

# Sapelo Ingredient Glossary (ftd 5.15.2023)

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The ingredients selected for Sapelo products is a carefully curated process that blends emerging discoveries in the science of skin rejuvenation, with Southern-inspired ingredients: Magnolia oil, Gardenia stem cells, Sea Lavender oil, Seaweed, Oyster shell calcium and Georgia honey, Sapelo replicates the body's immune response with a gentle cascade of biologically active peptides, vitamins and micronutrients that rejuvenate skin cells.

Sapelo Skin Care is manufactured in a laboratory in Savannah, Georgia. The lab has been in operation for over 30 years and is managed and operated by veteran cosmetic scientists. Each batch of Sapelo is produced with the highest attention to detail for exceptional quality.

Our products work with nature, mimicking the body's response to injury by topically delivering a healing cascade of molecules that replicate our body's immune system response. Our products do not create injury or inflammation. The result: skin that is healed and repaired with increased collagen, elastin, fibroblasts and skin cell density.

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# Ingredient Functions

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**Ingredient functions** are essentially the role each constituent plays in a given formulation. By analyzing each ingredients' role, you can understand why it performs the way it does on the skin. This can be particularly helpful when assisting clients with multiple conditions and concerns, such as sensitivity + visible signs of aging, or dehydration + oiliness.

**Anti-acne:** Ingredients that help fight against acne. This is often achieved via antibacterial and/or anti-inflammatory actions.

**Buffering:** Assistive ingredients that set the pH of a cosmetics formula to the right value.

**Cell-communicating:** Ingredients that signal to our skin cells to "behave better". The most famous example is retinol or peptides.

**Emollient:** Ingredients that make your skin soft, smooth and lovely.

**Emulsifying:** Ingredients that help things which normally do not like to mix together (most notably water and oils) to blend and form a nice, uniform mixture. Without them, your cosmetic product would separate into a watery part and an oily part.

**Moisturizer/humectant:** Humectant is the official name for a moisturizer ingredient that helps your skin to cling onto water and hold onto it so that your skin feels nicely moisturized.

**Preservative:** Ingredients that help your cosmetic products not to behave like perishable food. They are typically not the most skin friendly ingredients, but a) they are very important and without them you are risking cosmetic product safety, b) they are used in tiny amounts where they have demonstrated safety.

**Perfume:** Ingredients that impart a desired aroma to a formula. These are often only listed as *fragrance* as the amount need not be disclosed when it is in an amount of less than 1%.

**Skin brightening:** Ingredients that help to fade brownish spots (hyper-pigmentation) caused by sun damage or PIH (post-inflammatory hyper-pigmentation).

**Skin-identical ingredient:** Ingredients that can be found in the skin or mimic the things that can be found in the skin naturally. They have two big groups:

1. **NMFs (Natural Moisturizing Factor):** structures found inside the keratinocytes (skin cells) which help our skin to bind water. Glycerin or hyaluronic acid are famous NMFs. They are super-duper important in keeping the skin nicely hydrated.
2. **SC (Stratum Corneum - the outer layer of the skin) Lipids:** between the skin cells there is the extracellular matrix. It consists mainly of lipids and is critical for maintaining a healthy skin barrier. Ceramides, cholesterol, and fatty acids are important SC lipids.

**Solvent:** Ingredients that dissolve other ingredients in the product.

**Soothing:** Ingredients that help lessen discomfort of the skin. Anti-inflammatory and anti-irritant ingredients belong to this category that help reduce inflammation and soothe the skin. They are helpful in general to slow the aging process of the skin and they are super helpful for several common skin diseases like acne, rosacea or sensitive skin.

**Surfactant/cleansing:** Ingredients that lower the surface tension of cosmetics and help the product to spread evenly and easily. They usually have a water-loving head part and an oil-loving tail part, so they tend to be important ingredients in cleansers, or anything that makes bubbles. Very often surfactants are also cleansing and emulsifying ingredients.

**Viscosity controlling:** Ingredients that help to thicken up products so that they form a nice gel, serum or moisturizer-like texture.

# Sapelo Seaweed Cleanser

## Ingredients Overview

Aqua (Water), Sodium N-Cocoyl L-Glutamate, Glycerin, Algae, Xanthan Gum, Isostearamide MIPA, Glyceryl Laurate, Quillaja Saponaria Bark Extract, Sucrose Cocoate, Camellia Sinensis Leaf Extract, Lactic Acid, Phenoxyethanol, Ethylhexylglycerin, Fragrance (.002%)

## Highlights

Key Ingredients – Those which provide the distinct benefits of the product.

**Antioxidant:** Camellia Sinensis Leaf Extract

**Exfoliant:** Lactic Acid

**Skin-identical ingredient:** Glycerin

**Soothing:** Camellia Sinensis Leaf Extract

**Surfactant/Cleansing:** Sodium N-Cocoyl L-Glutamate, Isostearamide MIPA, Quillaja Saponaria Bark Extract

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Emollient:** Glyceryl Laurate, Sucrose Cocoate

**Emulsifying:** Quillaja Saponaria Bark Extract

**Moisturizer/humectant** Glycerin, Quillaja Saponaria Bark Extract

**Preservative:** Phenoxyethanol, Ethylhexylglycerin

**Solvent:** Water

**Viscosity controlling:** Isostearamide MIPA, Xanthan Gum

## Sapelo Seaweed Cleanser



Super-Star Ingredient



Moisturizing Ingredient

### Water

WHAT-IT-DOES: solvent

The most common skincare ingredient of all which is why it is in the first spot of the ingredient list. It is mainly a solvent for ingredients that do *not* like to dissolve in oils but rather in water. The water used in cosmetics is purified and deionized to remove the mineral ions.

### Sodium N-Cocoyl L-Glutamate

WHAT-IT-DOES: surfactant/cleansing

A vegetable based co-surfactant that helps to create mild cleansing formulas.

### Glycerin



ALSO-CALLED: Glycerol | WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Glycerin is a real cosmetic staple. It's been used in cosmetics for more than 50 years and it is a totally natural ingredient that's also a component in the outermost layer of our skin (stratum corneum - SC). Glycerin keeps the skin lipids between our skin cells in a healthy (liquid crystal) state, protects against irritation, and helps to restore skin's barrier. It

is a humectant-type of moisturizer meaning that it helps our skin to cling onto water. A 2005 study has shown that glycerin levels correlate with skin hydration levels, so more glycerin means better hydration.

As newer studies examine glycerin it turns out more and more that it's not just a simple humectant but also does some other important things:

- It binds the fluid between the skin cells (interstitial) assuring that it is neither too diluted nor too concentrated (it's called osmoregulation)
- It helps to maintain the healthy state of the cell membranes and intracellular lipids (keeping the lipids in a nice liquid crystal state that is optimal for barrier function)
- It can normalize skin shedding in very dry skin.
- It protects against skin irritation from environmental sources (such as washing your face too much and/or too aggressively)

### Algae (Chondrus Crispus Extract)



WHAT-IT-DOES: moisturizer/humectant, viscosity controlling

The extract of red seaweed (Chondrus Crispus) that has nice film-forming, skin smoothing and moisturizing properties thanks to biomimetic properties between skin proteins and carrageenans (the naturally occurring polysaccharides in red seaweed) it has a very long-lasting action and can form a "second skin". It also gives a "slow-release" effect to oil-loving active ingredients and measurably reduces trans-epidermal water loss.

### Xanthan Gum

WHAT-IT-DOES: viscosity controlling, emulsion stabilizing

It's one of the most commonly used thickeners and emulsion stabilizers. Xanthan gum is an all-natural, chain of sugar molecules (polysaccharide) produced from individual sugar molecules (glucose and sucrose) via fermentation. It's approved by Ecocert and also used in the food industry. If the product is too runny, xanthan gum will make it more gel-like.

### Isostearamide MIPA

WHAT-IT-DOES: surfactant/cleansing, viscosity controlling

It is a PEG-free thickening and conditioning agent. It also acts as an antistatic agent (reduces static charges by neutralizing the electric charge on the surface), viscosity regulator (increases or decreases the viscosity of cosmetic products) and foaming agent (increases the foaming and improves volume, structure and durability of the foam).

### Glyceryl Laurate



WHAT-IT-DOES: emollient, emulsifying

A glycerin and lauric acid derived multi-functional ingredient that works as a **co-emulsifier** (helps water and oil to mix together next to other emulsifiers), **emollient** (makes skin nice and smooth) and **anti-microbial** agent (preservative booster). It also has some **thickening and refatting properties** in cleansing formulas.

### Quillaja Saponaria Bark Extract



WHAT-IT-DOES: surfactant/cleansing, emulsifying, moisturizer/humectant

Quillaja extract is obtained from the bark of the plant Quillaja saponaria. It is also commonly called soap bark/Panama bark/ Chinese bark tree. It is a tree (native to Central Chile) with dark, thick bark, fruits, and white-colored star-shaped flowers. The extract obtained from its bark consists of compound saponins. It has been used historically in indigenous medicine for a variety of ailments.

Quillaja extract functions as a foaming agent, cleansing agent, emulsifying, surfactant, and skin conditioning agent. Saponins have foam-forming properties. As a surfactant, it lowers the surface tension between two components of the product like two liquids or a liquid and a solid. When they are added they form a cluster, which has water-loving ions on end and fat-loving ions in the center. This is important for facial cleansers because the fat-loving part attracts dirt, oil, and other impurities accumulated on the surface of the skin which then can be washed off easily with water with the help of a water-loving part. As an emulsifier, it binds the oil and water-based components. As a skin-conditioner, it forms a protective film on the surface of the skin to prevent loss of moisture.

### Sucrose Cocoate

WHAT-IT-DOES: emollient, moisturizer, thickener

Sucrose Cocoate is a natural, PEG-free, hydrophilic emollient and moisturizer made of sucrose esters of coconut fatty acid (sugar beets and coconut oil). HLB 15. Provides pleasant re-fattening and emollient effects. Effective moisturizer. Increases foam density, viscosity, and mildness of cleansing products. Increases gentleness and creaminess of creams & lotions. Has mild thickening effect.

### Camellia Sinensis Leaf Extract

ALSO-CALLED: Green Tea | WHAT-IT-DOES: antioxidant, soothing

Green tea is proven to be a great antioxidant, UV protectant, anti-inflammatory, anticarcinogenic and antimicrobial. The active parts are called polyphenols, or more precisely catechins (EGCG being the most abundant and most active catechin). Because of its exceptional properties green tea is a great choice for anti-aging and also for skin diseases including rosacea, acne and atopic dermatitis.

### Lactic Acid

WHAT-IT-DOES: exfoliant, moisturizer/humectant, buffering

It gently lifts off dead skin cells to reveal newer, fresher, smoother skin. It also has amazing skin hydrating properties. When used in higher concentration (10% and up) it improves skin firmness, thickness and wrinkles.

### Phenoxyethanol

WHAT-IT-DOES: preservative

It is the current hero preservative of choice by cosmetic formulators. It's safe and gentle, but even more importantly, it does not have the reputation of parabens. It was introduced around 1950 and today it can be used up to 1% worldwide. It can be found in nature - in green tea - but the version used in cosmetics is synthetic.

### Ethylhexylglycerin

WHAT-IT-DOES: preservative, deodorant

If you have spotted ethylhexylglycerin on the ingredient list, most probably you will see there also the current hero preservative: phenoxyethanol. This is because Ethylhexylglycerin can boost the effectiveness of phenoxyethanol (and other preservatives) and as an added bonus it feels nice on the skin too.

### Fragrance

WHAT-IT-DOES: perfuming

Fragrance: Ingredients that impart a desired aroma to a formula. These are often only listed as *fragrance* (parfum in the EU) as the substance (essential oil, botanical extract, synthetic ingredient, etc.). Contains 0.002% fragrance.

## Sapelo Sea Lavender Mist

### Ingredients Overview

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Water, Panthenol, Chondrus Crispus Extract, Sodium Hyaluronate, Pseudoalteromonas Ferment Extract, Alanine, Proline, Serine, Sodium Phosphate, Caprylyl/Capryl Glucoside, Sodium Cocoyl Glutamate, Polyglyceryl-5 Oleate, Glyceryl Caprylate, Citric Acid, Quillaja Saponaria Bark Extract, Lavender, Geranium, Phenoxyethanol, Ethylhexylglycerin

### Highlights

Key Ingredients – Those which provide the distinct benefits of the product.

**Skin-identical ingredient:** Sodium Hyaluronate, Alanine, Proline, Serine

**Soothing:** Panthenol, Pseudoalteromonas Ferment Extract

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Buffering:** Sodium Phosphate, Citric Acid

**Emulsifying:** Polyglyceryl-5 Oleate, Quillaja Saponaria Bark Extract

**Moisturizer/humectant:** Panthenol, Chondrus Crispus Extract, Sodium Hyaluronate, Pseudoalteromonas Ferment Extract, Quillaja Saponaria Bark Extract

**Perfuming:** Geranium

**Preservative:** Glyceryl Caprylate, Phenoxyethanol, Ethylhexylglycerin

**Solvent:** Water

**Surfactant/cleansing:** Caprylyl/Capryl Glucoside, Sodium Cocoyl Glutamate, Quillaja Saponaria Bark Extract

**Viscosity controlling:** Chondrus Crispus Extract

## Sapelo Sea Lavender Mist



Super-Star Ingredient



Moisturizing Ingredient

### Water

WHAT-IT-DOES: solvent

The most common skincare ingredient of all, which is why it is in the first spot of the ingredient list. It is mainly a solvent for ingredients that do *not* like to dissolve in oils but rather in water. The water used in cosmetics is purified and deionized to remove the mineral ions.

### Panthenol



WHAT-IT-DOES: soothing, moisturizer/humectant

Also called pro-vitamin B5, it's a precursor to vitamin B5 (AKA: pantothenic acid). It is primarily a moisturizer and humectant. There is also research showing that panthenol can help our skin to produce more lipids that are important for a strong and healthy skin barrier. It has also been shown to have anti-inflammatory and skin protecting abilities. Research also shows that it promotes fibroblasts (which in turn produce skin-firming collagen).

### Chondrus Crispus Extract



WHAT-IT-DOES: moisturizer/humectant, viscosity controlling

The extract of red seaweed that has nice film-forming, skin smoothing and moisturizing properties.

The manufacturer claims that thanks to biomimetic properties between skin proteins and carrageenans (the naturally occurring polysaccharides in red seaweed) it has a very long-lasting action and can form a "second skin". It also gives a "slow-release" effect to oil-loving active ingredients and measurably reduces trans-epidermal water loss.

## **Sodium Hyaluronate**



WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

It's the - sodium form - cousin of the famous NMF, hyaluronic acid (HA). HA is a huge polymer (big molecule from repeated subunits) found in the skin that acts as a sponge helping the skin to hold onto water, being plump and elastic. HA is famous for its unequalled water holding capacity as it can bind up to 1000 times its own weight in water. Hyaluronic acid and Sodium hyaluronate are nearly identical polymers; the difference is that the salt (sodium) form is more stable, easier to formulate with for most cosmetic applications.

## **Pseudoalteromonas Ferment Extract**



WHAT-IT-DOES: soothing, moisturizer/humectant, absorbent/mattifier

A biotechnologically derived ingredient that is produced by the fermentation of a marine bacteria. This microbe's unique adaptation allows it to survive in the extreme environments of Antarctica's King George Island, which is why the organism is called an extremophile. Pseudoalteromonas produces a unique glycoprotein (AKA: glycopeptide) covering its cellular membranes to reduce cryogenic damage in the organism. This glycoprotein has shown significant healing and protective effects for lipid layers as it spreads effectively on the horny layer of the epidermis, preventing skin dryness through its excellent moisturizing properties. This, in turn, can help post-procedural or acutely dry skin rapidly recover its barrier function. In addition, Pseudoalteromonas has been shown to be effective in fighting against poor collagen turnover and ineffective elastin production.

In vitro tests showed increased Collagen I and Collagen IV as well as the synthesis of Elastin. These gains via a (5% glycoprotein) have been shown to produce anti-wrinkle activity which has been confirmed through skin topography analysis and confocal laser scanning microscopy performed the analysis of the silicon replicas. As a result, the depth of the wrinkles around the eyes decreased significantly up to 50%.

## **Alanine**

WHAT-IT-DOES: skin-identical ingredient

A non-essential amino acid (a building block of skin proteins like collagen or elastin) that hydrates the skin.

## **Proline**

WHAT-IT-DOES: skin-identical ingredient

A non-essential amino acid (meaning that our body can produce it) that's also one of the major building blocks of collagen. Shows promise in improving appearance of wrinkles when combined with other amino acids.

## **Serine**

WHAT-IT-DOES: skin-identical ingredient

Serine is an amino acid that most often comes to the formula as part of a moisturizing complex. It's a non-essential amino acid (meaning that our body can synthesize it) and serves as a water-binding ingredient.

In general, amino acids are great skincare ingredients that play an important role in proper skin hydration.

## **Sodium Phosphate**

WHAT-IT-DOES: buffering of pH

It is a buffering agent, used in cosmetic formulations to help them achieve the proper pH.

## **Caprylyl/Capryl Glucoside**

WHAT-IT-DOES: surfactant/cleansing

Caprylyl/Capryl Glucoside is a glucose alkyl ether derived from vegetal and fruit sugars. It is considered an excellent, gentle cleansing surfactant and is also a highly effective solubilizing agent for essential oils to assist in the release of their aroma.

## **Sodium Cocoyl Glutamate**

**WHAT-IT-DOES:** surfactant/cleansing

A vegetable based co-surfactant that helps to create mild cleansing formulas.

### **Polyglyceryl-5 Oleate**

**WHAT-IT-DOES:** emulsifying

It is distilled triyglycerol ester based on vegetable oleic acid, PEG-free. Polyglyceryl-5 Oleate is an excellent emulsifier.

### **Glyceryl Caprylate**

**WHAT-IT-DOES:** preservative

A 100% plant derived, natural (Ecocert approved) multi-functional ingredient that has emollient and moisturizing properties, can work as a co-emulsifier (meaning that next to other emulsifiers it can help water and oil to mix) and even more importantly has a strong antimicrobial activity, thus allowing for a lower percentage of traditional preservatives.

### **Citric Acid**

**WHAT-IT-DOES:** buffering

Citric acid comes from citrus fruits and is an AHA. In skincare formulations, Citric Acid has protective antioxidant, and corrective anti aging effects helping to reverse visible signs of photodamage. Citric Acid works by exfoliating the upper layer of dead skin cells to help clean pores, even skin tone and soften and smooth the skin. It is also used to adjust the pH of a product to the level needed for efficacy.

### **Quillaja Saponaria Bark Extract**



**WHAT-IT-DOES:** surfactant/cleansing, emulsifying, moisturizer/humectant

Quillaja extract is obtained from the bark of the plant Quillaja saponaria. It is also commonly called soap bark/Panama bark/ Chinese bark tree. It is native to warm and temperate regions of Central Chile. It is a tree with dark, thick bark, fruits, and white-colored star-shaped flowers. The extract obtained from its bark consists of compound saponins. It has been used historically in indigenous medicine for a variety of ailments. Quillaja extract functions as a foaming agent, cleansing agent, emulsifying, surfactant, and skin conditioning agent. Saponins have foam-forming properties. As a surfactant, it lowers the surface tension between two components of the product like two liquids or a liquid and a solid. When they are added they form a cluster, which has water-loving ions on end and fat-loving ions in the center. This is important for facial cleansers because the fat-loving part attracts dirt, oil, and other impurities accumulated on the surface of the skin which then can be washed off easily with water with the help of a water-loving part. As an emulsifier, it binds the oil and water-based components. As a skin-conditioner, it forms a protective film on the surface of the skin to prevent loss of moisture.

### **Lavender**

**WHAT-IT-DOES:** perfuming

Lavender Oil (AKA: Lavandula Angustifolia Extract) has been used for centuries for its unmistakable aroma and myriad of benefits. When applied topically, lavender's soothing, antibacterial and antioxidant properties can help improve the appearance of certain skin conditions.

### **Geranium**

**WHAT-IT-DOES:** perfuming

The fragrant essential oil coming from the whole plant of Rose Geranium. It has a lovely scent with a mix of rose and citrus. Like most essential oils, it contains antioxidant and antimicrobial components, but the main ones are fragrant constituents (like geraniol and citronellol).

### **Phenoxyethanol**

**WHAT-IT-DOES:** preservative



It is the current hero preservative of choice by cosmetic formulators. It's safe and gentle, but even more importantly, it does not have the reputation of parabens. It was introduced around 1950 and today it can be used up to 1% worldwide. It can be found in nature - in green tea - but the version used in cosmetics is synthetic.

### **Ethylhexylglycerin**

WHAT-IT-DOES: preservative, deodorant

If you have spotted ethylhexylglycerin on the ingredient list, most probably you will see there also the current hero preservative: phenoxyethanol. This is because Ethylhexylglycerin can boost the effectiveness of phenoxyethanol (and other preservatives) and as an added bonus it feels nice on the skin too.

## **Sapelo Renewing Serum**

### **Ingredients Overview**

Aqua (Water), Glycerin, Pseudoalteromonas Ferment Extract, Plantago Lanceolata Leaf Extract, Glycine Soja (Soybean) Seed Extract, Gardenia Jasminoides Meristem Cell Culture, Proline, Alanine, Serine, Sodium Hyaluronate, Zizyphus Jujuba Seed Extract, Magnolia Sieboldii Extract, Chondrus Crispus Extract, Yeast Extract, Levan, Decyl Glucoside, Olea Europaea (Olive) Leaf Extract, Algae, Saccharide Isomerate, Diglycerin, Pinus pinaster extract, Niacinamide, Panthenol, Hydrolyzed Hyaluronic Acid, Calcium Ketogluconate, Hyaluronic Acid, Xanthan Gum, Sodium Phosphate, Sodium Hydroxide, Caprylyl Glycol, Phenethyl Alcohol, Phenoxyethanol, Ethylhexylglycerin. **Contains 4% concentration of Hyaluronic Acids.**

### **Highlights**

Key Ingredients – Those which provide the distinct benefits of the product.

**Anti-acne:** Niacinamide

**Antioxidant:** Plantago Lanceolata Leaf Extract, Glycine Soja (Soybean) Seed Extract, Gardenia Jasminoides Meristem Cell Culture, Pinus Pinaster Extract

**Cell-communicating ingredient:** Niacinamide

**Skin brightening:** Glycine Soja (Soybean) Seed Extract, Niacinamide

**Skin-identical ingredient:** Glycerin, Proline, Alanine, Serine, Sodium Hyaluronate, Diglycerin, Hyaluronic Acid

**Soothing:** Pseudoalteromonas Ferment Extract, Plantago Lanceolata Leaf Extract, Glycine Soja (Soybean) Seed Extract, Panthenol

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Antimicrobial/antibacterial:** Plantago Lanceolata Leaf Extract

**Buffering:** Sodium Phosphate, Sodium Hydroxide

**Emollient:** Glycine Soja (Soybean) Seed Extract, Caprylyl Glycol

**Moisturizer/humectant:** Glycerin, Pseudoalteromonas Ferment Extract, Sodium Hyaluronate, Chondrus Crispus Extract, Yeast Extract, Saccharide Isomerate, Diglycerin, Niacinamide, Panthenol, Hydrolyzed Hyaluronic Acid, Hyaluronic Acid, Caprylyl Glycol

**Perfuming:** Olea Europaea (Olive) Leaf Extract

**Preservative:** Phenoxyethanol, Ethylhexylglycerin

**Solvent:** Aqua (Water)

**Surfactant/cleansing:** Decyl Glucoside

**Viscosity controlling:** Chondrus Crispus Extract, Xanthan Gum

## Sapelo Renewing Serum



Super-Star Ingredient



Moisturizing Ingredient

### Water

WHAT-IT-DOES: solvent

The most common skincare ingredient of all which is why it is in the first spot of the ingredient list. It is mainly a solvent for ingredients that do *not* like to dissolve in oils but rather in water. The water used in cosmetics is purified and deionized to remove the mineral ions.

### Glycerin



WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Glycerin is a real cosmetic staple. It's been used in cosmetics for more than 50 years and it is a totally natural ingredient that's also a component in the outermost layer of our skin (stratum corneum - SC). Glycerin keeps the skin lipids between our skin cells in a healthy (liquid crystal) state, protects against irritation, and helps to restore skin's barrier. It is a humectant-type of moisturizer meaning that it helps our skin to cling onto water. A 2005 study has shown that glycerin levels correlate with skin hydration levels, so more glycerin means better hydration.

As newer studies examine glycerin it turns out more and more that it's not just a simple humectant but also does some other important things:

- It binds the fluid between the skin cells (interstitial) assuring that it is neither too diluted nor too concentrated (it's called osmoregulation)
- It helps to maintain the healthy state of the cell membranes and intracellular lipids (keeping the lipids in a nice liquid crystal state that is optimal for barrier function)
- It can normalize skin shedding in very dry skin.
- It protects against skin irritation from environmental sources (such as washing your face too much and/or too aggressively)

### Pseudoalteromonas Ferment Extract



WHAT-IT-DOES: soothing, moisturizer/humectant, absorbent/mattifier

A biotechnologically derived ingredient that is produced by the fermentation of a marine bacteria. This microbe's unique adaptation allows it to survive in the extreme environments of Antarctica's King George Island, which is why the organism is called an extremophile. Pseudoalteromonas produces a unique glycoprotein (AKA: glycopeptide) covering its cellular membranes to reduce cryogenic damage in the organism. This glycoprotein has shown significant healing and protective effects for lipid layers as it spreads effectively on the horny layer of the epidermis, preventing skin dryness through its excellent moisturizing properties. This, in turn, can help post-procedural or acutely dry skin rapidly recover

its barrier function. In addition, *Pseudoalteromonas* has been shown to be effective in fighting against poor collagen turnover and ineffective elastin production.

In vitro tests showed increased Collagen I and Collagen IV as well as the synthesis of Elastin. These gains via a (5% glycoprotein) have been shown to produce anti-wrinkle activity which has been confirmed through skin topography analysis and confocal laser scanning microscopy performed the analysis of the silicon replicas. As a result, the depth of the wrinkles around the eyes decreased significantly up to 50%.

### **Plantago Lanceolata Leaf Extract**



WHAT-IT-DOES: soothing, antioxidant, antimicrobial/antibacterial

The plant extract coming from the leaves of English plantain or narrowleaf plantain that's native to Europe and Asia. The plant's traditional medicinal uses include: speeds recovery of incisions, pimples or wounds.

Modern studies do confirm the leaves are loaded with active compounds with anti-inflammatory, antibacterial, and antioxidant properties. An in-vitro study found that concentrates of Plantain Leaf Extract had a comparable soothing effect to hydrocortisone.

### **Glycine Soja (Soybean) Seed Extract**



WHAT-IT-DOES: antioxidant, skin brightening, soothing, emollient

The soybean has many useful active components, including: antioxidant *phenolic acids* and *flavonoids* as well as *small and large soy proteins*. The large proteins give soybean extract nice skin smoothing and softening properties, while the small proteins (soybean trypsin inhibitor (STI) and Bowman-Birk inhibitor (BBI)) are thought to inhibit skin pigmentation.

### **Gardenia Jasminoides Meristem Cell Culture**



WHAT-IT-DOES: antioxidant/CELL-STIMULATING

An extract from the shrub of the Rubiaceae family, rich in anti-oxidants and highly defensive polyphenols, its anti-oxidant capacity is comparable to that of Vitamin C. Its high polysaccharide content reinforces the skin's extra cellular matrix while the high concentrations of fatty acids exert an anti-inflammation action. Most impressive is its unrivaled action in preserving the skin's collagen system. The stem cells stimulate the collagen system with a 3 level approach: boosts collagen production, reduces collagen degradation and inhibits collagen synthesis, resulting in a slow-down of firmness loss and preserving skin's youthful elasticity.

### **Alanine**

WHAT-IT-DOES: skin-identical ingredient

A non-essential amino acid (a building block of skin proteins like collagen or elastin) that hydrates the skin.

### **Proline**

WHAT-IT-DOES: skin-identical ingredient

A non-essential amino acid (meaning that our body can produce it) that's also one of the major building blocks of collagen. Shows promise in improving appearance of wrinkles when combined with other amino acids.

### **Serine**

WHAT-IT-DOES: skin-identical ingredient

Serine is an amino acid that most often comes to the formula as part of a moisturizing complex. It's a non-essential amino acid (meaning that our body can synthesize it) and serves as a water-binding ingredient.

In general, amino acids are great skincare ingredients that play an important role in proper skin hydration.

### **Sodium Hyaluronate**



WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

It's the - sodium form - cousin of the famous NMF, hyaluronic acid (HA). HA is a huge polymer (big molecule from repeated subunits) found in the skin that acts as a sponge helping the skin to hold onto water, being plump and elastic. HA is famous for its unequalled water holding capacity as it can bind up to 1000 times its own weight in water.

Hyaluronic acid and Sodium hyaluronate are nearly identical polymers; the difference is that the salt (sodium) form is more stable, easier to formulate with for most cosmetic applications.

### **Ziziphus Jujuba Seed Extract**



WHAT-IT-DOES: antioxidant, skin brightening

*Ziziphus jujuba* (AKA: Chinese Date) is an invaluable medicinal plant in traditional and modern medicine. It is known for a range of complex antioxidants that have earned it the designation as a super-food, much like blueberries. It is loaded with Vitamin C which may contribute to its ability to help with hyperpigmentation.

### **Magnolia Sieboldii Extract**



WHAT-IT-DOES: antioxidant, skin brightening

Magnolia Extract is a flower/branch extract of *Magnolia sieboldii* with a clinically proven skin whitening effect. It inhibits DOPA Auto-oxidation and melanin formation. Magnolia Extract has shown to be effective in post-inflammatory hyperpigmentation inhibition.

### **Chondrus Crispus Extract**



WHAT-IT-DOES: moisturizer/humectant, viscosity controlling

The extract of red seaweed that has nice film-forming, skin smoothing and moisturizing properties.

The manufacturer claims that thanks to biomimetic properties between skin proteins and carrageenans (the naturally occurring polysaccharides in red seaweed) it has a very long-lasting action and can form a "second skin". It also gives a "slow-release" effect to oil-loving active ingredients and measurably reduces trans-epidermal water loss.

### **Yeast Extract**



WHAT-IT-DOES: moisturizer/humectant

Developed using sophisticated molecular screening techniques and bio-fermented from a proprietary<sup>®</sup> strain of yeast, this extract provides a skin resurfacing action via **gentle** and selective desquamation as it stimulates skin renewal. Formulated at 5.2%, it helps the skin gently loosen coarse, dead skin cells at the surface without any irritation or drying acids, thereby stimulating renewal with younger cells. As a result, it actively refines and restores skin texture and radiance. Clinically tested anti-wrinkle and skin brightening activity after 14 and 28 days.

### **Decyl Glucoside**

WHAT-IT-DOES: surfactant/cleansing, emulsion stabilizing

A vegetable origin (coconut or palm kernel oil and glucose) cleansing agent with great foaming abilities. It's also mild to the skin and readily biodegradable.

### **Olea Europaea (Olive) Leaf Extract**



WHAT-IT-DOES: antioxidant, soothing, emollient

Olive Leaf Extract is derived from the leaves of the *Olea europaea* botanical, better known as the Olive tree. When applied to the skin, it can protect against the harsh effects of the weather, the elements, and environmental stressors and pollutants. It slows the appearance of the signs of aging, nourishes and purifies the skin, calms irritation, repairs damage, reduces redness, hydrates, stimulates the growth of new cells, and enhances circulation.

### **Algae (Chondrus Crispus Extract)**



WHAT-IT-DOES: moisturizer/humectant, viscosity controlling

The extract of red seaweed (*Chondrus Crispus*) that has nice film-forming, skin smoothing and moisturizing properties thanks to biomimetic properties between skin proteins and carrageenans (the naturally occurring polysaccharides in red seaweed) it has a very long-lasting action and can form a "second skin". It also gives a "slow-release" effect to oil-loving active ingredients and measurably reduces trans-epidermal water loss.

### **Saccharide Isomerate**



WHAT-IT-DOES: moisturizer/humectant

A 100% natural and plant-derived moisturizer that mimics the natural carbohydrate fraction found in the upper layer of the skin. Its key power is to bind to the skin stronger and longer than other moisturizer ingredients do so it can keep the skin hydrated longer than usual.

### Diglycerin



WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Compared to glycerin, diglycerin has a larger molecular structure (essentially double). Thanks to this, it penetrates slower into the skin but gives longer lasting moisture and reduces water evaporation from the upper layer of the skin. It gives longer lasting moisture and gives a nice skin-feel. Plant-based and promotes healthy skin microbiome.

### Pinus Pinaster Extract



WHAT-IT-DOES: antioxidant

A natural plant extract coming from the bark of the maritime pine that grows along the coast of southwest France. The extract contains potent antioxidant molecules, mainly *procyanidins* and *phenolic acids*. Horphag Research trademarked the name 'Pycnogenol', which refers to a standardized, high-active content version of the pine bark extract. Pycnogenol is a very well researched ingredient with more than 370 published studies and review articles. Most of these are in-vitro (made in the lab, not on real people) or analyze Pycnogenol when taken orally, where it has a load of health benefits including antioxidant, anti-inflammatory, and anticarcinogenic properties.

### Niacinamide



WHAT-IT-DOES: cell-communicating ingredient, skin brightening, anti-acne, moisturizer/humectant

- A multi-functional skincare superstar with several proven benefits for the skin
- Great anti-aging, wrinkle smoothing ingredient used at 4-5% concentration
- Fades brown spots alone or in combination with amino sugar, acetyl glucosamine
- Increases ceramide synthesis that results in a stronger skin barrier and better skin hydration
- Can help to improve several skin conditions including acne, rosacea, and atopic dermatitis

Niacinamide, or vitamin B3, is a water-soluble vitamin that can be found in meat, fish, wheat and small amounts in vegetables. The version used in cosmetics is produced exclusively synthetically for consistent stability.

It is a real skincare superstar with the following well-documented benefits:

#1: Anti-aging, wrinkle-smoothing properties: Studies show that niacinamide can boost collagen production as well as the production of these three important proteins: keratin, filaggrin, and involucrin. In this way niacinamide offsets the decreased rate of these skin-building proteins that comes with age.

#2: Skin-lightening properties: Studies show that 2-5% niacinamide used daily for 8 weeks results in significant lightening of hyperpigmentation.

#3: Barrier repair functions: The interstitial matrix of the skin barrier (between the skin cells) consists mainly of free fatty acids, cholesterol, and ceramides. The amount and structure of these determine how healthy the skin barrier is. What studies have shown is that 2% niacinamide can increase the synthesis of free fatty acids, cholesterol, and ceramides that result in healthier and stronger skin barrier, decreased trans-epidermal water loss (TEWL) and better hydrated skin.

#4: Anti-acne properties: though niacinamide is not a traditional anti-acne ingredients, it has been shown to have sebum regulating and anti-inflammatory properties and a study that used 4% niacinamide for 8 weeks to treat acne found that 82% of those treated showed results slightly better than with a 1% clindamycin gel, an antibiotic often used to treat acne.

### Panthenol



WHAT-IT-DOES: soothing, moisturizer/humectant

Also called pro-vitamin B5, it's a precursor to vitamin B5 (AKA: pantothenic acid). It is primarily a moisturizer and humectant. There is also research showing that panthenol can help our skin to produce more lipids that are important for a strong and healthy skin barrier. It has also been shown to have anti-inflammatory and skin protecting abilities. Research also shows that it promotes fibroblasts (which in turn produce skin-firming collagen).

### Hydrolyzed Hyaluronic Acid



WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Hydrolyzed Hyaluronic Acid is a low molecular weight version of the naturally big molecule Hyaluronic Acid (HA). (HA is a huge polymer found in the skin that acts as a sponge helping the skin to retain water, making it plump and elastic. As HA is a polymer, the subunits can be repeated many times (as a high-molecular-weight version), or just a few times (as a low-molecular-weight version). Hydrolyzed Hyaluronic Acid can also come in different molecular-weight versions.

### **Calcium Ketogluconate**



Calcium Ketogluconate is used in products to combat the signs of aging because of its ability to tone and smooth fine lines and wrinkles. Calcium ketogluconate is a French-patented natural molecule that comes in pure powder form. Calcium k works in the dermis to stimulate the production of elastin and hyaluronic acid. Calcium K is safe to use around the eyes and lips because of how safe and clean it is. It is ranked a 1, which is the highest rank in safety on EWG (Environmental Working Group Site). In a clinical trial\* in France, skin fatigue and sagging was decreased by 27% and skin elasticity and flexibility increased by 16%. \*in vivo tests used a formulation with .5% of Calcium K two times a day for 28 days,

### **Hyaluronic Acid**



WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Famous NMF, found in the skin that acts as a sponge helping the skin to hold onto water. HA's unequalled water holding capacity can bind up to 1000 times its own weight in water.

### **Xanthan Gum**

WHAT-IT-DOES: viscosity controlling, emulsion stabilizing

It's one of the most commonly used thickeners and emulsion stabilizers. Xanthan gum is an all-natural, chain of sugar molecules (polysaccharide) produced from individual sugar molecules (glucose and sucrose) via fermentation. It's approved by Ecocert and also used in the food industry. If the product is too runny, xanthan gum will make it more gel-like.

### **Sodium Phosphate**

WHAT-IT-DOES: buffering of pH

It is a buffering agent, used in cosmetic formulations to help them achieve the proper pH.

### **Sodium Hydroxide**

WHAT-IT-DOES: buffering

The unfancy name for: lye. It is a solid, white, substance that is very alkaline and is typically used in very small amounts to adjust the pH of the product and make it optimal for the performance the overall formulation.

### **Caprylyl Glycol**

WHAT-IT-DOES: moisturizer/humectant, emollient, deodorant

It's a handy multi-tasking ingredient that gives the skin a nice, soft feel. It also boosts the effectiveness of preservatives, such as phenoxyethanol (see below). The blend of these two (caprylyl glycol + phenoxyethanol) is a popular duo called Optiphen, which not only helps to keep your cosmetics pristine for a long time but also gives a good feel to the finished product.

### **Phenethyl Alcohol**

WHAT-IT-DOES: (aroma) masking

A colorless liquid used in small amounts as a so-called masking ingredient, meaning it can hide the natural not-so-nice smell of other cosmetic ingredients. It has a nice rose-like scent and can be found in several essential oils such as rose, neroli or geranium. It also has some antimicrobial activity and can boost the performance of traditional preservatives.

### **Phenoxyethanol**

WHAT-IT-DOES: preservative

It is the current hero preservative of choice by cosmetic formulators. It's safe and gentle, but even more importantly, it does not have the reputation of parabens. It was introduced around 1950 and today it can be used up to 1% worldwide. It can be found in nature - in green tea - but the version used in cosmetics is synthetic.

### **Ethylhexylglycerin**

WHAT-IT-DOES: preservative, deodorant

If you have spotted ethylhexylglycerin on the ingredient list, most probably you will see there also the current hero preservative: phenoxyethanol. This is because Ethylhexylglycerin can boost the effectiveness of phenoxyethanol (and other preservatives) and as an added bonus it feels nice on the skin too.

## **Sapelo Spring Tide Serum**

### **Ingredients Overview**

Water, Sunflower (Helianthus Annuus) Seed Oil, Lauryl Laurate, Salmon Roe, Cetearyl (fatty) Alcohol, Cetearth 20, Prunus Armeniaca (Apricot) Kernel Oil, Niacinamide, Glycerin, Beta-Glucan, Algin, Xanthan Gum, Polyglyceryl-6 Caprylate; Polyglyceryl-4 Caprate; Polyglyceryl-4 Cocoate; Polyglyceryl-6 Ricinoleate, Chondrus Crispus Extract, Sodium Hyaluronate, NaOH, Acrylates/C10-30 Alkyl Acrylate Crosspolymer, Polysorbate 60, Aminomethylpropanol, Propanediol, Phenoxyethanol, Ethylhexylglycerin

### **Highlights**

Key Ingredients – Those which provide the distinct benefits of the product.

**Anti-acne:** Niacinamide

**Cell-communicating ingredient:** Niacinamide

**Skin brightening:** Niacinamide

**Skin-identical ingredient:** Glycerin, Sodium Hyaluronate

**Soothing:** Beta-Glucan

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Buffering:** NaOH, Aminomethyl Propanol

**Emollient:** Sunflower (Helianthus Annuus) Seed Oil, Cetearyl (Fatty) Alcohol, Prunus Armeniaca (Apricot) Kernel Oil, Polyglyceryl-4 Cocoate

**Emulsifying:** Cetearyl (Fatty) Alcohol, Cetearth-20, Polyglyceryl-6 Caprylate, Polyglyceryl-4 Caprate, Polyglyceryl-4 Cocoate, Polyglyceryl-6 Ricinoleate, Polysorbate 60

**Moisturizer/humectant:** Niacinamide, Glycerin, Beta-Glucan, Chondrus Crispus Extract, Sodium Hyaluronate, Propanediol

**Preservative:** Phenoxyethanol, Ethylhexylglycerin

**Solvent:** Water, Propanediol

**Surfactant/cleansing:** Cetearyl (Fatty) Alcohol, Cetearth-20, Polysorbate 60

**Viscosity controlling:** Cetearyl (Fatty) Alcohol, Algin, Xanthan Gum, Chondrus Crispus Extract, Acrylates/C10-30 Alkyl Acrylate Crosspolymer

## Sapelo Spring Tide Serum



Super-Star Ingredient



Moisturizing Ingredient

### Water

WHAT-IT-DOES: solvent

The most common skincare ingredient of all which is why it is in the first spot of the ingredient list. It is mainly a solvent for ingredients that do *not* like to dissolve in oils but rather in water. The water used in cosmetics is purified and deionized to remove the mineral ions.

### Sunflower (*Helianthus Annuus*) Seed Oil



WHAT-IT-DOES: emollient

Sunflower oil is one of the most commonly used plant oils in skincare. It is expressed directly from the seeds, and has been used for thousands of years. According to The National Sunflower Association, there is evidence that both the plant and its oil were used by American Indians in the area of Arizona and New Mexico about 3000 BC.

Sunflower oil - similar to other plant oils - is a great emollient that makes the skin smooth and nice and helps to keep it hydrated. It also protects the surface of the skin and enhances the damaged or irritated skin barrier. Cosmetic Dermatology notes that just one application of sunflower oil significantly speeds up the recovery of the skin barrier within an hour and sustains the results 5 hours after using it. It's also loaded with fatty acids (mostly linoleic (50-74%) and oleic (14-35%)). Its comedogen index is 0, meaning that it's pretty much an all skin-type oil.

### Lauryl Laurate



WHAT-IT-DOES: emollient

Lauryl Laurate is a low molecular weight natural wax-like ester that is compatible with most cosmetic ingredients. It is made from a mixture of coconut and palm oils. It is a solid, fast melting ester that will give a dry and powdery feel on the skin and when combined with other oils and esters it will help to "de-grease" formulations while still providing slip. When a formula containing it touches the skin, this ester melts giving instant glide. Lauryl Laurate is an excellent natural replacement for light weight silicones.

### Salmon Roe



WHAT-IT-DOES: antioxidative, soothing, moisturizing

Salmon Caviar refers to the roe [or eggs] from the Salmon. Sapelo's incredible Salmon roe extract is the only one of its kind used in skin care. The ingredient, organically extracted from unfertilized salmon eggs (meaning 'no life') is nutrient rich with proteins, DNA, RNA, omega fatty acids, minerals and vitamins. High sources of skin-loving vitamins A and E, proven antioxidative sources, help to improve skin suppleness and even skin tone. This ingredient has the additional benefit of being bio-compatible, which means on a molecular level, its DNA composition is remarkably similar to that of human DNA.

Clinical studies show efficacy in healing sensitive skin, boosting wound repair and revitalizing the overall tone and texture. The ingredient stimulates biological activity in skin within minutes of application and results are apparent after



72 hours. Further, it reinforces your skin's moisture barrier, prevents transepidermal water loss (TEWL), and is potent in protecting the skin from oxidative damage that can cause premature aging. In fact, Salmon Roe is naturally loaded with a AOX constituent called: astaxanthin. This is a UV-blocking, carotenoid pigment that produces a distinctive orange color (much as it does in carrots) but, it's also a powerful antioxidant (it contains 6,000 times the antioxidant content of vitamin C!) that can help to diminish fine lines and wrinkles, boost elasticity, and protect the cell membranes from free radical damage. It further doubles as an anti-inflammatory to soothe redness and irritation.

If all of that wasn't enough, salmon is also naturally rich in one of the skin's favorite electrolytes — potassium. We like to think of this ingredient as an electrolyte shot of mega-hydration for the skin which also improves overall barrier restoration. Bottom Line: this ingredient works three-fold to fight premature aging, infuse skin with hydration, and reinforce your skin barrier for long-lasting protection.

Summary of benefits:

- Supports healing of sensitive skin
- boosts wound repair
- revitalizes overall tone and texture
- reinforces skin's moisture barrier
- prevents transepidermal water loss
- protects the skin from oxidative damage that can cause premature aging, diminish fine lines and wrinkles, boosts elasticity, and protect the cell membranes from free radical damage

### Cetearyl (Fatty) Alcohol



WHAT-IT-DOES: emollient, viscosity controlling, emulsifying, emulsion stabilizing, surfactant/cleansing

An extremely common multitasker ingredient that gives your skin a nice soft feel (emollient) and gives body to creams and lotions. It also helps to stabilize oil-water mixes (emulsions), though it does not function as an emulsifier in itself. It is what is referred to as a fatty alcohol, a mix of cetyl and stearyl alcohol, other two emollient alcohols. Though chemically speaking, it is alcohol, its properties are totally different from the properties of low molecular weight or drying alcohols such as denatured alcohol. Fatty alcohols have a long oil-soluble structure that makes them absolutely non-drying and non-irritating.

### Ceteareth-20

WHAT-IT-DOES: emulsifying, surfactant/cleansing

A common functional ingredient that helps to keep the oil-loving and water-loving ingredients together (emulsifier), stabilizes and thickens the products. Chemically speaking, it is ethoxylated Cetearyl alcohol, meaning that some ethylene oxide is added to the fatty alcohol to increase the water-soluble part in the molecule. The result is that the mainly oil soluble, emollient fatty alcohol is converted to an emulsifier molecule that keeps oil and water mixed in creams. The number in the name of Ceteareth emulsifiers refers to the average number of ethylene oxide molecules added and 20 makes a good emulsifier.

### Prunus Armeniaca (Apricot) Kernel Oil



WHAT-IT-DOES: emollient

The emollient plant oil coming from the kernel (the seed of the seed) of the delicious apricot fruit. Like other plant oils, it contains antioxidant *vitamin E* and nourishing fatty acids (mostly *oleic acid 54-74%*, *linoleic acid 12-35%*). It is a nice general purpose emollient, has nourishing and moisturizing properties (as a high oleic oil it's ideal for dry skin types) and is quite easily absorbed into the skin.

### Niacinamide



WHAT-IT-DOES: cell-communicating ingredient, skin brightening, anti-acne, moisturizer/humectant

- A multi-functional skincare superstar with several proven benefits for the skin
- Great anti-aging, wrinkle smoothing ingredient used at 4-5% concentration
- Fades brown spots alone or in combination with amino sugar, acetyl glucosamine

- Increases ceramide synthesis that results in a stronger skin barrier and better skin hydration
- Can help to improve several skin conditions including acne, rosacea, and atopic dermatitis

Niacinamide, or vitamin B3, is a water-soluble vitamin that can be found in meat, fish, wheat and small amounts in vegetables. The version used in cosmetics is produced exclusively synthetically for consistent stability.

It is a real skincare superstar with the following well-documented benefits:

**#1: Anti-aging, wrinkle-smoothing properties:** Studies show that niacinamide can boost collagen production as well as the production of these three important proteins: keratin, filaggrin, and involucrin. In this way niacinamide offsets the decreased rate of these skin-building proteins that comes with age.

**#2: Skin-lightening properties:** Studies show that 2-5% niacinamide used daily for 8 weeks results in significant lightening of hyperpigmentation.

**#3: Barrier repair functions:** The interstitial matrix of the skin barrier (between the skin cells) consists mainly of free fatty acids, cholesterol, and ceramides. The amount and structure of these determine how healthy the skin barrier is. What studies have shown is that 2% niacinamide can increase the synthesis of free fatty acids, cholesterol, and ceramides that result in healthier and stronger skin barrier, decreased trans-epidermal water loss (TEWL) and better hydrated skin.

**#4: Anti-acne properties:** though niacinamide is not a traditional anti-acne ingredients, it has been shown to have sebum regulating and anti-inflammatory properties and a study that used 4% niacinamide for 8 weeks to treat acne found that 82% of those treated showed results slightly better than with a 1% clindamycin gel, an antibiotic often used to treat acne.

## Glycerin



ALSO-CALLED: Glycerol | WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Glycerin may not sound very glamorous but it is a real cosmetic staple. It's been used in cosmetics for more than 50 years and it is a totally natural ingredient that's also a component in the outermost layer of our skin (stratum corneum - SC). Glycerin keeps the skin lipids between our skin cells in a healthy (liquid crystal) state, protects against irritation, and helps to restore skin's barrier. It is a humectant-type of moisturizer meaning that it helps our skin to cling onto water. A 2005 study has shown that glycerin levels correlate with skin hydration levels, so more glycerin means better hydration. As newer studies examine glycerin it turns out more and more that it's not just a simple humectant but also does some other important things:

- It binds the fluid between the skin cells (interstitial) assuring that it is neither too diluted nor too concentrated (it's called osmoregulation)
- It helps to maintain the healthy state of the cell membranes and intracellular lipids (keeping the lipids in a nice liquid crystal state that is optimal for barrier function)
- It can normalize skin shedding in very dry skin.
- It protects against skin irritation from environmental sources (such as washing your face too much and/or too aggressively)

## Beta-Glucan



WHAT-IT-DOES: soothing, moisturizer/humectant

Beta-Glucan is a nice big molecule composed of many smaller sugar molecules (called polysaccharide). It's in the cell walls of yeast, some mushrooms, seaweeds, and cereals. It's a super-nourishing ingredient no matter if you eat it or put it on your face. Beta-glucan is a humectant moisturizer that attracts water to the top layers of skin and does that while decreasing the look of wrinkles, redness, and irritation. This is because Beta-Glucan's molecular links come together on the surface of the skin to form a thin and undetectable film. This boosts the natural barrier, which protects the sensitive skin beneath from daily environmental stressors, which can be the cause of redness and irritation for some skin types. Beta-glucans also work by stimulating the macrophages (they work to fight off invading pathogens that can cause infections) and stimulate other immune cells to attack pathogens. For those who have compromised skin barriers like eczema or dermatitis, beta-glucan can help fight viruses and pathogens that pass through your skin barrier.

## Algin

**WHAT-IT-DOES:** viscosity controlling

A large sugar molecule (aka polysaccharide) that's used as a gelling agent and comes from brown seaweed. Combined with calcium salts, it forms a rigid gel used in "rubber masks".

### **Xanthan Gum**

**WHAT-IT-DOES:** viscosity controlling, emulsion stabilizing

It's one of the most commonly used thickeners and emulsion stabilizers. If the product is too runny, a little xanthan gum will make it more gel-like. Xanthan gum is all natural, a chain of sugar molecules (polysaccharide) produced from individual sugar molecules (glucose and sucrose) via fermentation. It's approved by Ecocert and also used in the food industry.

### **Polyglyceryl-6 Caprylate**

**WHAT-IT-DOES:** emulsifying

Polyglyceryl-6 caprylate/caprinate is derived from polyglycerin-6 (vegetable oil component) mixed with caprylic and capric acids (saturated fatty acids from coconut/palm). It's used in many different personal care products for its gentle cleansing properties and good compatibility with sensitive skin.

### **Polyglyceryl-4 Caprate**

**WHAT-IT-DOES:** emulsifying

A water-loving emollient that is used as a solubilizer in water-based, toner-like formulas. Solubilizers are handy helper ingredients to dissolve small amounts of oil-loving materials (such as essential oils or fragrances) into watery liquids. Polyglyceryl-4 Caprate also has some emollient properties, making the skin feel nice and smooth.

### **Polyglyceryl-4 Cocoate**



**WHAT-IT-DOES:** emollient, emulsifying

This is an ester (compound) that is created by joining Coconut acid and polyglycerin-6 (glycerin polymer).

### **Polyglyceryl-6 Ricinoleate**



**WHAT-IT-DOES:** emulsifying, softening

This is an ester (compound) that is created by joining ricinolein acid and polyglycerin-6 (glycerin polymer). Ricinolein acid is the major constituent in castor oil from the castor bean. Along with its many derivatives, it exerts skin smoothing and moisturizing activities and helps to recover rough skin. In formulations, it acts as a barrier to protect against harsh weather conditions, to soothe the skin.

### **Chondrus Crispus Extract**



**WHAT-IT-DOES:** moisturizer/humectant, viscosity controlling

The extract of red seaweed that has nice film-forming, skin smoothing and moisturizing properties. Thanks to biomimetic properties between skin proteins and carrageenans it has a very long-lasting action and can form a "second skin". It also gives a "slow-release" effect to oil-loving active ingredients and measurably reduces trans-epidermal water loss (TEWL).

### **Sodium Hyaluronate**



**WHAT-IT-DOES:** skin-identical ingredient, moisturizer/humectant

It's the - sodium form - cousin of the famous NMF, hyaluronic acid (HA). HA is a huge polymer (big molecule from repeated subunits) found in the skin that acts as a sponge helping the skin to hold onto water, being plump and elastic. HA is famous for its unequalled water holding capacity as it can bind up to 1000 times its own weight in water. Hyaluronic acid and Sodium hyaluronate are nearly identical polymers; the difference is that the salt (sodium) form is more stable, easier to formulate with for most cosmetic applications.

### **NaOH**

**WHAT-IT-DOES:** buffering

It is a solid white substance (AKA: lye) that's very alkaline and used in very small amounts to correctly adjust the pH of the product and make it just right. For example, in the case of AHA or BHA exfoliants, the right pH is critical, and pH adjusters like sodium hydroxide are one of the best ways to achieve that. Lye was used by ancient Egyptians to help oil and fat magically turn into soap. It still often shows up in the ingredient list of cosmetic formulations to help them achieve the proper pH.

### **Acrylates/C10-30 Alkyl Acrylate Crosspolymer**

WHAT-IT-DOES: viscosity controlling, emulsion stabilizing

Though its long name does not reveal it, this polymer molecule (big molecule from repeated subunits or monomers) is a relative to the super common, water-loving thickener, Carbomer. Both of them are big molecules that contain acrylic acid units, but Acrylates/C10-30 Alkyl Acrylate Crosspolymer also contains some other monomers that are hydrophobic, i.e. water-hating. This means that our molecule is part water- and part oil-loving, so it not only works as a thickener but also as an emulsion stabilizer. It is very common in gel-type formulas that also contain an oil-phase as well as in cleansers as it also works with most cleansing agents (unlike a lot of other thickeners).

### **Polysorbate 60**

WHAT-IT-DOES: emulsifying, surfactant/cleansing

A common little helper ingredient that helps water and oil to mix together, aka emulsifier.

### **Aminomethyl Propanol**

WHAT-IT-DOES: buffering

An alkaline (high pH, aka basic) material that is used to set the pH of a formula to the proper value.

### **Propanediol**



WHAT-IT-DOES: solvent, moisturizer/humectant

Propanediol is a natural alternative for the often used and often bad-mouthed propylene glycol. It's produced sustainably from corn sugar and it's Ecocert approved. It's quite a multi-tasker: can be used to improve skin moisturization, as a solvent, to boost preservative efficacy or to influence the sensory properties of the end formula.

### **Phenoxyethanol**

WHAT-IT-DOES: preservative

It is the current hero preservative of choice by cosmetic formulators. It's safe and gentle, but even more importantly, it does not have the reputation of parabens. It was introduced around 1950 and today it can be used up to 1% worldwide. It can be found in nature - in green tea - but the version used in cosmetics is synthetic.

### **Ethylhexylglycerin**

WHAT-IT-DOES: preservative, deodorant

If you have spotted ethylhexylglycerin on the ingredient list, most probably you will see there also the current hero preservative: phenoxyethanol. This is because Ethylhexylglycerin can boost the effectiveness of phenoxyethanol (and other preservatives) and as an added bonus it feels nice on the skin too.

## **Sapelo Restoring Eye Serum**

### **Ingredients Overview**

Water (Aqua), Prunus Armeniaca (Apricot) Kernel Oil, Caprylic / Capric Triglyceride, Sodium Acrylates Copolymer, Lecithin, Whey Protein, Acetyl Tetrapeptide -5, Saccharide Isomerate, Triticum Vulgare (Wheat) Germ Extract, Pinus

Pinaster Extract, Diglycerin, Ceramide 3, Ceramide 6, Ceramide 1, Phytosphingosine HCl, Cholesterol, Sodium Lauroyl Lactylate, Carbomer, Panthenol, Chondrus Crispus (Carageenan), Hydrolyzed Chondrus Crispus Whole Plant Extract, Sodium Hyaluronate, Arctium Majus Root (Burdock) Extract, Glutamine, Decyl Glucoside, Phenethyl Alcohol, Cistus Incanus Flower/Leaf/Stem Extract, Gynostemma Pentaphyllum Leaf/Stem Extract, Glycerin, Xanthan Gum, Squalane oil, Coconut Alkanes, Coco-Caprylate/Caprates, Ethylhexylglycerin, Phenoxyethanol

## Highlights

Key Ingredients – Those which provide the distinct benefits of the product.

**Antioxidant:** Pinus Pinaster Extract, Gynostemma Pentaphyllum Leaf/Stem Extract

**Cell-communicating ingredient:** Whey Protein, Acetyl Tetrapeptide -5

**Skin-identical ingredient:** Diglycerin, Ceramide 3, Ceramide 6, Ceramide 1, Cholesterol, Sodium Hyaluronate, Glycerin, Squalane Oil

**Soothing:** Panthenol

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Emollient:** Prunus Armeniaca (Apricot) Kernel Oil, Caprylic/Capric Triglyceride, Lecithin, Cholesterol, Gynostemma Pentaphyllum Leaf/Stem Extract, Squalane Oil, Coconut Alkanes, Coco-Caprylate/Caprates

**Emulsifying:** Lecithin, Sodium Lauroyl Lactylate

**Moisturizer/humectant:** Acetyl Tetrapeptide -5, Saccharide Isomerate, Diglycerin, Panthenol, Sodium Hyaluronate, Glycerin

**Preservative:** Ethylhexylglycerin, Phenoxyethanol

**Solvent:** Water (Aqua), Coconut Alkanes

**Surfactant/cleansing:** Decyl Glucoside

**Viscosity controlling:** Sodium Acrylates Copolymer, Carbomer, Chondrus Crispus (Carrageenan), Xanthan Gum

## Sapelo Restoring Eye Serum



Super-Star Ingredient



Moisturizing Ingredient

### Water

WHAT-IT-DOES: solvent

The most common skincare ingredient of all which is why it is in the first spot of the ingredient list. It is mainly a solvent for ingredients that do *not* like to dissolve in oils but rather in water. The water used in cosmetics is purified and deionized to remove the mineral ions.

### Prunus Armeniaca (Apricot) Kernel Oil



WHAT-IT-DOES: emollient

The emollient plant oil coming from the kernel of the delicious apricot fruit. Like other plant oils, it contains antioxidant *vitamin E* and nourishing fatty acids (mostly *oleic acid 54-74%*, *linoleic acid 12-35%*).

It's a nice general purpose emollient, has nourishing and moisturizing properties (as a high oleic oil it's ideal for dry skin types) and is quite easily absorbed into the skin.

### Caprylic/Capric Triglyceride



WHAT-IT-DOES: emollient

A commonly used emollient that makes the skin feel nice and smooth. It comes from coconut oil and glycerin, it is light-textured, clear, odorless and non-greasy, and is well tolerated by every skin type.

### Sodium Acrylates Copolymer

WHAT-IT-DOES: viscosity controlling

A big molecule from repeated subunits that is used to form gel-like textures and create a film on the skin.

### Lecithin



WHAT-IT-DOES: emollient, emulsifying

A very common ingredient that can be found in all cell membranes. In cosmetics it is a useful multi-tasker: it is an emollient and water-binding ingredient but it's also an emulsifier and can be used for stabilization purposes. It is also often used to create liposomes.

### Whey Protein



WHAT-IT-DOES: cell-communicating ingredient

Protein fragments, aka peptides and growth factors derived from milk can help to boost the production of extracellular matrix components such as hyaluronic acid, collagen I and fibronectin. In-vivo tests have shown reduced wrinkles and improved firmness in two weeks by using 0.5%

### Acetyl Tetrapeptide - 5



WHAT-IT-DOES: cell-communicating ingredient, moisturizer/humectant

A four amino acid peptide that assists to improve puffy eye bags and dark circle activity via its anti-edema and anti-glycation effects. As skin loses its elasticity and as muscles weaken through age, loose skin can accumulate around the eyes. This peptide fights edema-forming mechanisms and shows a decongesting effect, enhancing skin elasticity and smoothness. To back this claim up, the manufacturer created an in-vivo study with 20 volunteers using 10% concentration, that comes down to 0.01% (!) of the pure peptide) and found that by day 15, 70% of the volunteers improved, while 95% of the volunteers improved by the end of the study (60 days).

### Saccharide Isomerate



WHAT-IT-DOES: moisturizer/humectant

A 100% natural and plant-derived moisturizer that mimics the natural carbohydrate fraction found in the upper layer of the skin. Its special magic power is to bind to the skin stronger and longer than other moisturizer ingredients do so it can keep the skin hydrated longer than usual.

### Triticum Vulgare (Wheat) Germ Extract



WHAT-IT-DOES: emollient

It's a plant extract that comes from wheat germ. Used as skin- and hair conditioner and skin protectant. **The wheat germ extract used in all Sapelo products contains < 20 ppm gluten and therefore meets the FDA's definition of gluten free as defined in 21 CFR §101.91(a)(3). This however; does not guarantee that the material is completely gluten free.**

### Pinus Pinaster Extract



WHAT-IT-DOES: antioxidant

A natural plant extract coming from the bark of the maritime pine that grows along the coast of southwest France. The extract contains potent antioxidant molecules, mainly *procyanidins* and *phenolic acids*. Horphag Research trademarked the name 'Pycnogenol', which refers to a standardized, high-active content version of the pine bark extract. Pycnogenol is a very well researched ingredient with more than 370 published studies and review articles which support numerous health benefits including antioxidant and anti-inflammatory properties.

### Diglycerin



**WHAT-IT-DOES:** skin-identical ingredient, moisturizer/humectant

Compared to glycerin, diglycerin has a larger molecular structure (essentially double). Thanks to this, it penetrates slower into the skin but gives longer lasting moisture and reduces water evaporation from the upper layer of the skin. Plant-based and promotes healthy skin microbiome.

### **Ceramide 3**



**WHAT-IT-DOES:** skin-identical ingredient

One of the many types of ceramides that can be found naturally in the upper layer of the skin. Ceramides make up about 50% of the gelatinous substance between our skin cells and play an important role in maintaining a healthy skin barrier and keeping the skin hydrated. Ceramide 3 (also called Ceramide NP) works even better when combined with its pal, Ceramide 1. (See below)

### **Ceramide 6**



**WHAT-IT-DOES:** skin-identical ingredient

Also called Ceramide AP, it is one of the many types of ceramides that can be found naturally in the upper layer of the skin. Ceramides make up about 50% of the gelatinous substance between our skin cells and play an important role in maintaining a healthy skin barrier and keeping the skin hydrated.

### **Ceramide 1**



**WHAT-IT-DOES:** skin-identical ingredient

Ceramide 1, or more recently called Ceramide EOP, was the first one that was identified in 1982 and its structure is special. It contains the essential fatty acid, linoleic acid and has a unique structure. It's believed that ceramide 1 plays a "binding role" in the lipid layers of the extracellular matrix and, along with other ceramides, plays a vital role in epidermal integrity and serve as the main storage areas for linoleic acid--a fatty acid that is very important for barrier repair.

### **Phytosphingosine Hcl**



**WHAT-IT-DOES:** skin-identical ingredient

Phytosphingosine Hydrochloride is a natural, skin-identical cosmetic ingredient found naturally present in the skin. It effectively reduces the signs of acne, inhibits the growth of micro-organisms on the skin, reduces redness and inflamed skin and is active at very low concentrations.

### **Cholesterol**



**WHAT-IT-DOES:** skin-identical ingredient, emollient

It's one of the important lipids that can be found naturally in the outer layer of the skin. About 25% of the goopy stuff between our skin cells consists of cholesterol. Together with ceramides and fatty acids, they play a vital role in having a healthy skin barrier and keeping the skin hydrated. As a cosmetic ingredient, it is an excellent emollient and stabilizer.

### **Sodium Lauroyl Lactylate**

**WHAT-IT-DOES:** emulsifying

A helper ingredient that's used as a co-emulsifier, meaning next to other emulsifiers in the formula it helps water and oil to mix. It also, has some antimicrobial activity so it can help to boost the effectiveness of a formula's preservative system.

### **Carbomer**

**WHAT-IT-DOES:** viscosity controlling, emulsion stabilizing

A big molecule created from repeated subunits (a polymer of acrylic acid) that magically converts a liquid into a nice gel formula. It typically has to be neutralized with a base (such as sodium hydroxide) for the thickening to occur and it creates viscous, clear gels that also feel nice and non-tacky on the skin. No wonder, it is a very popular and common ingredient. Typically used at 1% or less in most formulations.

### **Panthenol (AKA Pro-Vitamin B5)**



**WHAT-IT-DOES:** soothing, moisturizer/humectant

An easy-to-formulate, commonly used, nice to have ingredient that's also called pro-vitamin B5. As you might guess from the "pro" part, it's a precursor to vitamin B5 (whose fancy name is pantothenic acid).

Its main job in skincare products is to moisturize the skin. It's a humectant meaning that it can help the skin to attract water and then hold onto it. There is also research showing that panthenol can help our skin to produce more lovely lipids that are important for a strong and healthy skin barrier.

### **Hydrolyzed Chondrus Crispus (Carageenan)**

WHAT-IT-DOES: viscosity controlling

It is a type of algae extract coming from the algae commonly called Irish moss or red seaweed. It is rich in carrageenan, a natural polymer (big molecules from repeated subunits) that acts as a gelling, thickening and stabilizing agent.

### **Sodium Hyaluronate**



WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

The - sodium form - cousin of the famous NMF, hyaluronic acid (HA). HA is a huge polymer (big molecule from repeated subunits) found in the skin that acts as a sponge helping the skin to hold onto water, being plump and elastic. HA is famous for its unequaled water holding capacity as it can bind up to 1000 times its own weight in water. Hyaluronic acid and Sodium hyaluronate are nearly identical polymers; the difference is that the salt (sodium) form is more stable, easier to formulate with for most cosmetic applications.

### **Arctium Majus Root (Burdock) Extract**



WHAT-IT-DOES: soothing

Plant extract whose active constituents are skin-soothing and antioxidant. Whether the leaves, roots, or seeds are used, burdock is a helpful ingredient for skin conditions such as: wrinkles, eczema, acne, and psoriasis when applied topically. A small observational study also found burdock may help with inflammatory types of acne.

### **Glutamine**



WHAT-IT-DOES: skin-identical ingredient

Also known as L-Glutamine, Glutamine is a naturally occurring amino acid in the body, which helps skin cells function optimally for smooth, radiant, healthy-looking skin. Furthermore, Glutamine is scientifically proven to play an important role in the growth of fibroblast cells to support collagen synthesis.

### **Decyl Glucoside**

WHAT-IT-DOES: surfactant/cleansing, emulsion stabilizing

A vegetable origin (coconut or palm kernel oil and glucose) cleansing agent with great foaming abilities. It's also mild to the skin and readily biodegradable.

### **Phenethyl Alcohol**

WHAT-IT-DOES: aroma-masking

A colorless liquid used in small amounts as a so-called masking ingredient, meaning it can hide the natural not-so-nice smell of other cosmetic ingredients. It has a nice rose-like scent and can be found in several essential oils such as rose, neroli or geranium. It also has some antimicrobial activity and can boost the performance of traditional preservatives.

### **Cistus Incanus Flower/Leaf/Stem Extract**



WHAT-IT-DOES: antioxidative, soothing

The extract of *Cistus incanus*, a Mediterranean shrub (AKA: Hairy Rock Rose) has been used in traditional medicine for the treatment of inflammatory and other diseases. It contains the anti-oxidant compound: myricitrin (a naturally occurring polyphenol) which is of interest in mitigating the effects of neurogenic inflammation and skin aging by inhibiting the production of related pro-inflammatory cytokines. In clinical trials this extract delivered significant anti-inflammatory and anti-aging effects.

### **Gynostemma Pentaphyllum Leaf/Stem Extract**

WHAT-IT-DOES: antioxidant, emollient





An extract from a vine that grows in Asia. It reportedly activates the (LXR) receptor in human primary keratinocytes and stimulates the synthesis of epidermal lipids. Recent studies have also shown that this plant may possess great antioxidant properties, which can be very beneficial in combating oxidative stress to prolong cell viability. Specifically, *Gynostemma pentaphyllum* extract has a positive effect on the viability of dermal fibroblasts that have been damaged by UVC light-induced oxidative stress.

## Glycerin

WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Glycerin (AKA: Glycerol) may not sound very glamorous but it is a real cosmetic staple. It's been used in cosmetics for more than 50 years and it is a totally natural ingredient that's also a component in the outermost layer of our skin (stratum corneum - SC). Glycerin keeps the skin lipids between our skin cells in a healthy (liquid crystal) state, protects against irritation, and helps to restore skin's barrier. It is a humectant-type of moisturizer meaning that it helps our skin to cling onto water. A 2005 study has shown that glycerin levels correlate with skin hydration levels, so more glycerin means better hydration.

As newer studies examine glycerin it turns out more and more that it's not just a simple humectant but also does some other important things:

- It binds the fluid between the skin cells (interstitial) assuring that it is neither too diluted nor too concentrated (it's called osmoregulation)
- It helps to maintain the healthy state of the cell membranes and intracellular lipids (keeping the lipids in a nice liquid crystal state that is optimal for barrier function)
- It can normalize skin shedding in very dry skin.
- It protects against skin irritation from environmental sources (such as washing your face too much and/or too aggressively)

## Xanthan Gum

WHAT-IT-DOES: viscosity controlling, emulsion stabilizing

It's one of the most commonly used thickeners and emulsion stabilizers. If the product is too runny, a little xanthan gum will make it more gel-like. Xanthan gum is all natural, a chain of sugar molecules (polysaccharide) produced from individual sugar molecules (glucose and sucrose) via fermentation. It's approved by Ecocert and also used in the food industry.

## Squalane Oil

WHAT-IT-DOES: skin-identical ingredient, emollient

It is a saturated hydrocarbon, meaning that it is a nice and stable oily liquid with a long shelf life. It occurs naturally in certain fish and plant oils (e.g. olive), and in the sebum of the human skin. Sapelo's Squalane Oil is derived from olives. It is a superb moisturizer that makes skin nice and smooth, without being heavy or greasy.

## Coconut Alkanes

WHAT-IT-DOES: emollient, solvent

Coconut Alkanes is a volatile (something that does not absorb into the skin but evaporates from it), naturally derived renewable vegetal sources. It is a light, oily liquid that works as an emollient and gives a smooth skin feel. It's often combined with another emollient called Coco-Caprylate/Caprates and the two together can serve as a great replacement for some volatile silicones.

## Coco-Caprylate/Caprates

WHAT-IT-DOES: emollient

A light emollient ester (C8-10 fatty acids connected to C12-18 fatty alcohols) that absorbs quickly and leaves a dry but silky finish on the skin.

## Phenoxyethanol

WHAT-IT-DOES: preservative

It is the current hero preservative of choice by cosmetic formulators. It's safe and gentle, but even more importantly, it does not have the reputation of parabens. It was introduced around 1950 and today it can be used up to 1% worldwide. It can be found in nature - in green tea - but the version used in cosmetics is synthetic.

### Ethylhexylglycerin

WHAT-IT-DOES: preservative, deodorant

If you have spotted ethylhexylglycerin on the ingredient list, most probably you will see there also the current hero preservative: phenoxyethanol. This is because Ethylhexylglycerin can boost the effectiveness of phenoxyethanol (and other preservatives) and as an added bonus it feels nice on the skin too.

## Sapelo Rejuvenating Cream

### Ingredients Overview

Water (Aqua), Helianthus Annuus (Sunflower) Seed Oil, Cetearyl Alcohol, Cetareth 20, Prunus Armeniaca (Apricot) Kernel Oil, Calendula Officinalis Flower Extract, Glycine Soja (Soybean) Oil, Cetyl Ricinoleate, Saccharide Isomerate, Palmitoyl oligopeptide, Palmitoyl-tetrapeptide-7, Hexapeptide 11, Acetyl Tetrapeptide-5, Acetyl Tetrapeptide - 17, Colloidal platinum, Gardenia Jasminoides Meristem Cell Culture, Magnolia Sielboldii Extract, Hydrolyzed Hyaluronic Acid, Hydrolyzed Glycosaminoglycans, Foeniculum Vulgare (Fennel) Fruit Extract, Triticum Vulgare (Wheat) Germ Extract, Yeast Extract, Saccharomyces/Xylinum/Black Tea Ferment, Calcium 2 - Ketogluconate, Ceramide 3 , Ceramide 6 , Ceramide 1 , Phytosphingosine HCl , Cholesterol, Sodium Lauroyl Lactylate, Carbomer, Camellia Sinensis (Green Tea) Leaf Extract, Saccharomyces /Copper Ferment / Manganese Ferment / Zinc Ferment, Arnica Montana Flower Extract, Squalane Oil, Mangifera Indica (Mango) Seed Butter, 3-O-Ethyl Ascorbic Acid, Tocopherol, Algae Extract, Chondrus Crispus Extract, Sodium Hyaluronate, Alteromonas Ferment Extract, Butylene Glycol, Honey, Sorbitol, Polysorbate 60, Xanthan Gum, Oyster (Ostrea) Shell Extract, Behenyl Behenate, Aminomethyl Propanol, Acrylates/C10-30 Alkyl Acrylate Crosspolymer, Glycereth-7 Trimethyl Ether, Polyglyceryl-6 Caprylate; Polyglyceryl-4 Caprate; Polyglyceryl-4 Cocoate; Polyglyceryl-6 Ricinoleate, Glyceryl Caprylate, Glyceryl Undecylenate, Diheptyl Succinate, Capryloyl Glycerin/Sebacic Acid Copolymer, Isoamyl Laurate, Coconut Alkanes, Coco - Caprylate/Caprate, Fragrance (.002%). **Contains 2% concentration of Hyaluronic Acids**

### Highlights

Key Ingredients – Those which provide the distinct benefits of the product.

**Antioxidant:** Calendula Officinalis Flower Extract, Colloidal Platinum, Gardenia Jasminoides Meristem Cell Culture, Camellia Sinensis (Green Tea) Leaf Extract, Tocopherol

**Cell-communicating ingredient:** Palmitoyl Oligopeptide, Palmitoyl Tetrapeptide-7, Acetyl Tetrapeptide-5, Hexapeptide 11

**Skin-identical ingredient:** Ceramide 3, Ceramide 6, Ceramide 1, Cholesterol, Squalane Oil, Sodium Hyaluronate

**Soothing:** Calendula Officinalis Flower Extract, Foeniculum Vulgare (Fennel) Fruit Extract, Camellia Sinensis (Green Tea) Leaf Extract, Alteromonas Ferment Extract, Honey

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Antimicrobial/antibacterial:** Colloidal Platinum, Honey

**Antioxidant:** 3-O-Ethyl Ascorbic Acid

**Buffering:** Aminomethyl Propanol

**Emollient:** Helianthus Annuus (Sunflower) Seed Oil, Cetearyl Alcohol, Prunus Armeniaca (Apricot) Kernel Oil, Glycine Soja (Soybean) Oil, Cetyl Ricinoleate, Foeniculum Vulgare (Fennel) Fruit Extract, Cholesterol, Squalane Oil, Mangifera Indica (Mango) Seed Butter, Algae Extract, Behenyl Behenate, Glycereth-7 Trimethyl Ether, Polyglyceryl-4 Cocoate, Glyceryl Undecylenate, Diheptyl Succinate, Isoamyl Laurate, Coconut Alkanes, Coco - Caprylate/Caprates

**Emulsifying:** Cetearyl Alcohol, Cetareth-20, Sodium Lauroyl Lactylate, Polysorbate 60, Polyglyceryl-6 Caprylate, Polyglyceryl-4 Caprate, Polyglyceryl-4 Cocoate, Polyglyceryl-6 Ricinoleate, Glyceryl Undecylenate

**Moisturizer/humectant:** Saccharide Isomerate, Acetyl Tetrapeptide-5, Hydrolyzed Hyaluronic Acid, Hydrolyzed Glycosaminoglycans, Yeast Extract, Algae Extract, Chondrus Crispus Extract, Sodium Hyaluronate, Butylene Glycol, Honey, Sorbitol

**Perfuming:** Calendula Officinalis Flower Extract, Glycine Soja (Soybean) Oil, Arnica Montana Flower Extract, Fragrance

**Preservative:** Glyceryl Caprylate

**Solvent:** Water (Aqua), Butylene Glycol, Coconut Alkanes

**Surfactant/cleansing:** Cetearyl Alcohol, Cetareth-20, Polysorbate 60

**Viscosity controlling:** Cetearyl Alcohol, Carbomer, Chondrus Crispus Extract, Xanthan Gum, Acrylates/C10-30 Alkyl Acrylate Crosspolymer

## Sapelo Rejuvenating Cream



Super-Star Ingredient

Moisturizing

### Water

WHAT-IT-DOES: solvent

The most common skincare ingredient of all which is why it is in the first spot of the ingredient list. It is mainly a solvent for ingredients that do *not* like to dissolve in oils but rather in water. The water used in cosmetics is purified and deionized to remove the mineral ions.

### Sunflower (Helianthus Annuus) Seed Oil



WHAT-IT-DOES: emollient

Sunflower oil is one of the most commonly used plant oils in skincare. It is expressed directly from the seeds, and has been used for thousands of years. According to The National Sunflower Association, there is evidence that both the plant and its oil were used by American Indians in the area of Arizona and New Mexico about 3000 BC.

Sunflower oil - similar to other plant oils - is a great emollient that makes the skin smooth and nice and helps to keep it hydrated. It also protects the surface of the skin and enhances the damaged or irritated skin barrier. Cosmetic Dermatology notes that just one application of sunflower oil significantly speeds up the recovery of the skin barrier within an hour and sustains the results 5 hours after using it. It's also loaded with fatty acids (mostly linoleic (50-74%) and oleic (14-35%)). Its comedogen index is 0, meaning that it's pretty much an all skin-type oil.

### Cetearyl (Fatty) Alcohol



WHAT-IT-DOES: emollient, viscosity controlling, emulsifying, emulsion stabilizing, surfactant/cleansing

An extremely common multitasker ingredient that gives your skin a nice soft feel (emollient) and gives body to creams and lotions. It also helps to stabilize oil-water mixes (emulsions), though it does not function as an emulsifier in itself. It is what is referred to as a fatty alcohol, a mix of cetyl and stearyl alcohol, other two emollient alcohols. Though chemically speaking, it is alcohol, its properties are totally different from the properties of low molecular weight or

drying alcohols such as denatured alcohol. Fatty alcohols have a long oil-soluble structure that makes them absolutely non-drying and non-irritating.

### **Ceteareth-20**

WHAT-IT-DOES: emulsifying, surfactant/cleansing

A common functional ingredient that helps to keep the oil-loving and water-loving ingredients together (emulsifier), stabilizes and thickens the products. Chemically speaking, it is ethoxylated Cetearyl alcohol, meaning that some ethylene oxide is added to the fatty alcohol to increase the water-soluble part in the molecule. The result is that the mainly oil soluble, emollient fatty alcohol is converted to an emulsifier molecule that keeps oil and water mixed in creams. The number in the name of Ceteareth emulsifiers refers to the average number of ethylene oxide molecules added and 20 makes a good emulsifier.

### **Prunus Armeniaca (Apricot) Kernel Oil**



WHAT-IT-DOES: emollient

The emollient plant oil coming from the kernel (the seed of the seed) of the delicious apricot fruit. Like other plant oils, it contains antioxidant *vitamin E* and nourishing fatty acids (mostly *oleic acid 54-74%*, *linoleic acid 12-35%*). It is a nice general purpose emollient, has nourishing and moisturizing properties (as a high oleic oil it's ideal for dry skin types) and is quite easily absorbed into the skin.

### **Calendula Officinalis Flower Extract**



WHAT-IT-DOES: soothing, antioxidant, perfuming

The extract is derived from the popular garden plant Calendula or Marigold. According to manufacturer info, it's used for many centuries for its exceptional healing powers and is particularly remarkable in the treatment of wounds. It contains flavonoids that give the plant anti-inflammatory and antioxidant properties.

### **Glycine Soja (Soybean) Seed Extract**



WHAT-IT-DOES: antioxidant, skin brightening, soothing, emollient

The soybean has many useful active components, including: antioxidant *phenolic acids* and *flavonoids* as well as *small and large soy proteins*. The large proteins give soybean extract nice skin smoothing and softening properties, while the small proteins (soybean trypsin inhibitor (STI) and Bowman-Birk inhibitor (BBI)) are thought to inhibit skin pigmentation.

### **Cetyl Ricinoleate**



WHAT-IT-DOES: emollient

Cetyl Ricinoleate works as a conditioner, stabilizer and film forming agent in cosmetic formulations. Cetyl Ricinoleate also known for providing a light, non-oily and silky moisturization to the skin. Cetyl Ricinoleate is considered to be a non-comedogenic emollient that does not clog the pores.

### **Saccharide Isomerate**



WHAT-IT-DOES: moisturizer/humectant

A 100% natural and plant-derived moisturizer that mimics the natural carbohydrate fraction found in the upper layer of the skin. Its key power is to bind to the skin stronger and longer than other moisturizer ingredients do so it can keep the skin hydrated longer than usual.

### **Palmitoyl Oligopeptide**



WHAT-IT-DOES: cell-communicating ingredient

A six amino acid peptide that helps to improve firmness and skin tone. Its amino acid sequence is also called the "spring fragment" and is repeated six times in the important skin protein, elastin molecule. A double-blind, one-month long clinical study on 10 women, found that twice a day application of 4%, improved skin firmness by 33% and skin tone by 20%. (ALSO-CALLED: Biopeptide EI, pal-VGVAPG, Palmitoyl Oligopeptide (old name); Palmitoyl Hexapeptide-12)

### **Palmitoyl Tetrapeptide-7**



WHAT-IT-DOES: cell-communicating ingredient

A four amino acid peptide with the amino sequence of glycine-glutamine-proline-arginine. It is attached to palmitic acid (a fatty acid) to increase oil solubility and skin penetration. It works by reducing the production of the signal molecule, interleukin-6 (IL-6) which promotes inflammation in the skin and less inflammation means slower degradation of important things (like collagen) that results in younger looking skin for a longer time. (ALSO-CALLED: Part of Matrixyl 3000, Pal-GQPR, Previously Palmitoyl Tetrapeptide-3)

### **Hexapeptide-11**



WHAT-IT-DOES: cell-communicating ingredient

Hexapeptide-11 reduces the appearance of fine lines and wrinkles, making this an excellent addition to all kinds of skincare and anti-aging products. It has a unique set of amino acids that allow it to manipulate collagen levels and boost elasticity in the skin. It can be used for both skin care and scalp care.

### **Acetyl Tetrapeptide - 5**



WHAT-IT-DOES: cell-communicating ingredient, moisturizer/humectant

A four amino acid peptide that assists to improve puffy eye bags and dark circle activity via its anti-edema and anti-glycation effects. As skin loses its elasticity and muscles weaken through age, loose skin can accumulate around the eyes. This peptide fights against edema-forming mechanisms and shows a decongesting effect, enhancing skin elasticity and smoothness. To back this claim up, the manufacturer created an in-vivo study with 20 volunteers using 10% concentration, that comes down to 0.01% (!) of the pure peptide and found that by day 15, 70% of the volunteers improved, while 95% of the volunteers improved by the end of the study (60 days).

### **Acetyl Tetrapeptide - 17**



WHAT-IT-DOES: cell-communicating ingredient

Acetyl Tetrapeptide-3 is known to stimulate the dermal papilla extracellular matrix proteins

### **Colloidal Platinum**

WHAT-IT-DOES: antimicrobial/antibacterial, antioxidant, deodorant

The use of platinum as a cosmetic active is theorized to promote electron transfer between metal ions naturally found in the skin to help stimulate cell turnover and natural healing. The light scattering effect of platinum helps to reduce wrinkles.

### **Gardenia Jasminoides Meristem Cell Culture**



WHAT-IT-DOES: antioxidant/cell-communicating

An extract from the shrub of the Rubiaceae family, rich in anti-oxidants and highly defensive polyphenols, its anti-oxidant capacity is comparable to that of Vitamin C. Its high polysaccharide content reinforces the skin's extra cellular matrix while the high concentrations of fatty acids exert an anti-inflammation action. Most impressive is its unrivaled action in preserving the skin's collagen system. The stem cells stimulate the collagen system with a 3-level approach - boost collagen production, reduce collagen degradation and inhibit collagen synthesis - resulting in a slow-down of firmness loss and preservation of skin's youthful elasticity.

### **Magnolia Sieboldii Extract**

WHAT-IT-DOES: cell-communicating/de-pigmenting ingredient

Magnolia Extract is a flower/branch extract of Magnolia sieboldii clinically proven skin whitening effect. It inhibits DOPA Auto-oxidation and melanin formation. Magnolia Extract is a post-inflammatory hyper-pigmentation inhibition. This product contains adaptogenic properties that may be helpful in mitigating cellular stress.

### **Hydrolyzed Hyaluronic Acid**



WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Hydrolyzed Hyaluronic Acid is a low molecular weight version of the naturally big molecule Hyaluronic Acid (HA). (HA is a huge polymer found in the skin that acts as a sponge helping the skin to retain water, making it plump and elastic. As HA is a polymer, the subunits can be repeated many times (as a high-molecular-weight version), or just a few times (as a low-molecular-weight version). Hydrolyzed Hyaluronic Acid can also come in different molecular-weight versions.

### Hydrolyzed Glycosaminoglycans

WHAT-IT-DOES: moisturizer/humectant



Hydrolyzed Glycosaminoglycans are widely used in skin care products and cosmetics because of their ability to bind with water efficiently and increase depth hydration, improving the elasticity and firmness of the skin.

### Foeniculum Vulgare (Fennel) Fruit Extract

WHAT-IT-DOES: emollient, soothing



When contained in skin care it has anti-inflammatory, skin firming and regenerating properties. It promotes healing and provides tired, stressed skin with new radiance.

### Triticum Vulgare (Wheat) Germ Extract



A plant extract that comes from wheat germ. Used as skin and hair conditioner and skin protectant. **The wheat germ extract used in all Sapelo products contains < 20 ppm gluten and therefore meets the FDA's definition of gluten free as defined in 21 CFR §101.91(a)(3). This however; does not guarantee that the material is completely gluten free.**

### Yeast Extract

WHAT-IT-DOES: EXFOLIATES AND STIMULATES NEW CELLS

Developed using sophisticated molecular screening techniques and bio-fermented from a proprietary® strain of yeast, this extract- provides a skin resurfacing action via gentle and selective desquamation as it stimulates skin renewal. As a result, it actively refines and restores skin texture and radiance. Clinically tested anti-wrinkle and skin brightening activity after 14 and 28 days.

### Saccharomyces/Xylinum/Black Tea Ferment

WHAT-IT-DOES: plumps and repairs

Saccharomyces lysate extract is known for its ability to improve absorption, add beneficial nutrients, decrease irritation and optimize cellular oxygen consumption. Rich in amino acids, beta-glucans and vitamins, it offers skin-softening and anti-oxidant properties.

### Calcium 2 Ketogluconate



WHAT-IT-DOES INCREASES HYDRATION AND PLUMPS

Calcium Ketogluconate is used in products to combat the signs of aging because of its ability to tone and smooth fine lines and wrinkles. Calcium ketogluconate is a French-patented natural molecule that comes in pure powder form. Calcium k works in the dermis to stimulate the production of elastin and hyaluronic acid. Calcium K is safe to use around the eyes and lips because of how safe and clean it is. It is ranked a 1, which is the highest rank in safety on EWG (Environmental Working Group Site). In a clinical trial\* in France, skin fatigue and sagging was decreased by 27% and skin elasticity and flexibility increased by 16%. \*in vivo tests used a formulation with .5% of Calcium K two times a day for 28 days,

### Ceramide 3



WHAT-IT-DOES: skin-identical ingredient

One of the many types of ceramides that can be found naturally in the upper layer of the skin. Ceramides make up about 50% of the gelatinous substance between our skin cells and play an important role in maintaining a healthy skin barrier and keeping the skin hydrated. Ceramide 3 (also called Ceramide NP) works even better when combined with its pal, Ceramide 1. (See below)

## **Ceramide 6**



WHAT-IT-DOES: skin-identical ingredient

Also called Ceramide AP, it is one of the many types of ceramides that can be found naturally in the upper layer of the skin. Ceramides make up about 50% of the gelatinous substance between our skin cells and play an important role in maintaining a healthy skin barrier and keeping the skin hydrated.

## **Ceramide 1**



WHAT-IT-DOES: skin-identical ingredient

Ceramide 1, or more recently called Ceramide EOP, was the first one that was identified in 1982 and its structure is special. It contains the essential fatty acid, linoleic acid and has a unique structure. It's believed that ceramide 1 plays a "binding role" in the lipid layers of the extracellular matrix and, along with other ceramides, plays a vital role in epidermal integrity and serve as the main storage areas for linoleic acid--a fatty acid that is very important for barrier repair.

## **Phytosphingosine Hcl**



WHAT-IT-DOES: skin-identical ingredient

Phytosphingosine Hydrochloride is a natural, skin-identical cosmetic ingredient found naturally present in the skin. It effectively reduces the signs of acne, inhibits the growth of micro-organisms on the skin, reduces redness and inflamed skin and is active at very low concentrations.

## **Cholesterol**



WHAT-IT-DOES: skin-identical ingredient, emollient

It's one of the important lipids that can be found naturally in the outer layer of the skin. About 25% of the goopy stuff between our skin cells consists of cholesterol. Together with ceramides and fatty acids, they play a vital role in having a healthy skin barrier and keeping the skin hydrated. As a cosmetic ingredient, it is an excellent emollient and stabilizer.

## **Sodium Lauroyl Lactylate**

WHAT-IT-DOES: emulsifying

A helper ingredient that's used as a co-emulsifier, meaning next to other emulsifiers in the formula it helps water and oil to mix. It also, has some antimicrobial activity so it can help to boost the effectiveness of a formula's preservative system.

## **Carbomer**

WHAT-IT-DOES: viscosity controlling, emulsion stabilizing

A big molecule created from repeated subunits (a polymer of acrylic acid) that magically converts a liquid into a nice gel formula. It typically has to be neutralized with a base (such as sodium hydroxide) for the thickening to occur and it creates viscous, clear gels that also feel nice and non-tacky on the skin. No wonder, it is a very popular and common ingredient. Typically used at 1% or less in most formulations.

## **Camellia Sinensis Leaf Extract**



ALSO-CALLED: Green Tea | WHAT-IT-DOES: antioxidant, soothing

Green tea is proven to be a great antioxidant, UV protectant, anti-inflammatory, anticarcinogenic and antimicrobial. The active parts are called polyphenols, or more precisely catechins (EGCG being the most abundant and most active catechin). Because of its exceptional properties green tea is a great choice for anti-aging and also for skin diseases including rosacea, acne and atopic dermatitis.

## **Saccharomyces /Copper Ferment / Manganese Ferment / Zinc Ferment**

WHAT-IT-DOES: Humectant, conditioning and antimicrobial

A combination of micro-elements, peptides and minerals that firm and plump skin while visibly diminish the appearance of wrinkles.

## **Arnica Montana Flower Extract**

**WHAT-IT-DOES:** perfuming, soothing, healing

A nice yellow flower living in the mountains. It has been used as a herbal medicine for centuries. It's most famously used to treat bruising. It is also considered to be anti-inflammatory.

### **Squalane Oil**



**WHAT-IT-DOES:** skin-identical ingredient, emollient

It is a saturated hydrocarbon, meaning that it is a nice and stable oily liquid with a long shelf life. It occurs naturally in certain fish and plant oils (e.g. olive), and in the sebum (oil) of the human skin. It is a superb moisturizer that makes skin nice and smooth, without being heavy or greasy. Ours derived from olive oil.

### **Mangifera Indica (Mango) Seed Butter**



**WHAT-IT-DOES:** emollient, antioxidant

The soft solid, off-white to ivory butter or oil coming from the kernel (the seed inside of the seed) of the Mango. Similar to many other plant oils, it's a great moisturizing and nourishing emollient oil. It has medium spreadability and gives skin a creamy-dry feel. It's loaded with good-for-the-skin stuff, it contains almost all of the *essential amino acids*, has several *antioxidant phenolic compounds* (including famous antioxidant ferulic acid) and is a rich source of *nourishing fatty acids* (like stearic and oleic acid).

### **3-O-Ethyl Ascorbic Acid**



**WHAT-IT-DOES:** antioxidant

A skincare superstar, 3-O-Ethyl Ascorbic Acid is a pure form of vitamin C. 3-O-Ethyl Ascorbic Acid, when combined with a quality skin penetrating system, has the ability to penetrate skin tissue and stimulate collagen production. This stable derivative of pure vitamin C is known for anti-aging treatments, smoothing wrinkles and fine lines, brightening, fading hyperpigmentation and restoring a more even skin tone. It also protects from free-radical damage.

### **Tocopherol (Vitamin E)**

**WHAT-IT-DOES:** antioxidant

It is a primary fat-soluble antioxidant in our skin, which provides significant photoprotection against UVB rays. In formulations, it imparts emollient properties and works in synergy with Vit C.

### **Algae Extract**



**WHAT-IT-DOES:** emollient, moisturizer/humectant

A marine extract from seaweed that binds moisture to the skin with macromolecules. It also brings a soft and silky touch to the skin - offering the velvety feel of silicones but with a natural ingredient.

### **Algae (Chondrus Crispus Extract)**



**WHAT-IT-DOES:** moisturizer/humectant, viscosity controlling

The extract of red seaweed (Chondrus Crispus) that has nice film-forming, skin smoothing and moisturizing properties thanks to biomimetic properties between skin proteins and carrageenans (the naturally occurring polysaccharides in red seaweed) it has a very long-lasting action and can form a "second skin". It also gives a "slow-release" effect to oil-loving active ingredients and measurably reduces trans-epidermal water loss.

### **Sodium Hyaluronate**



**WHAT-IT-DOES:** skin-identical ingredient, moisturizer/humectant

It's the - sodium form - cousin of the famous NMF, hyaluronic acid (HA). HA is a huge polymer (big molecule from repeated subunits) found in the skin that acts as a sponge helping the skin to hold onto water, being plump and elastic. HA is famous for its unequalled water holding capacity as it can bind up to 1000 times its own weight in water. Hyaluronic acid and Sodium hyaluronate are nearly identical polymers; the difference is that the salt (sodium) form is more stable, easier to formulate with for most cosmetic applications.



### **Alteromonas Ferment Extract**



WHAT-IT-DOES: soothing

A so-called exopolysaccharide (high-molecular-weight polymers) secreted by a microorganism living in hydrothermal deep vents (AKA: Extremophiles). It soothes and reduces irritation to sensitive skin against chemical (such as drying acne treatments or strong chemical exfoliants), mechanical (such as micro-cuts after shaving) and UVB aggressors.

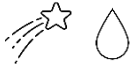
### **Butylene Glycol**



WHAT-IT-DOES: moisturizer/humectant, solvent | IRRITANCY: 0 | COMEDOGENICITY: 1

Butylene glycol, or let's just call it BG, is a multi-tasking colorless, syrupy liquid. It's a great pick for creating a nice feeling product. It's main job is usually to be a solvent for the other ingredients. Other tasks include helping the product to absorb faster and deeper into the skin (penetration enhancer), making the product spread nicely over the skin (slip agent), and attracting water (humectant) into the skin.

### **Honey**



WHAT-IT-DOES: soothing, moisturizer/humectant, antimicrobial/antibacterial

Arguably the oldest skincare ingredient, according to the Journal of Cosmetic Dermatology which cites evidence from eye cream recipes dating around 4500 BC. Chemically speaking, it is a bee-derived, supersaturated sugar solution. About 95% of honey dry weight is sugar and the other 5% consists of a great number of other minor components including *proteins, amino acids, vitamins, enzymes, and minerals*.

### **Sorbitol**



WHAT-IT-DOES: moisturizer/humectant

A sugar substitute which helps the skin to hold onto water when used in cosmetic products. It also helps to thicken up products and give them a bit more slip.

### **Polysorbate 60**

WHAT-IT-DOES: emulsifying, surfactant/cleansing

A common little helper ingredient that helps water and oil to mix together, aka emulsifier.

### **Xanthan Gum**

WHAT-IT-DOES: viscosity controlling, emulsion stabilizing

It's one of the most commonly used thickeners and emulsion stabilizers. Xanthan gum is an all-natural, chain of sugar molecules (polysaccharide) produced from individual sugar molecules (glucose and sucrose) via fermentation. It's approved by Ecocert and also used in the food industry. If the product is too runny, xanthan gum will make it more gel-like.

### **Oyster (Ostrea) Shell Extract**

WHAT-IT-DOES: energizes cellular activity

Oyster shell powder promotes metabolism, increased secretion of hormones and improves blood circulation. It is also beneficial for skin as it promotes skin metabolism and prevents it from drying, cleanses skin pores, removes dead skin cells, treats blackheads, resulting in healthy skin.

### **Behenyl Behenate**



WHAT-IT-DOES: emollient

Behenyl behenate is the wax-like ester of the fatty acid behenic acid and fatty alcohol behenyl alcohol. Can be a plant-derived or synthetic ingredient which hydrates skin and adds occlusive properties to emulsions like creams and lotions, which help to prevent moisture loss.

### **Aminomethyl Propanol**

WHAT-IT-DOES: buffering

An alkaline (high pH, aka basic) material that is used to set the pH of a formula to the proper value.

### **Acrylates/C10-30 Alkyl Acrylate Crosspolymer**

WHAT-IT-DOES: viscosity controlling, emulsion stabilizing

Though its long name does not reveal it, this polymer molecule (big molecule from repeated subunits or monomers) is a relative to the super common, water-loving thickener, Carbomer. Both of them are big molecules that contain acrylic acid units, but Acrylates/C10-30 Alkyl Acrylate Crosspolymer also contains some other monomers that are hydrophobic, i.e. water-hating. This means that our molecule is part water- and part oil-loving, so it not only works as a thickener but also as an emulsion stabilizer. It is very common in gel-type formulas that also contain an oil-phase as well as in cleansers as it also works with most cleansing agents (unlike a lot of other thickeners).

### **Glycereth-7 Trimethyl Ether**



WHAT-IT-DOES: emollient

A light yellow liquid ester that gives a slightly dry, silky emollience on the skin. Its unique property is that it is both water-soluble as well as castor oil soluble. This dual solubility is a rare trait that enables the addition of water into waterless formulas, such as lipsticks or balms. Glycereth-7 Trimethyl Ether is also very pH stable and dissolves salicylic acid so it can be a nice helper ingredient in alcohol-free (alcohol is a very good solvent for SA) salicylic acid formulas.

### **Polyglyceryl-6 Caprylate**

WHAT-IT-DOES: emulsifying

Polyglyceryl-6 caprylate/caprata is derived from polyglycerin-6 (vegetable oil component) mixed with caprylic and capric acids (saturated fatty acids from coconut/palm). It's used in many different personal care products for its gentle cleansing properties and good compatibility with sensitive skin.

### **Polyglyceryl-4 Caprate**

WHAT-IT-DOES: emulsifying

A water-loving emollient that is used as a solubilizer in water-based, toner-like formulas. Solubilizers are handy helper ingredients to dissolve small amounts of oil-loving materials (such as essential oils or fragrances) into watery liquids. Polyglyceryl-4 Caprate also has some emollient properties, making the skin feel nice and smooth.

### **Polyglyceryl-4 Cocoate**



WHAT-IT-DOES: emollient, emulsifying

This is an ester (compound) that is created by joining Coconut acid and polyglycerin-6 (glycerin polymer).

### **Polyglyceryl-6 Ricinoleate**



WHAT-IT-DOES: emulsifying, softening

This is an ester (compound) that is created by joining ricinolein acid and polyglycerin-6 (glycerin polymer). Ricinolein acid is the major constituent in castor oil from the castor bean. Along with its many derivatives, it exerts skin smoothing and moisturizing activities and recovers rough skin. In formulations, it acts as a barrier to protect against harsh weather conditions, to soothe the skin.

### **Glyceryl Caprylate**

WHAT-IT-DOES: preservative

A 100% plant derived, natural (Ecocert approved) multi-functional ingredient that has emollient and moisturizing properties, can work as a co-emulsifier (meaning that next to other emulsifiers it can help water and oil to mix) and even more importantly has a strong antimicrobial activity, thus allowing for a lower percentage of traditional preservatives.

### **Glyceryl Undecylenate**



WHAT-IT-DOES: emollient, emulsifying

Used in formulations for its ability to emulsify a product along with its antimicrobial properties. Acts as a skin-conditioning agent that moisturizes and seals moisture into the skin. Because of its natural origin, it can be found in many natural organic skincare products.

### **Diheptyl Succinate**



WHAT-IT-DOES: emollient

Diheptyl Succinate is a natural, "silicone-alternative" emollient that usually comes to the formula with Capryloyl Glycerin/Sebacic Acid Copolymer. The two together is trade-marked duo and they can mimic a Cyclomethicone/Dimethicone-like skin feel. The duo also plays well with pure natural oils, and it can reduce their greasiness and tackiness and make them feel nicer on the skin. It is also very eco-friendly, 100% natural (Ecocert approved), sustainable and biodegradable.

### **Capryloyl Glycerin/Sebacic Acid Copolymer**



WHAT-IT-DOES: emollient

The friend of Diheptyl Succinate as the duo is usually used together and is touted as a natural silicone alternative.

### **Isoamyl Laurate**



WHAT-IT-DOES: emollient

A naturally derived (Ecocert approved) colorless to yellowish oily liquid that's touted as a natural silicone alternative with great sensorial properties: light but caring, velvety, silky and non-sticky.

### **Coconut Alkanes**



WHAT-IT-DOES: emollient, solvent

Coconut Alkanes is a volatile (something that does not absorb into the skin but evaporates from it), naturally derived renewable vegetal sources. It is a light, oily liquid that works as an emollient and gives a smooth skin feel. It's often combined with another emollient called Coco-Caprylate/Caprates and the two together can serve as a great replacement for some volatile silicones.

### **Coco-Caprylate/Caprates**



WHAT-IT-DOES: emollient

A light emollient ester (C8-10 fatty acids connected to C12-18 fatty alcohols) that absorbs quickly and leaves a dry but silky finish on the skin.

### **Fragrance**

WHAT-IT-DOES: perfuming

Fragrance: Ingredients that impart a desired aroma to a formula. These are often only listed as *fragrance* (parfum in the EU) as the substance (essential oil, botanical extract, synthetic ingredient, etc.). Rejuvenating Cream at 0.002% fragrance.

## **Sapelo Anti-Aging Enzyme Mask**

### **Ingredients Overview**

Aqua (Water), Honey, Algae, Prunus Armeniaca (Apricot) Kernel Extract, Prunus Serotina (Wild Cherry) Bark Extract, Prunus Spinosa Wood Extract, Caprylic / Capric Triglyceride, Cucurbita Pepo (Pumpkin) Seed Extract, Sucrose Cocoate, Quillaja Saponaria Bark Extract, Xanthan Gum, Arctium Majus Root (Burdock) Extract, Willow Bark Extract, Soy Amino

Acids, Yeast Extract, Caprylyl/Capryl Wheat Bran/Straw Glycosides, Fusel Wheat Bran/Straw Glycosides, Polyglyceryl-5 Oleate, Sodium Cocoyl Glutamate, Glyceryl Caprylate, Phenoxyethanol, Ethylhexylglycerin.

## Highlights

Key Ingredients – Those which provide the distinct benefits of the product.

Skin Resurfacing: Soy Amino Acids/Yeast Extract

**Antioxidant:** Prunus Spinosa Wood Extract

**Soothing:** Honey, Willow Bark Extract

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Antimicrobial/antibacterial:** Honey

**Emollient:** Caprylic/Capric Triglyceride

**Emulsifying:** Sucrose Cocoate, Quillaja Saponaria Bark Extract, Caprylyl/Capryl Wheat Bran/Straw Glycosides, Fusel Wheat Bran/Straw Glycosides, Polyglyceryl-5 Oleate

**Moisturizer/humectant:** Honey, Prunus Serotina (Wild Cherry) Bark Extract, Quillaja Saponaria Bark Extract, Soy Amino Acids, Yeast Extract

**Preservative:** Glyceryl Caprylate, Phenoxyethanol, Ethylhexylglycerin

**Solvent:** Aqua (Water), Fusel Wheat Bran/Straw Glycosides

**Surfactant/cleansing:** Quillaja Saponaria Bark Extract, Caprylyl/Capryl Wheat Bran/Straw Glycosides, Caprylyl/Capryl Wheat Bran/Straw Glycosides, Fusel Wheat Bran/Straw Glycosides, Sodium Cocoyl Glutamate

**Viscosity controlling:** Xanthan Gum

## Sapelo Anti-Aging Enzyme Mask



Super-Star Ingredient



Moisturizing Ingredient

### Water

WHAT-IT-DOES: solvent

The most common skincare ingredient of all which is why it is in the first spot of the ingredient list. It is mainly a solvent for ingredients that do *not* like to dissolve in oils but rather in water. The water used in cosmetics is purified and deionized to remove the mineral ions.

### Honey



WHAT-IT-DOES: soothing, moisturizer/humectant, antimicrobial/antibacterial

Arguably the oldest skincare ingredient, according to the Journal of Cosmetic Dermatology which cites evidence from eye cream recipes dating around 4500 BC. Chemically speaking, it is a bee-derived, supersaturated sugar solution. About 95% of honey dry weight is sugar and the other 5% consists of a great number of other minor components including *proteins, amino acids, vitamins, enzymes, and minerals*.

### Algae Extract



WHAT-IT-DOES: emollient, moisturizer/humectant

A marine extract from seaweed that binds moisture to the skin with macromolecules. It also brings a soft and silky touch to the skin - offering the velvety feel of silicones but with a natural ingredient.

### **Prunus Armeniaca (Apricot) Kernel Oil**



WHAT-IT-DOES: emollient

The emollient plant oil coming from the kernel (the seed of the seed) of the delicious apricot fruit. Like other plant oils, it contains antioxidant *vitamin E* and nourishing fatty acids (mostly *oleic acid 54-74%*, *linoleic acid 12-35%*). It is a nice general purpose emollient, has nourishing and moisturizing properties (as a high oleic oil it's ideal for dry skin types) and is quite easily absorbed into the skin.

### **Prunus Serotina (Wild Cherry) Bark Extract**

WHAT-IT-DOES: astringent soothing

The constituents in Wild Cherry Bark help to reduce inflammation and act as an astringent to tissues. Applied topically, it is beneficial as an eyewash for inflamed, puffy eyes and it can be added to natural skin cream to help soothe problems such as eczema, psoriasis, acne, and rashes.

### **Prunus Spinosa Wood Extract**

WHAT-IT-DOES: antioxidant, astringent

Also called Blackthorn, this extract of the flower has been used directly to the skin for rashes, "skin impurities," and "blood purification" in herbal medicine.

### **Caprylic/Capric Triglyceride**



WHAT-IT-DOES: emollient

A commonly used emollient that makes the skin feel nice and smooth. It comes from coconut oil and glycerin, it is light-textured, clear, odorless and non-greasy, and is well tolerated by every skin type.

### **Cucurbita Pepo (Pumpkin) Seed Extract**

WHAT-IT-DOES: antioxidant

Plant whose seeds are a rich source of fatty acids and several antioxidant components, including carotene, lutein, and various carotenoid pigments. Pumpkin oil is a rich source of the skin-restoring ingredient linoleic acid and antioxidant vitamin E. Pumpkin does not contain fragrance chemicals that are sensitizing to skin, and as such can be considered a beneficial plant ingredient. Enzymes naturally present in pumpkin are often claimed to be alternative exfoliant/peel ingredients for skin.

### **Sucrose Cocoate**



WHAT-IT-DOES: emollient, moisturizer, thickener

Sucrose Cocoate is a natural, PEG-free, hydrophilic emollient and moisturizer made of sucrose esters of coconut fatty acid (sugar beets and coconut oil). HLB 15. Provides pleasant re-fattening and emollient effects. Effective moisturizer. Increases foam density, viscosity, and mildness of cleansing products. Increases gentleness and creaminess of creams & lotions. Has mild thickening effect.

### **Quillaja Saponaria Bark Extract**



WHAT-IT-DOES: surfactant/cleansing, emulsifying, moisturizer/humectant

Quillaja extract is obtained from the bark of the plant Quillaja saponaria. It is also commonly called soap bark/Panama bark/ Chinese bark tree. It is a tree (native to Central Chile) with dark, thick bark, fruits, and white-colored star-shaped flowers. The extract obtained from its bark consists of compound saponins. It has been used historically in indigenous medicine for a variety of ailments.

Quillaja extract functions as a foaming agent, cleansing agent, emulsifying, surfactant, and skin conditioning agent. Saponins have foam-forming properties. As a surfactant, it lowers the surface tension between two components of the product like two liquids or a liquid and a solid. When they are added they form a cluster, which has water-loving ions on end and fat-loving ions in the center. This is important for facial cleansers because the fat-loving part attracts dirt, oil, and other impurities accumulated on the surface of the skin which then can be washed off easily with water with the help of a water-loving part. As an emulsifier, it binds the oil and water-based components. As a skin-conditioner, it forms a protective film on the surface of the skin to prevent loss of moisture.

### **Xanthan Gum**

WHAT-IT-DOES: viscosity controlling, emulsion stabilizing

It's one of the most commonly used thickeners and emulsion stabilizers. Xanthan gum is an all-natural, chain of sugar molecules (polysaccharide) produced from individual sugar molecules (glucose and sucrose) via fermentation. It's approved by Ecocert and also used in the food industry. If the product is too runny, xanthan gum will make it more gel-like.

### **Arctium Majus Root (Burdock) Extract**



WHAT-IT-DOES: soothing

Plant extract whose active constituents are skin-soothing and antioxidant. Whether the leaves, roots, or seeds are used, burdock is a helpful ingredient for skin conditions such as: wrinkles, eczema, acne, and psoriasis when applied topically. A small observational study also found burdock may help with inflammatory types of acne.

### **Willow Bark Extract**



WHAT-IT-DOES: soothing, astringent

Also called: Salix Alba Bark Extract is the extract coming from the bark of the White Willow, a tree famous for containing anti-inflammatory natural salicylates (this powder, for example, is standardized to contain 53-65%), a close chemical relative to famous exfoliant salicylic acid. Thanks to its salicin content, willow bark is often touted as a natural alternative to salicylic acid. It also contains soothing salicin, *flavonoids* and *penolic acids* that give willow bark tonic, astringent, and antiseptic properties.

### **Soy Amino Acids**



WHAT-IT-DOES: moisturizer/humectant

Soy Amino Acids are the little components that come from totally chopping up a soy protein. It is a low-molecular-weight water-binding ingredient, that can help to moisturize deeper layers of skin or hair.

### **Yeast Extract**



WHAT-IT-DOES: moisturizer/humectant

Developed using sophisticated molecular screening techniques and bio-fermented from a proprietary<sup>®</sup> strain of yeast, this extract provides a skin resurfacing action via gentle and selective desquamation as it stimulates skin renewal. As a result, it actively refines and restores skin texture and radiance. Clinically tested anti-wrinkle and skin brightening activity after 14 and 28 days.

### **Caprylyl/Capryl Wheat Bran/Straw Glycosides**

WHAT-IT-DOES: surfactant/cleansing, emulsifying, emulsion stabilizing, surfactant/cleansing

As surfactants, caprylyl/capryl wheat bran/straw glycosides are effective at creating lather and are also used to mix oils and other ingredients which typically are not capable of mixing into water. These are produced from renewable plant-derived raw materials.

### **Fusel Wheat Bran/Straw Glycosides**

WHAT-IT-DOES: emulsifying, solvent, hydrotropic, surfactant

Ingredient formed from wheat (*triticum vulgare*) obtained by the glycosylation of alcohols derived from fuel oil with the monosaccharides derived from hydrolyzed wheat bran and wheat straw. Enhances the solubility of other ingredients in water.

### **Polyglyceryl-5 Oleate**

WHAT-IT-DOES: emulsifying

It is distilled triyglycerol ester based on vegetable oleic acid, PEG-free. Polyglyceryl-5 Oleate is an excellent emulsifier.

### **Sodium Cocoyl Glutamate**

WHAT-IT-DOES: surfactant/cleansing

A vegetable based co-surfactant that helps to create mild cleansing formulas.

### **Glyceryl Caprylate**

WHAT-IT-DOES: preservative

A 100% plant derived, natural (Ecocert approved) multi-functional ingredient that has emollient and moisturizing properties, can work as a co-emulsifier (meaning that next to other emulsifiers it can help water and oil to mix) and even more importantly has a strong antimicrobial activity, thus allowing for a lower percentage of traditional preservatives.

### **Phenoxyethanol**

WHAT-IT-DOES: preservative

It is the current hero preservative of choice by cosmetic formulators. It's safe and gentle, but even more importantly, it does not have the reputation of parabens. It was introduced around 1950 and today it can be used up to 1% worldwide. It can be found in nature - in green tea - but the version used in cosmetics is synthetic.

### **Ethylhexylglycerin**

WHAT-IT-DOES: preservative, deodorant

If you have spotted ethylhexylglycerin on the ingredient list, most probably you will see there also the current hero preservative: phenoxyethanol. This is because Ethylhexylglycerin can boost the effectiveness of phenoxyethanol (and other preservatives) and as an added bonus it feels nice on the skin too.

## **Sapelo Softening Emollient**

### **Ingredients Overview**

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Prunus Armeniaca (Apricot) Kernel Oil, Argania Spinosa Kernel Oil, Trimethyl Phenyl Silsesquioxane, Squalane, Bisabolol, Curcuma longa, Eugenia Caryophyllus (Clove) Bud Oil, Cymbopogon Schoenanthus (Lemongrass) Oil, Sesamum Indicum Seed Oil, Rosa Moschata (Rose Hip) Seed Oil, Vitis Vinifera (Grape) Seed Oil, Tocopherol

### **Highlights**

Key Ingredients – Those which provide the distinct benefits of the product.

**Antioxidant:** Argania Spinosa Kernel Oil, Curcuma Longa, Vitis Vinifera (Grape) Seed Oil, Tocopherol

**Skin brightening:** Curcuma Longa

**Skin-identical ingredient:** Squalane

**Soothing:** Bisabolol, Curcuma Longa

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Emollient:** Prunus Armeniaca (Apricot) Kernel Oil, Argania Spinosa Kernel Oil, Squalane, Sesamum Indicum Seed Oil, Rosa Moschata (Rose Hip) Seed Oil, Vitis Vinifera (Grape) Seed Oil

**Perfuming:** Curcuma Longa, Eugenia Caryophyllus (Clove) Bud Oil

## Sapelo Softening Emollient



Super-Star Ingredient



Moisturizing Ingredient

### Prunus Armeniaca (Apricot) Kernel Oil



WHAT-IT-DOES: emollient

The emollient plant oil coming from the kernel (the seed of the seed) of the delicious apricot fruit. Like other plant oils, it contains antioxidant *vitamin E* and nourishing fatty acids (mostly *oleic acid 54-74%*, *linoleic acid 12-35%*). It is a nice general purpose emollient, has nourishing and moisturizing properties (as a high oleic oil it's ideal for dry skin types) and is quite easily absorbed into the skin.

### Argania Spinosa Kernel Oil



WHAT-IT-DOES: antioxidant, emollient

Argan oil, dubbed the "liquid gold of Morocco", comes from the kernel of the argan fruit which comes from the argan tree that grows only in Morocco. Argan oil contains 80% nourishing and moisturizing unsaturated fatty acids, mainly *oleic (38-50%)*, *linoleic (28-38%)* and *palmitic (10-18%)*. It also contains a relatively large amount of antioxidant *vitamin E* (600-900 mg/kg, about twice as much as olive), small amounts of antioxidant *phenols* (including caffeic acid, ferulic acid, and epicatechin), as well as some rare *sterols* with soothing and anti-inflammatory properties.

### Squalane Oil



WHAT-IT-DOES: skin-identical ingredient, emollient

It is a saturated hydrocarbon, meaning that it is a nice and stable oily liquid with a long shelf life. It occurs naturally in certain fish and plant oils (e.g. olive), and in the sebum of the human skin. It is a superb moisturizer that makes skin nice and smooth, without being heavy or greasy. Our squalane is derived from olives.

### Bisabolol



WHAT-IT-DOES: soothing

It's one of the active parts of Chamomile that contains about 30% of bisabolol. It's a clear oily fluid that is used in skincare as a nice anti-inflammatory and soothing ingredient. (Also called: Alpha-Bisabolol)

### Curcuma Longa



WHAT-IT-DOES: antioxidant, soothing, skin brightening, perfuming

Turmeric (Also called: Turmeric Root Extract) is the yellow spice you probably know from curry and Indian food. It's also a traditional herbal medicine used in Ayurveda. As for turmeric and skincare, studies show that the root extract and its main biologically active component, *curcumin* can do multiple good things for the skin. Thanks to its anti-inflammatory and antimicrobial activity, it shows some promise for acne-prone skin and a small study from 2013 showed that it might be able to regulate sebum production.

### Eugenia Caryophyllus (Clove) Bud Oil

WHAT-IT-DOES: perfuming

Clove bud imparts a natural, somewhat spicy, aroma and has been shown to relieve itching when applied topically to the skin.



### **Cymbopogon Schoenanthus (Lemongrass) Oil**

WHAT-IT-DOES: perfuming

Lemongrass oil imparts a fresh and fruity lemon-scented aroma and has a mild astringent effect.

### **Sesamum Indicum Seed Oil**



WHAT-IT-DOES: emollient

A goldish to dark yellow emollient plant oil coming from Sesame seeds. Similar to many other plant oils, it contains high amounts of nourishing and moisturizing fatty acids (about 38% of oleic and 48% of linoleic acid) and is a nice oil to repair and regenerate dry skin. It is rapidly absorbed, making the skin feel soft and supple.

### **Rosa Moschata (Rose Hip) Seed Oil**



WHAT-IT-DOES: emollient

The retinoids in rosehip oil can help brighten your skin, prevent blackheads, and reduce inflammation. Rosehip oil also contains linoleic acid, a fatty acid that can aid acne prevention and shrink pimples. Rosehip oil may help treat eczema, an inflammation of the skin that can cause itching and redness.

### **Vitis Vinifera (Grape) Seed Oil**



WHAT-IT-DOES: antioxidant, emollient

Coming from the polyphenol-rich seeds of the grape, Grape Seed Oil is a light emollient oil that makes skin feel smooth and nice. It's a great source of antioxidant polyphenols, barrier repair fatty acid linoleic acid (about 55-77%, while oleic acid is about 12-27%) and antioxidant, skin-protectant vitamin E.

### **Tocopherol (Vitamin E)**



WHAT-IT-DOES: antioxidant

It is a primary fat-soluble antioxidant in our skin, which provides significant photoprotection against UVB rays. In formulations, it imparts emollient properties and works in synergy with Vit C.

## **Sapelo Milk & Honey Mask**

### **Ingredients Overview**

Aqua (Water), Glycerin, Caprylic / Capric Triglyceride, Pseudoalteromonas Ferment Extract, Proline, Alanine, Serine, Sodium Phosphate, Sodium Hydroxide, Caprylyl Glycol, Chondrus Crispus Extract, Sodium Acrylates Copolymer, Lecithin, Algae Extract, Honey, Whey Protein, Chamomilla Recutita (Matricaria) Flower Extract, Glyceryl Caprylate, Glyceryl Undecylenate, Fragrance (0.002%)

### **Highlights**

Key Ingredients – Those which provide the distinct benefits of the product.

**Antioxidant:** Chamomilla Recutita (Matricaria) Flower Extract

**Cell-communicating ingredient:** Whey Protein

**Skin-identical ingredient:** Glycerin, Proline, Alanine, Serine

**Soothing:** Pseudoalteromonas Ferment Extract, Honey, Chamomilla Recutita (Matricaria) Flower Extract

Other Ingredients – Those which are needed to make the formula safe, stable, and marketable.

**Antimicrobial/antibacterial:** Honey

**Buffering:** Sodium Phosphate, Sodium Hydroxide

**Emollient:** Caprylic/Capric Triglyceride, Caprylyl Glycol, Lecithin, Algae Extract, Glyceryl Undecylenate

**Emulsifying:** Lecithin, Glyceryl Undecylenate

**Moisturizer/humectant:** Glycerin, Pseudoalteromonas Ferment Extract, Caprylyl Glycol, Chondrus Crispus Extract, Algae Extract, Honey

**Perfuming:** Fragrance

**Preservative:** Glyceryl Caprylate

**Solvent:** Aqua (Water)

**Viscosity controlling:** Chondrus Crispus Extract, Sodium Acrylates Copolymer

## Sapelo Milk & Honey Mask



Super-Star Ingredient



Moisturizing Ingredient

### Water

WHAT-IT-DOES: solvent

The most common skincare ingredient of all which is why it is in the first spot of the ingredient list. It is mainly a solvent for ingredients that do *not* like to dissolve in oils but rather in water. The water used in cosmetics is purified and deionized to remove the mineral ions.

### Glycerin



ALSO-CALLED: Glycerol | WHAT-IT-DOES: skin-identical ingredient, moisturizer/humectant

Glycerin is a real cosmetic staple. It's been used in cosmetics for more than 50 years and it is a totally natural ingredient that's also a component in the outermost layer of our skin (stratum corneum - SC). Glycerin keeps the skin lipids between our skin cells in a healthy (liquid crystal) state, protects against irritation and helps to restore barrier. It is a humectant-type of moisturizer meaning that it helps our skin to cling onto water. A 2005 study has shown that glycerin levels correlate with skin hydration levels, so more glycerin means better hydration.

As newer studies examine glycerin it turns out more and more that it's not just a simple humectant but also does some other important things:

- It binds the fluid between the skin cells (interstitial) assuring that it is neither too diluted nor too concentrated (it's called osmoregulation)
- It helps to maintain the healthy state of the cell membranes and intracellular lipids (keeping the lipids in a nice liquid crystal state that is optimal for barrier function)
- It can normalize skin shedding in very dry skin.
- It protects against skin irritation from environmental sources (such as washing your face too much and/or too aggressively)

### Caprylic/Capric Triglyceride



WHAT-IT-DOES: emollient

A commonly used emollient that makes the skin feel nice and smooth. It comes from coconut oil and glycerin, it is light-textured, clear, odorless and non-greasy, and is well tolerated by every skin type.

### **Pseudoalteromonas Ferment Extract**



WHAT-IT-DOES: soothing, moisturizer/humectant, absorbent/mattifier

A biotechnologically derived ingredient that is produced by the fermentation of a marine bacteria. This microbe's unique adaptation allows it to survive in the extreme environments of Antarctica's King George Island, which is why the organism is called an extremophile. Pseudoalteromonas produces a unique glycoprotein (AKA: glycopeptide) covering its cellular membranes to reduce cryogenic damage in the organism. This glycoprotein has shown significant healing and protective effects for lipid layers as it spreads effectively on the horny layer of the epidermis, preventing skin dryness through its excellent moisturizing properties. This, in turn, can help post-procedural or acutely dry skin rapidly recover its barrier function. In addition, Pseudoalteromonas has been shown to be effective in fighting against poor collagen turnover and ineffective elastin production.

In vitro tests showed increased Collagen I and Collagen IV as well as the synthesis of Elastin. These gains via a (5% glycoprotein) have been shown to produce anti-wrinkle activity which has been confirmed through skin topography analysis and confocal laser scanning microscopy performed the analysis of the silicon replicas. As a result, the depth of the wrinkles around the eyes decreased significantly up to 50%.

### **Proline**

WHAT-IT-DOES: skin-identical ingredient

A non-essential amino acid (meaning that our body can produce it) that's also one of the major building blocks of collagen. Shows promise in improving appearance of wrinkles when combined with other amino acids.

### **Alanine**

WHAT-IT-DOES: skin-identical ingredient

A non-essential amino acid (a building block of skin proteins like collagen or elastin) that hydrates the skin.

### **Serine**

WHAT-IT-DOES: skin-identical ingredient

Serine is an amino acid that most often comes to the formula as part of a moisturizing complex. It's a non-essential amino acid (meaning that our body can synthesize it) and serves as a water-binding ingredient.

In general, amino acids are great skincare ingredients that play an important role in proper skin hydration.

### **Sodium Phosphate**

WHAT-IT-DOES: buffering of pH

It is a buffering agent, used in cosmetic formulations to help them achieve the proper pH.

### **Sodium Hydroxide**

WHAT-IT-DOES: buffering

The unfancy name for: lye. It is a solid, white, substance that is very alkaline and is typically used in very small amounts to adjust the pH of the product and make it optimal for the performance of the overall formulation.

### **Caprylyl Glycol**

WHAT-IT-DOES: moisturizer/humectant, emollient, deodorant

It's a handy multi-tasking ingredient that gives the skin a nice, soft feel. It also boosts the effectiveness of preservatives, such as phenoxyethanol (see below). The blend of these two (caprylyl glycol + phenoxyethanol) is a popular duo called Optiphen, which not only helps to keep your cosmetics pristine for a long time but also gives a good feel to the finished product.

### **Chondrus Crispus Extract**



WHAT-IT-DOES: moisturizer/humectant, viscosity controlling

The extract of red seaweed (Chondrus Crispus) that has nice film-forming, skin smoothing and moisturizing properties thanks to biomimetic properties between skin proteins and carrageenans (the naturally occurring polysaccharides in red

seaweed) it has a very long-lasting action and can form a "second skin". It also gives a "slow-release" effect to oil-loving active ingredients and measurably reduces trans-epidermal water loss.

### **Sodium Acrylates Copolymer**

WHAT-IT-DOES: viscosity controlling

A big molecule from repeated subunits that is used to form gel-like textures and create a film on the skin.

### **Lecithin**



WHAT-IT-DOES: emollient, emulsifying

A very common ingredient that can be found in all cell membranes. In cosmetics it is a useful multi-tasker: it is an emollient and water-binding ingredient but it's also an emulsifier and can be used for stabilization purposes. It is also often used to create liposomes.

### **Algae Extract**



WHAT-IT-DOES: emollient, moisturizer/humectant

A marine extract from seaweed that binds moisture to the skin with macromolecules. It also brings a soft and silky touch to the skin - offering the velvety feel of silicones but with a natural ingredient.

### **Honey**



WHAT-IT-DOES: soothing, moisturizer/humectant, antimicrobial/antibacterial

Arguably the oldest skincare ingredient, according to the Journal of Cosmetic Dermatology which cites evidence from eye cream recipes dating around 4500 BC. Chemically speaking, it is a bee-derived, supersaturated sugar solution. About 95% of honey dry weight is sugar and the other 5% consists of a great number of other minor components including *proteins, amino acids, vitamins, enzymes, and minerals*.

### **Whey Protein**



WHAT-IT-DOES: cell-communicating ingredient

Protein fragments, aka peptides and growth factors derived from milk can help to boost the production of extracellular matrix components such as hyaluronic acid, collagen I and fibronectin. In-vivo tests have shown reduced wrinkles and improved firmness in two weeks by using 0.5%

### **Chamomilla Recutita (Matricaria) Flower Extract**



WHAT-IT-DOES: soothing, antioxidant

Chamomile (Also called German Chamomile) is used mainly for its anti-inflammatory properties. It contains the terpenoids chamazulene and bisabolol both of which show great anti-inflammatory action. Chamomile also has some antioxidant activity (thanks to the actives: matricine, apigenin and luteolin).

### **Glyceryl Caprylate**

WHAT-IT-DOES: preservative

A 100% plant derived, natural (Ecocert approved) multi-functional ingredient that has emollient and moisturizing properties, can work as a co-emulsifier (meaning that next to other emulsifiers it can help water and oil to mix) and even more importantly has a strong antimicrobial activity, thus allowing for a lower percentage of traditional preservatives.

### **Glyceryl Undecylenate**



WHAT-IT-DOES: emollient, emulsifying

Used in formulations for its ability to emulsify a product along with its antimicrobial properties. Acts as a skin-conditioning agent that moisturizes and seals moisture into the skin. Because of its natural origin, it can be found in many natural organic skincare products.

### **Fragrance**

WHAT-IT-DOES: perfuming

Fragrance: Ingredients that impart a desired aroma to a formula. These are often only listed as *fragrance* (parfum in the EU) as the substance (essential oil, botanical extract, synthetic ingredient, etc.). Contains 0.002% fragrance.