
MAJIME BIO



Majime bio : Probiotics vs Prebiotics

Microbiome vs Microbiota

Probiotics: Are alive bacteria

Prebiotics : Are 'food' for our good bacteria strains

The FDA does not currently regulate the use of probiotics in skincare and only recently issued draft guidance for the use of probiotics in dietary supplements.

➤ **Therefore, probiotics are not allowed in the cosmetics industry**

Microbiome: is the genetic material of all the microbes - bacteria, fungi & viruses

Microbiota: refers to specific microorganisms that are found within a specific environment

➤ **Microbiota describes the actual bacteria, and microbiome is the bacteria and their genes.**

Majime Bio: Fermentation

➤ What Is Fermentation?

- ✓ Fermentation is the **breakdown** of complex **organic compounds** into simple **organic compounds** through a chemical **enzyme reaction**

➤ How Does Fermentation Work?

- ✓ Fermentation is the process in which a substance breaks down into a simpler substance.

➤ What happens during the fermentation process?

- ✓ The **fermentation** process transforms the **natural substances** in a moisturizer, serum or mask, enabling the skin to more readily accept and **absorb** these ingredients. The process also **creates** additional skin-loving **amino acids and antioxidants**.

➤ Benefits of fermentation:

- ✓ Helps skin more readily **absorb** the active ingredient making it more effective.
- ✓ Increases the level of antioxidants in the ingredients which can provide numerous benefits to the skin
- ✓ Remove dead skin build up which makes it comparable to strong forms of exfoliation while remaining gentle on the skin.
- ✓ Fermentation reduces the chances of skin irritation
- ✓ Fermentation creates new skin-benefitting substances

Majime Bio: what the fermentation process looks like with Majime Bio Cranberry



After the raw materials pass quality control, **Cranberry** is extracted and replaced with hydrating birch juice and bacteria *Lactobacillus*. It is then put in a dark facility at 30 to 70 ° and 70-80% relative humidity to ferment for two days.



Majime Bio- LAB & AHA

➤ The benefits of Lactic Acid Bacteria- Fermentation

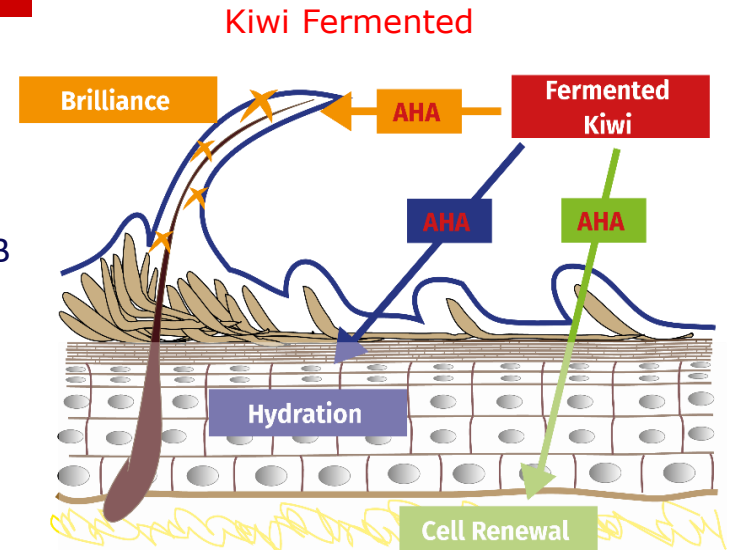
Fermentation technology involving LAB is known to be useful for producing or improving the function of many kinds of cosmetic ingredients including generation of **natural AHA's**. Advances in LAB science are continuously being used to improve the safety and function of cosmetic ingredients, and these ingredients are expected to keep skin in good condition and healthier overall.

- Safe Bacteria (non- GMO)
- Self preservation
- Biome friendly

➤ The benefits of Alpha Hydroxy Acids - AHA's

AHAs exert benefits both to the outer layer of the skin (epidermis) and the deep layer (the dermis). AHAs have an exfoliative effect, increasing the shedding of dead skin cells retained at the surface. They do this by gently cleaving the retained bonds between dead skin cells, triggering of cell renewal and epidermal metabolism.

- Exfoliate the skin
- Natural moisturizer
- Support skin firmness



Acts as an antioxidant-, regenerating- and anti-aging agent. stimulates cell renewal and illuminates complexion & hair. It exhibits ultra-high concentrations of alpha hydroxy acids (AHAs). It is suitable for sensitive skin and offers smoothness, plump, even complexion and radiance. It provides shine and glossy effect to hair.

Majime Bio : Benefits

➤ Majime Bio

Fermentation has been practiced by many cultures for thousands of years and although the process is simple, it provides **super charged ingredients** to help deliver **some powerful benefits to your skin**.

Fermented ingredients, like our **Majime Bio fruit extracts**, are prebiotic and thus extremely beneficial to the skin microbiome. The **fermentation** process by using probiotic **Lactic Acid Bacteria** gives rise to micronutrients, bioactive compounds and organic acids, which synergistically help the skin become healthier.

As the **fermentation** process **increases** the **level of antioxidants** in each ingredient, this may help **slow down the ageing process** of the skin.

Using **fermented products** is an **excellent** way to hydrate and nourish your skin without the worry of skin irritation.

It is also an antioxidant that can **reduce free radicals** and **protect the skin from UV damage**.

Majime Bio : Benefits of Fermented fruits

➤ Majime Bio Non fermented vs Fermented

Fruits	Non Fermented	Fermented
Cranberries	<ul style="list-style-type: none"> ✓ Rich in vitamin C ✓ Boost collagen production ✓ Improve the elasticity of the skin 	<ul style="list-style-type: none"> ✓ Boost vitamin C ✓ Boost the elasticity of the skin ✓ Stabilize and minimize the damaging effects of free radicals for vibrant ✓ Cyto-protection against bacterial induced cell death. ✓ Revitalizing ✓ Support vibrant health and wellbeing
Kiwi	<ul style="list-style-type: none"> ✓ Antioxidant ✓ Contain Vitamin C 	<ul style="list-style-type: none"> ✓ Excellent moisturizer and highlighter ✓ Improving epidermis' cell functions ✓ Boost antioxidant ✓ Boost anti-aging ✓ Boost Vitamin C ✓ Antioxidant
Green Tea	<ul style="list-style-type: none"> ✓ Contains a powerful antioxidant ✓ Anti-inflammatory properties ✓ Reduce irritation, redness, and swelling ✓ Vitamin B2 and Vitamin E 	<ul style="list-style-type: none"> ✓ Boosts its antioxidant levels of polyphenols ✓ Your skin absorb antioxidants easier ✓ Boost & protect against UV radiation ✓ Contains the most powerful catechin – EGCG ✓ Fights against sun damage ✓ Allows collagen production to progress smoothly for firm, supple skin ✓ Repair in your skin cells
Ginger	<ul style="list-style-type: none"> ✓ Rejuvenates Skin ✓ Prevent free radical damage and protect against aging ✓ Increases circulation to your scalp ✓ Stimulate circulation and tone your skin 	<ul style="list-style-type: none"> ✓ Boost antioxidant ✓ inhibits the breakdown of elastin ✓ Protect against UVA radiation ✓ boost the circulation of your skin's smallest blood vessels ✓ protect your skin from free radicals and other environmental aggressors ✓ natural anti-inflammatory properties

Majime Bio : Benefits of Fermented fruits

➤ Majime Bio Non fermented vs Fermented

Fruits	Non Fermented	Fermented
Cocos	<ul style="list-style-type: none"> ✓ Excellent for the immunity system ✓ Antifungal, anti-bacterial, and anti-parasitic. ✓ Maintaining hydration ✓ Fights dryness ✓ Effective on acne, black spots and blemishes 	<ul style="list-style-type: none"> ✓ Boost Vitamin C, E, B-1, B-3 ✓ Boost hydration ✓ Stimulate collagen expression ✓ Fight against anti-aging ✓ Boost anti-microbial properties (antifungal)
Apple	<ul style="list-style-type: none"> ✓ Improves your complexion. ✓ Hydrates the skin. ✓ Offers Protection from UV rays. ✓ Treats acne, blemishes, and dark spots. ✓ Works as a natural toner. ✓ Reduces puffy eyes & dark circles 	<ul style="list-style-type: none"> ✓ Boost anti-inflammatory properties ✓ Increase Hydration of skin ✓ May disrupt the skin barrier leading to skin inflammation ✓ Triple threat of being a potent antibacterial, antifungal and antiviral substance ✓ Reduce the levels of acne-causing bacteria and exfoliates the dead skin cells
Matcha	<ul style="list-style-type: none"> ✓ Preserve antioxidant levels and chlorophyll ✓ Fight free radicals which damage cells ✓ Blocks the effects of UV radiation ✓ Provides the perfect background for your skin to thrive 	<ul style="list-style-type: none"> ✓ Boost vitamins, minerals, theanine, and catechins ✓ Have antioxidant, antibacterial and relaxation effects ✓ Adjust the balance, keep the skin healthy, and promotes smooth skin ✓ Help to minimize pores and removes dead skin cells

➤ **Fermented cosmetics ingredients are more symbiotic with the skin. Majime bio provide a sort of protection for the skin and strengthen the skin's metabolism to make it stronger and healthier.**

Majime Bio - Kiwi

Majime Bio Kiwi

INCI: Actinidia Chinensis (Kiwi) Fruit Water, Lactobacillus Ferment

✓ Applications

- ✓ Skin & Hair Care
- ✓ Sun Care & Anti-aging

✓ Benefits

- ✓ Antioxidant
- ✓ Vitamin C + E & Polyphenols
- ✓ Skin firming
- ✓ Reducing the appearance of wrinkles & fine lines

✓ Formulating with Majime Bio Kiwi

- ✓ Recommended use level 0,5-4%

✓ Physical & chemical Properties

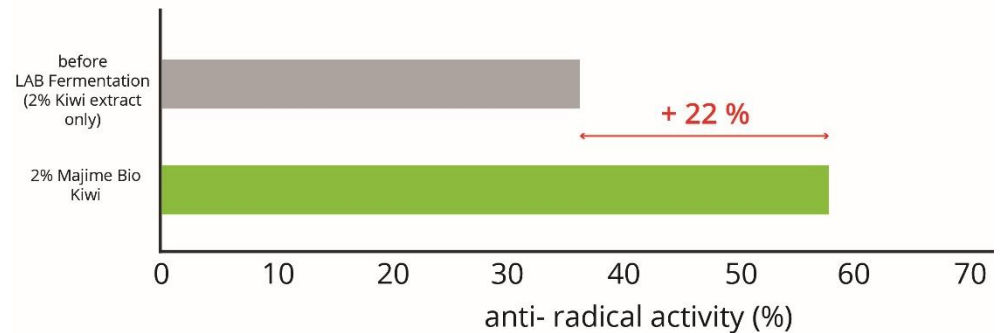
Appearance: transparence light green

Solubility : in water

pH: 3-5

✓ Origin

- ✓ Kiwi from Italy



▶ Boosting of radical scavenging activity power

▶ Claims: anti-oxidant, anti- ageing

LAB- fermentation leads to 22 % increased anti-radical scavenging activity of Kiwi Fruit Ferment compared to non- fermented control.

Majime Bio Kiwi exhibited higher antioxidant activity to scavenge free radicals.

Majime Bio - Cranberry

Majime Bio Cranberry

INCI: Vaccinium Macrocarpon (Cranberry) Fruit Juice, Lactobacillus Ferment

✓ Benefits

- ✓ Deeply Moisturizing
- ✓ Nourishing
- ✓ Soothing
- ✓ Firm & Tighten Skin
- ✓ Vitamin A + C

✓ Origin

- ✓ Cranberry : Canada & USA

✓ Applications

- ✓ Skin & Eye care
- ✓ Hair care

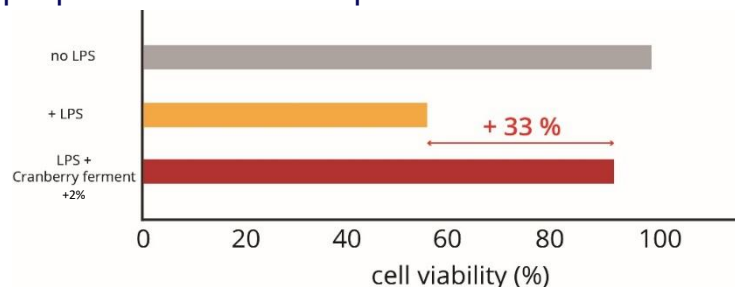
✓ Formulating with Majime Bio Cranberry

- ✓ Recommended use level 0,5-4%

✓ Physical & chemical Properties

Appearance : transparant – light red
Solubility : water
pH 3-5

Cranberry, a versatile fruit, is known for nutritional as well as medicinal properties due to the presence of bioactive compounds.



▶ Decreased LPS-mediated cell death

▶ Claims: cyto- protection, revitalizing

Primary fibroblast are treated with Lipopolysaccharide (LPS), an bacterial-derived strong inducer of inflammatory processes, leading to cell death.

Only 60 % of a cell population survive in presence of LPS only without Majime-Bio Cranberry.

In presence of LPS in combination with 2% of Majime Bio-Cranberry we can increase the percentage of viable cells by up to 33% compared to LPS-only treated cells.

Majime-Bio Cranberry shows cyto-protective activity against bacterial induced cell death.

Majime Bio - Green Tea / Ginger

Majime Bio Green Tea / Ginger

INCI: Camellia Sinensis Leaf Extract, Zingiber officinale (Ginger), Water, Lactobacillus Ferment

✓ Benefits

- ✓ Anti-inflammatory
- ✓ Antimicrobial
- ✓ Antioxidant
- ✓ Contains catechine

✓ Origin

- ✓ Green Tea: China & Ginger EU

✓ Physical & chemical Properties

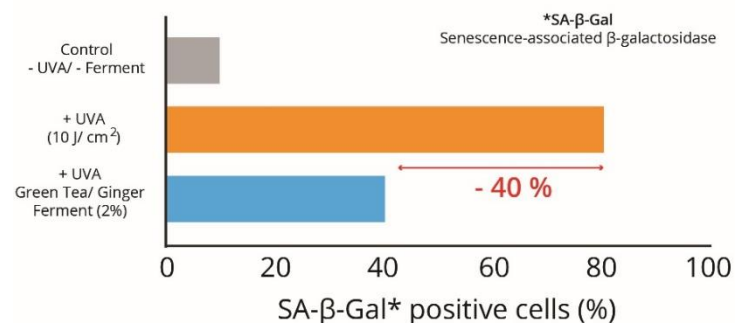
Appearance : transparant light yellow
Solubility : water
pH 3-5

✓ Applications

- ✓ Hair & Skin care

✓ Formulating with Majime Bio Green Tea / Ginger

- ✓ Recommendation use level 0,5-4%



- ▶ Inhibition of cellular ageing upon UVA irradiation
- ▶ Claims: anti- ageing

The phenolic compounds of Green Tea and bioactive compounds, like shogaols from Ginger, may inhibit UVA-induced damage of DNA and preventing cells entering into state of senescence.

The study shows that human dermal fibroblast without exposure of UVA shows only 10% of senescent cells of the whole population. After exposure of UVA with 10 J/ cm² without Majime Bio Green Tea/ Ginger, Beta-Galactosidase-positive cells increased by 70% to nearly 80%. This clearly shows and damaging effect of the applied UVA radiation. Exposure of equivalent UVA power on human dermal fibroblast in presence of 2% Majime Bio Green Tea/ Ginger, the part of senescent cells can be reduced by up to 40% compared to cells without Majime Bio Green Tea/ Ginger.

Majime-Bio Green Tea/ Ginger may protect against extrinsic aging of skin cells through preventing from entering the senescent state after UVA radiation.

Majime Bio - Cocos

Majime Bio Cocos

INCI: Cocos Nucifera (Coconut) Fruit Juice, Lactobacillus Ferment

✓ Benefits

- ✓ High in vitamins C, E, B-1, B-3
- ✓ Antimicrobial
- ✓ Moisturizing

✓ Applications

- ✓ Skin & Hair Care
- ✓ Milk lotion
- ✓ Mask & Shampoo

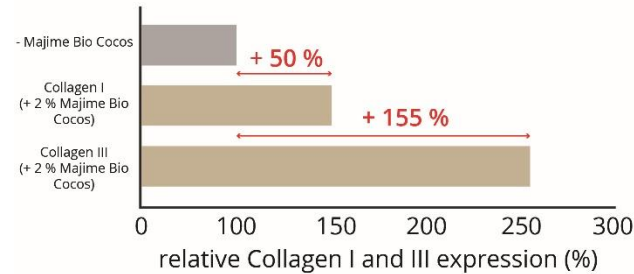
✓ Formulating with

- ✓ Recommendation use level 0,5-4%

✓ Physical & chemical Properties

Appearance : transparent light
Solubility: water
pH 3-5

A conditioning and intensively moisturising substance with antimicrobial effects that can replace conventional synthetic preserving agents.



✓ Origin

- ✓ Coconut : Sri Lanka

- ▶ Boosting of Collagen I & III synthesis
- ▶ Claims: dermal matrix remodeling, anti- ageing

Collagen type I and III are the major collagen components and are responsible providing tensile strength to connective tissue including skin.

In this study, Majime bio was investigated on human keratinocytes for stimulation of Collagen I and III expression by immunohisto- staining.

By exposing human skin cells to 2% Majime Bio Cocos, the collagen content increased by 50% and 155% for Collagen I and III, respectively compared in relation to untreated cells.

Majime Bio Cocos may stimulate Collagen expression and, therefore may strengthen the connective skin tissue and stimulate the remodeling of the extracellular matrix.

Majime Bio - Apple/Matcha

Majime Bio Apple/Matcha

INCI: Pyrus malus (Apple), Fruit Water, Camellia Sinensis Leaf, Lactobacillus Ferment

✓ Benefits

- ✓ Refreshing
- ✓ Regenerating
- ✓ Revitalizing

✓ Origin

- ✓ Apple: Germany
- ✓ Matcha : Japan

✓ Applications

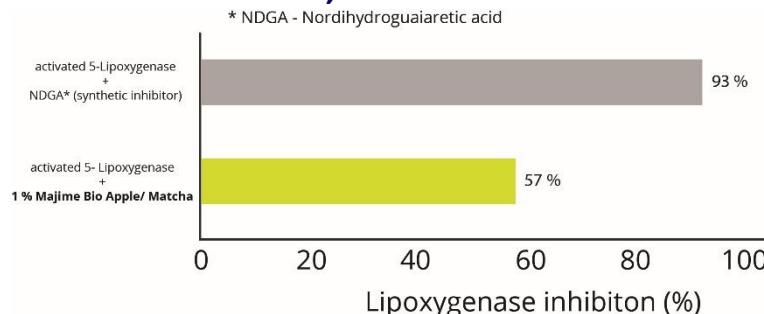
- ✓ Skin & hair Care
- ✓ Color cosmetic

✓ Formulating with Majime Bio Apple Matcha

- ✓ Recommendation 0,5-4%

✓ Physical & chemical Properties

Apparance transparent light orange
Solubility : Water
pH: 3-5



- ▶ Inhibition of proinflammatory Lipoxygenase enzyme
- ▶ Claims: anti-inflammatory, soothing

Lipoxygenases (e.g. LOX-5) are key enzymes in pro-inflammatory processes by catalyzing the synthesis of leukotrienes. The inhibition of LOX-5 activity negatively effects the biosynthesis of leukotrienes and prevent the inflammatory process in the skin. The 5-LOX enzyme is activated in presence of linoleic acid as substrate. By addition of Nordihydroguaiaretic acid (NDGA), a potent LOX-5 inhibitor, the 5-LOX enzyme activity is strongly inhibited by up to 93%. In presence of 1 % Majime Bio Apple/ Matcha, the previously activated enzyme was inhibited up to 57 %. Therefore, Majime Bio Apple/ Matcha represents an effective natural inhibitor of the pro-inflammatory 5-LOX enzyme in contrast to the synthetic positive control NDGA.



THANK YOU

Contacts:

AmphoChem AB

Jan Haataja

Product & Sales Manager

jan.Haataja@amphochem.com

www.amphochem.com