WHITE WILLOW

The bark of the white willow (*Salix alba*) contains a substance called salicin, from which salicylic acid is obtained.

Since the 5th century, Hippocrates recommended to his patients a substance obtained from willow bark to relieve pain.

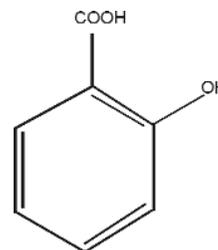
Salicylic acid, belonging to the group of analgesic, antipyretic and anti-inflammatory agents, was first described in the 18th century by the Reverend Richard Stone who observed that infusions of the bark of the common white willow (*Salix alba vulgaris*) cured fever .

However, it is due to Henri Leroux (1827), a French pharmacist, obtaining the active ingredient from the bark, the glucoside salicillin. In 1828 Johann A. Buchner, a German pharmacist chemist isolated salicillin.

Acetylsalicylic acid was synthesized in 1899 and was used to replace quinine in the control of fever and pain by mouth. One of its metabolites was salicylic acid with qualities for topical use.

**Physico-chemical properties:** Its molecular formula:  $C_7H_6O_3 = 138.1$ .

Industrially, it is obtained from carbon dioxide and sodium phenolate by electrolytic substitution and subsequent liberation of the acid from its salt by adding a strong acid.



## ANTI-ACNE PEELING COCKTAIL

### Actions and effects

Salicylic acid acts as a keratolytic, in 5 to 10% and keratoplastic in concentrations of 1 to 3%.

Keratoplastics favor the regeneration of the corneal layer and normalize keratinization

and keratolytics are defined as substances capable of causing the horny layer to fall or reduce its thickness.

Its exfoliating and antimicrobial properties are given by its ability to promote epidermal desquamation and prevent contamination by bacteria and fungi. Salicylic acid is fat soluble, a property that allows it to mix with existing fats in the skin.

By entering these fatty areas, it causes exfoliation and flaking of the skin.



### Indications

As a keratolytic: for warts, hyperkeratotic eczema. As a comedolytic in acne.

To repair photodamage: alone (10 to 50% in ointment or creams) or together with AHA or retinoic acid, in sun spots on the back of the hands and forearms.

As a photoprotector: it acts as a chemical filter and the benzene ring transforms UVB into UVA.

Together with urea, it contributes to the detachment of the nail plate in cases of onychomycosis. At 50% it is effective as a topical therapy for chromomycosis and other diseases whose lesions have a hyperkeratotic and warty surface.

As an anesthetic: its anti-prostaglandin effect relieves pain in ulcerated canker sores

As an anti-inflammatory: by inhibiting the synthesis of prostaglandins.

Beta-hydroxy acids such as salicylic acid have similar properties to alpha-hydroxy acids, and can be used to remove acne scars, hyperkeratosis, dyschromia, photoaging, and wrinkles.

For peelings you can apply salicylic acid in solution at 15 and up to 30%

The application times and concentrations are increasing (according to the tolerance and phototype of the patient).

Indicated in psoriasis of the scalp, dandruff and seborrheic dermatitis of the scalp.

## Citric acid

Citric acid is widely used in the production of beauty and skin care products, as it adequately reduces the pH and acts as an antioxidant compound.

For this reason, this acid is widely used in anti-blemish cosmetic products and in depigmenting creams.

Because this compound helps protect the skin from oxidation, it is also widely used in face creams and body gels.

Among them, exfoliants stand out, since this acid removes dead skin cells and cleanses it properly without causing irritation.



## Glycolic acid

Glycolic acid is part of a group of acids that come from grapes, apples, oranges, and sugar cane. Of all of them, this acid is the one with the lowest molecular weight, so it is easier and faster to penetrate the skin layers.

Glycolic acid is an exfoliating treatment that brings splendor to the skin. It allows to eliminate dead cells, softens and accelerates the regeneration of the skin. Glycolic acid allows you to remove all dead skin cells gently and without damaging it.

Glycolic acid reactivates the formation of these proteins (elastin and collagen), restoring a youthful appearance to the skin. In addition, it reduces wrinkles and fine lines. Reactivates the formation of elastin and collagen.

Thus the skin is rejuvenated unifying its texture and tone. Prevents the formation of skin blemishes.

Helps make skin blemishes disappear and achieve the perfect even tone.

Treatment with a high concentration of A.H.A that brings luminosity to the skin.

Prevents the formation of unsightly skin marks. Also suitable for skin with blackheads.

Improves oily and acne skin. Very effective for skin with impurities or large pores.

## Lactic acid

Lactic acid belongs to the group of our beloved alpha hydroxy acids or AHAs, what happens is that it is a larger molecule, so it is less likely to cause skin irritation. It is usually incorporated into cosmetics to promote skin renewal, as it is an excellent exfoliating agent.

Like the other AHAs, lactic acid works by detaching the layers of dead skin cells, that superficial layer in which dirt and impurities also accumulate. Therefore, in cosmetics it is used for its depigmenting properties, by descaling the layer of skin that turns off our skin. Anti-stain treatments, especially those caused by sun damage, often use lactic acid.

With this exfoliation more powerful than that of other AHAs, lactic acid improves the texture of the skin and its luminosity. But not only does it 'clean' the skin, it also improves its hydration, which translates into greater elasticity. Lactic acid stimulates the synthesis of collagen and elastin - present in the structure of the skin - by achieving a deeper penetration into the layers of the skin where they are, improving their structure and ensuring that the skin does not lose water.

With this renewal of the skin, not only is tone and hydration improved, the depth of wrinkles and other signs of aging such as skin blemishes are also reduced.

Due to all these properties, lactic acid is usually used in chemical peels, especially when treating sensitive skin, since its penetration is better and its results are less aggressive.