

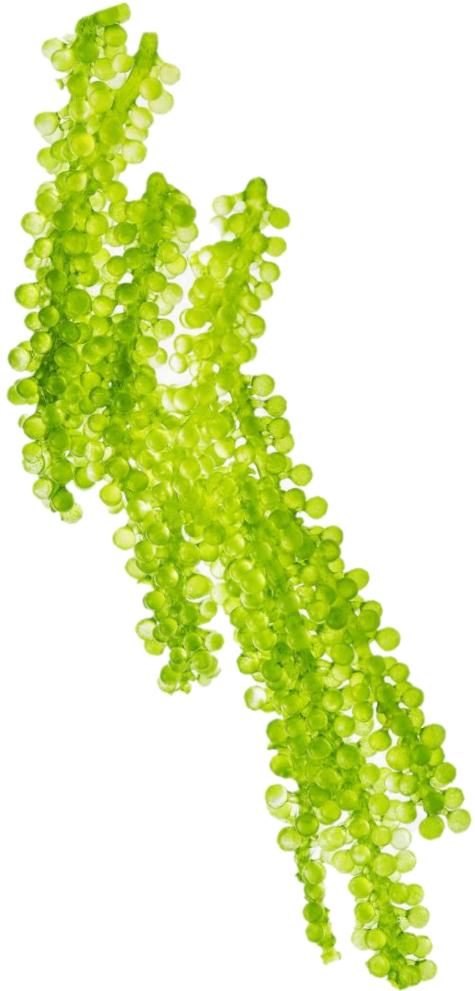


SEAGRAPES EXTRACT

A natural active cosmetic ingredient

PATENTED

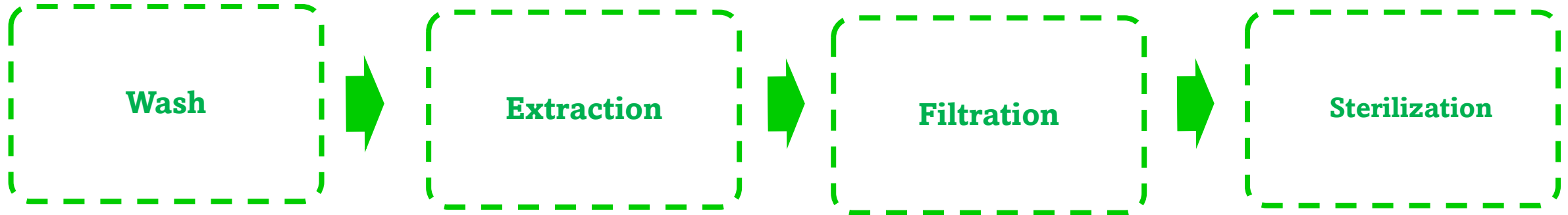
SEA GRAPE EXTRACT A GREEN SEAWEED



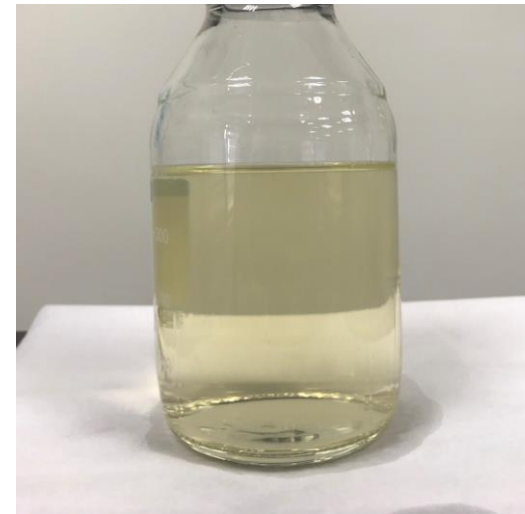
It exists two chlorophytes in the genus *Caulerpa*, *C. microphysa* and *C. lentillifera*, also known as sea grapes and Green Caviar, because of their fully rounded and crystal clear green spherical structures. We collaborated with **National Taiwan Ocean University** which had developed the artificial *Caulerpa* culture technique, which allows massive and stable production of good-quality *Caulerpa*. Its culture uses seawater and mineral nutrients, and it is guaranteed **ISO-9001, non-GMO and chemical-free**, cultivated under controlled conditions.

SEA GRAPE EXTRACT A GREEN SEAWEED

- Extraction method*

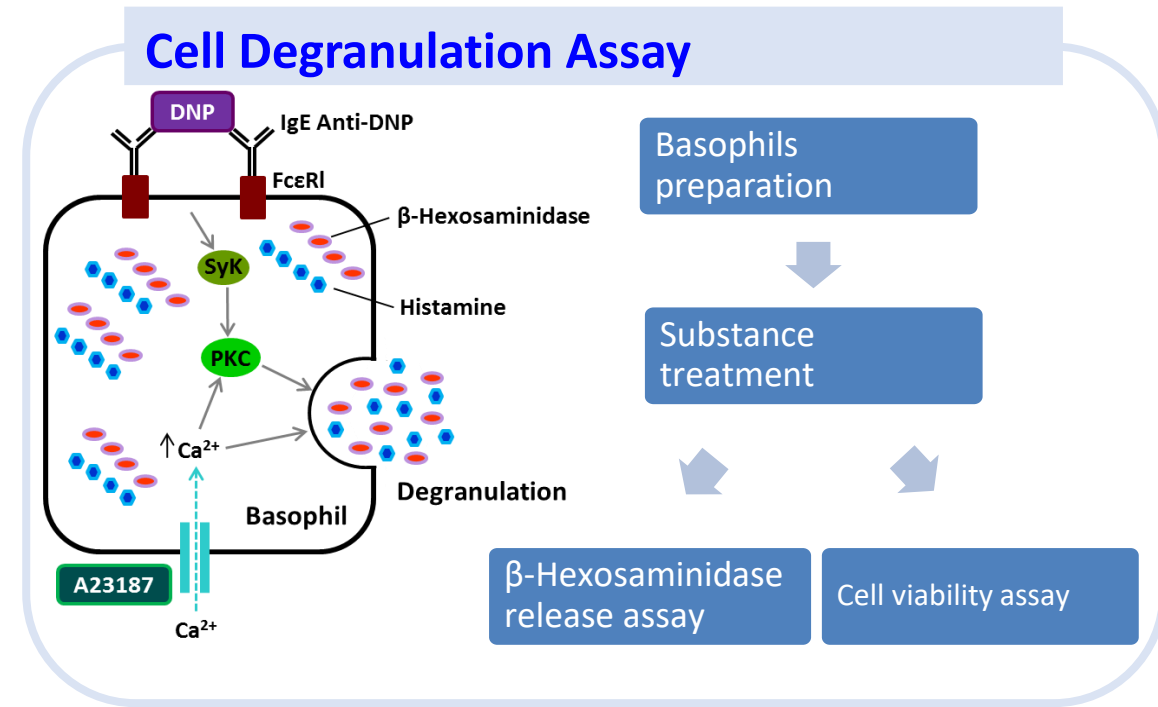
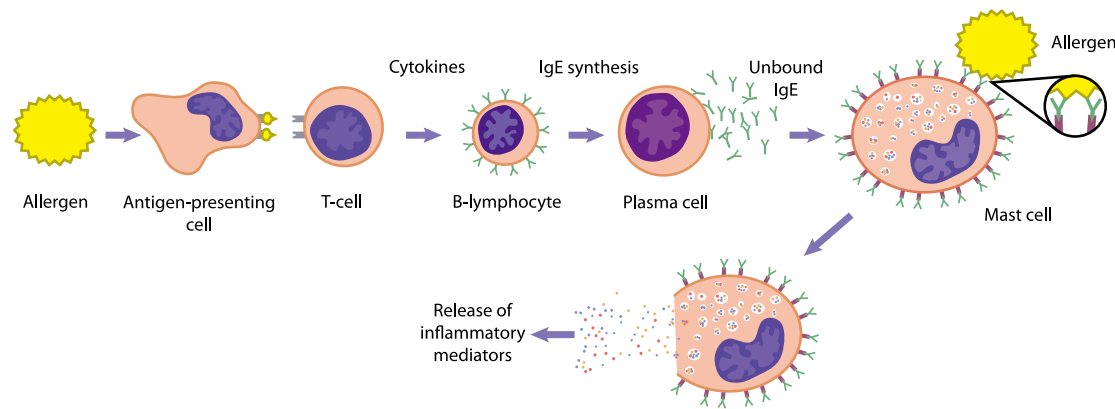


Sea grapes extract is rich in polysaccharides (+70%)

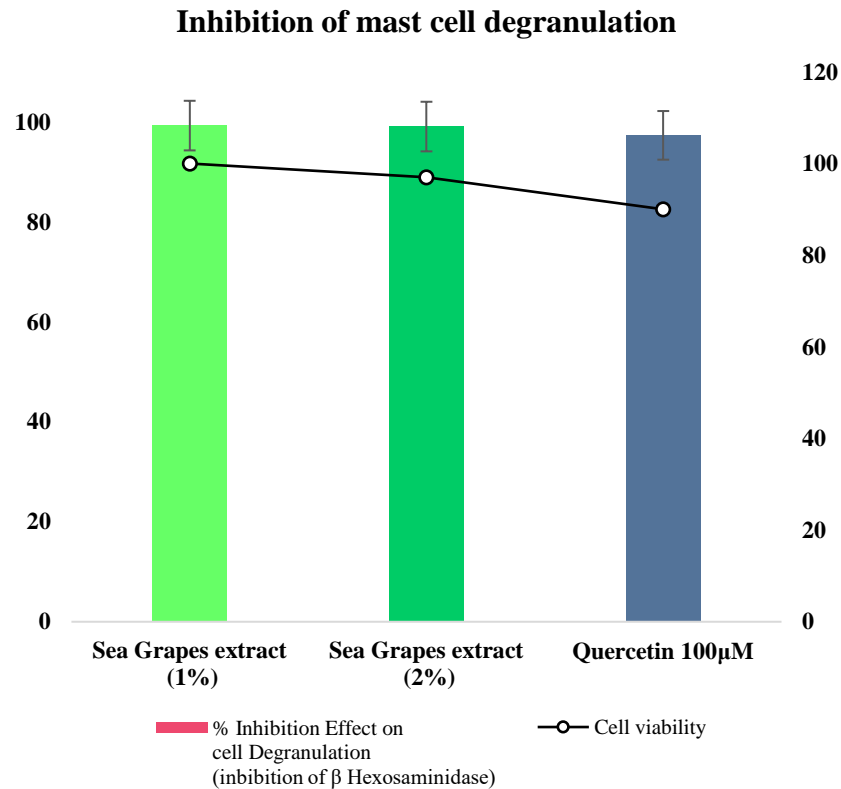


SEA GRAPE EXTRACT- ALLERGIC REACTION

- Mast cell tissue, cell of the immune system mediates inflammatory responsive such as hypersensitivity and allergic reaction. It stores several different chemical mediators (histamine, interleukins, and proteoglycans). Upon stimulation, by an allergen, the mast cells release the contents of their granules (degranulation).



SEA GRAPE EXTRACT- GOOD FOR SKIN DISORDERS

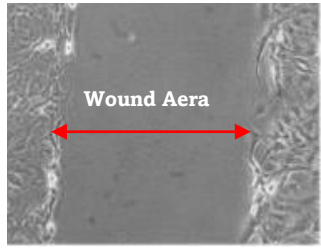


- **Methods:** The medical mediators produce local responsive characteristics of an allergic reaction. The mast cell is involved in inflammation and allergic reaction. RBL-2H3 cells released the β -Hexosaminidase was stimulated by A23187 (control) and Sea Grape Extract level to the cultures to evaluate the cell degranulation inhibition by UV/Vis spectrum.
- Sea grapes extract (2%) can inhibit 99% of mast cell degranulation. This phenomenon increases in presence of an allergen in your skin and begins inflammation reaction.

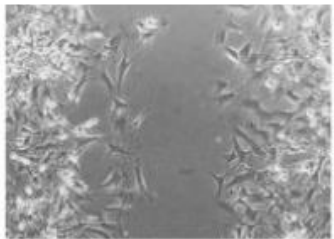
SEA GRAPES EXTRACT CAN IMPROVE SKIN DISORDERS OR SENSITIVE SKIN.

SEA GRAPE EXTRACT -WOUND HEALING (REPAIR)

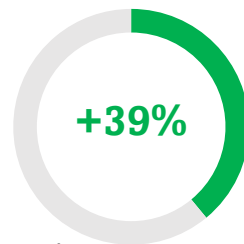
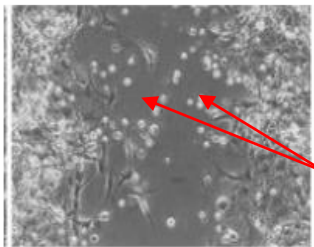
Wound Healing (0 H)



Blank control



Sea grapes extract (1%)



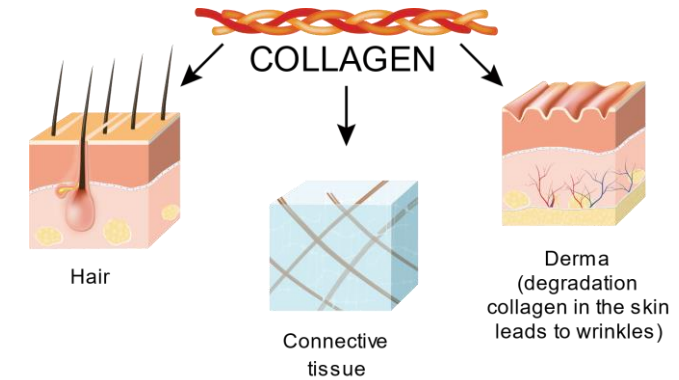
Matrix protein production to repair wound area.

- The wound-healing process consists of four highly integrated and overlapping phases: hemostasis, inflammation, proliferation, and tissue remodeling or resolution. ROS such as hydrogen peroxide (H_2O_2) and superoxide ($O_2^{\cdot-}$) are thought to act as cellular messengers to stimulate key processes associated with wound healing, including cell motility.
- Fibroblast was used, a wound area was created with a block during 24H, then sea grapes extract, and control was incubated for an additional 8H. The reduction of the wound healing rate was calculated.
- **Sea grapes extract (1%) stimulates matrix protein production by 39%** in fibroblast 8H after creating a wound area.

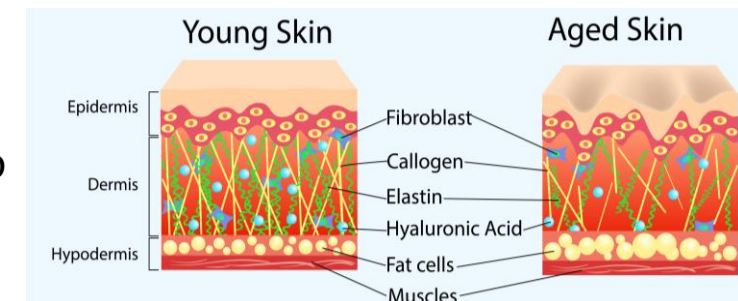
SEA GRAPES EXTRACT IMPROVES THE SKIN'S REPAIR PROCESS

SEA GRAPE EXTRACT - ANTI-AGEING PROPERTIES

- **PROCOLLAGEN Type I** is a precursor of type collagen I. Collagens are the major structural proteins of the extracellular matrix. It exists 28 different types of collagens. Type I collagen is the most abundant human body collagen. **It is mostly used to support healthy skin, hair, and nails.**

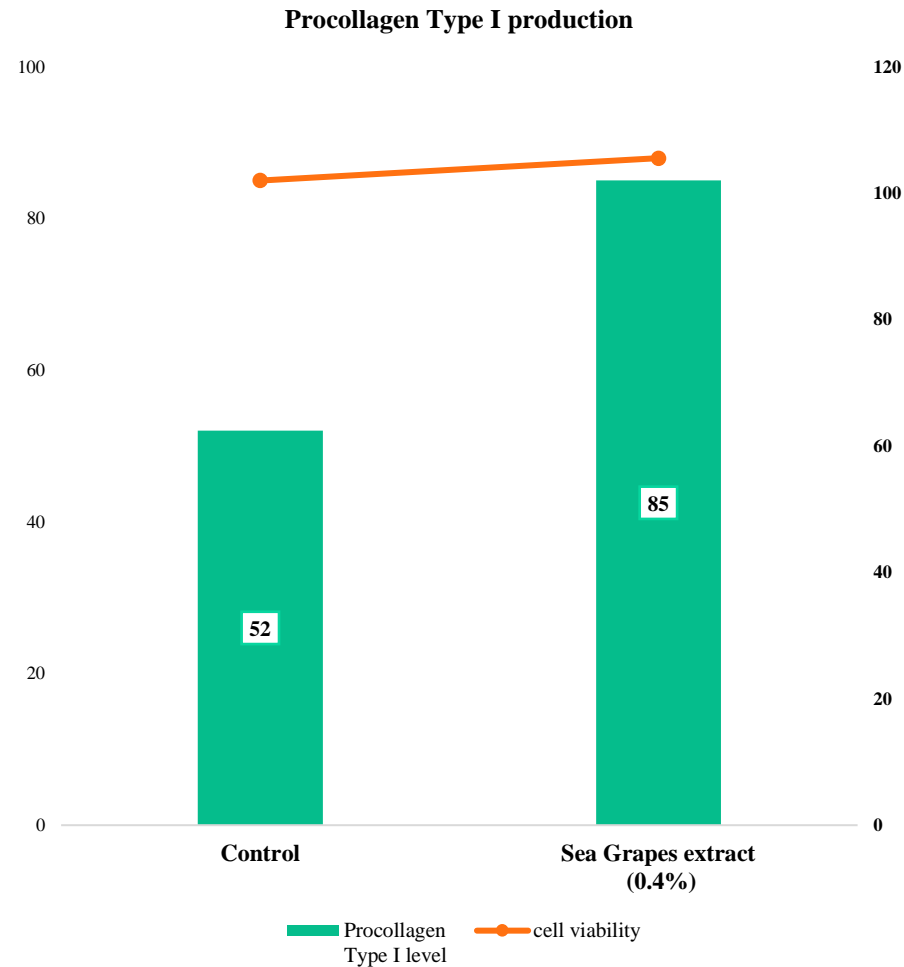


- **HYDROXYPROLINE:** an amino acid, with Proline, they are major amino acid in the collagen proteins. It provides important structural and regulatory properties to some proteins. Concerning collagens, it has a major role in its biosynthesis, structure, and strength.



SEA GRAPE EXTRACT - ANTI-AGEING PROPERTIES

PROCOLLAGEN SYNTHESIS



- **Method:** Human foreskin fibroblast (Hs68) were incubated with TGF- β (transforming growth factor) that stimulates proliferation of cells and Sea grapes extract. Procollagen type I, carboxy-terminal peptide (PIP) released in the culture supernatant as an expression of the collagen synthesis. The cell viability was measured using MTT.
- **Sea grapes extract (0.4%) increases the procollagen type I level by 85% in fibroblast.** Procollagen Type I is a precursor of type collagen I.

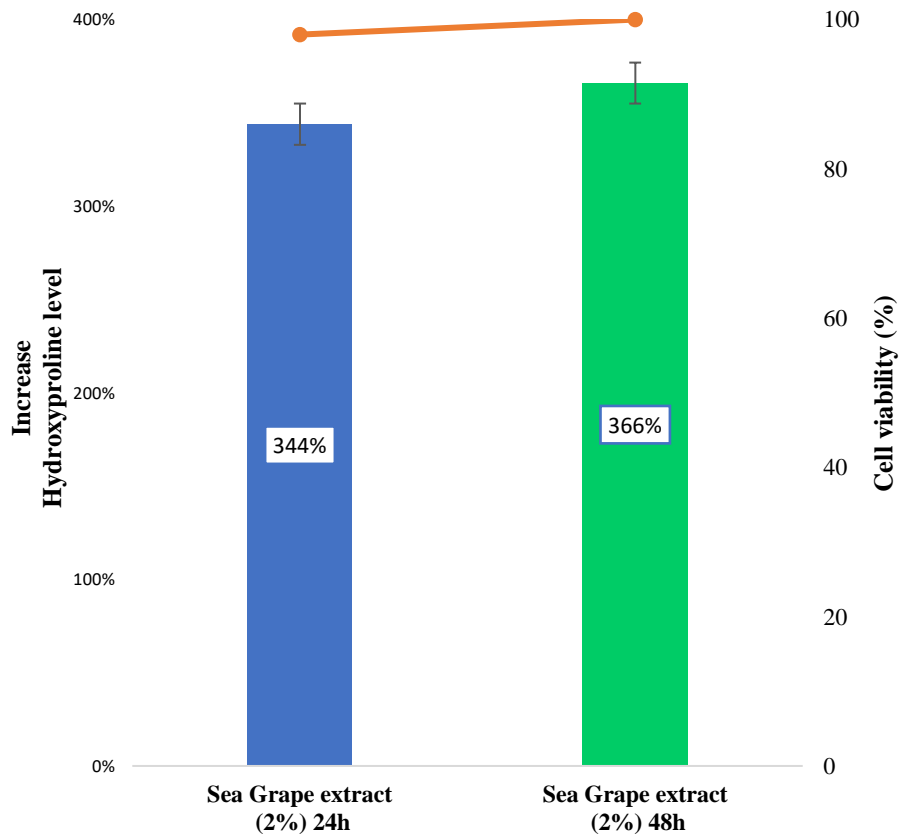
SEA GRAPES EXTRACT BOOSTS NATURAL COLLAGEN TYPE I PRODUCTION.

SEA GRAPE EXTRACT - ANTI-AGEING PROPERTIES

PRODUCTION OF HYDROXYPROLINE

• **Method:** Human fibroblast (CCD966SK) were incubated with TGF- β (transforming growth factor) as positive control and different concentration of sea grape extract for 24H and 48H. The concentration of Hydroxyproline was determined. The cell viability was measured using MTT.

• **Sea grapes extract (2%) increases the amount of hydroxyproline in fibroblast.** After 24H the level of these compounds increased by +344% and by +366% after 48H.



SEA GRAPES EXTRACT HAS ANTI-AGING PROPERTIES.

SEA GRAPE EXTRACT – TECHNICAL DATA

- **INCI name 1:** Caulerpa Lentillifera Extract, Water, Butylene Glycol, Phenoxyethanol, Caprylyl Glycol
- **INCI name 2:** Caulerpa Microphysa Extract, Water, Propanediol, 1,2 hexanediol.
- **Recommended dosage:** 1~ 10 %
- **Color:** Light yellow
- **Appearance (25°C) :** Liquid
- **pH value (25°C) :** 6~8
- **Expiry date:** 2 years and 1 year
- **Packaging:** Aluminum bottle 500mL or Amber Plastic Bottle contains 1kg.
- **Storage:** Temperature storage at 4° C in a dry place and protected from light, to avoid well-ventilated areas away from sources of heat, ignition, direct sunlight, and oxidizing agents.

SEA GRAPE EXTRACT FORMULATION

- **Application:** Skin, Body and Hair products
- **Processing:** water-soluble, to Add after the cool-down.
- **Cosmetic Products Suggestion :**
 - **Skincare:** Cream (Day and Night), Essence, lotion, Toner, cleanser.
 - **Hair Products :** Gel, Cream, Essence, etc.
 - **Bodycare :** Lotion, Cream, soap , hand cream etc.



- **Range :** Antioxidant / Sun care / Anti-aging / Brightening / Sensitive skin

SEA GRAPE EXTRACT CLAIMS



Improves skin's repair process

SEA GRAPE EXTRACT

A NATURAL INGREDIENT HELPS YOU TO BOOST YOUR COLLAGEN PRODUCTION

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