

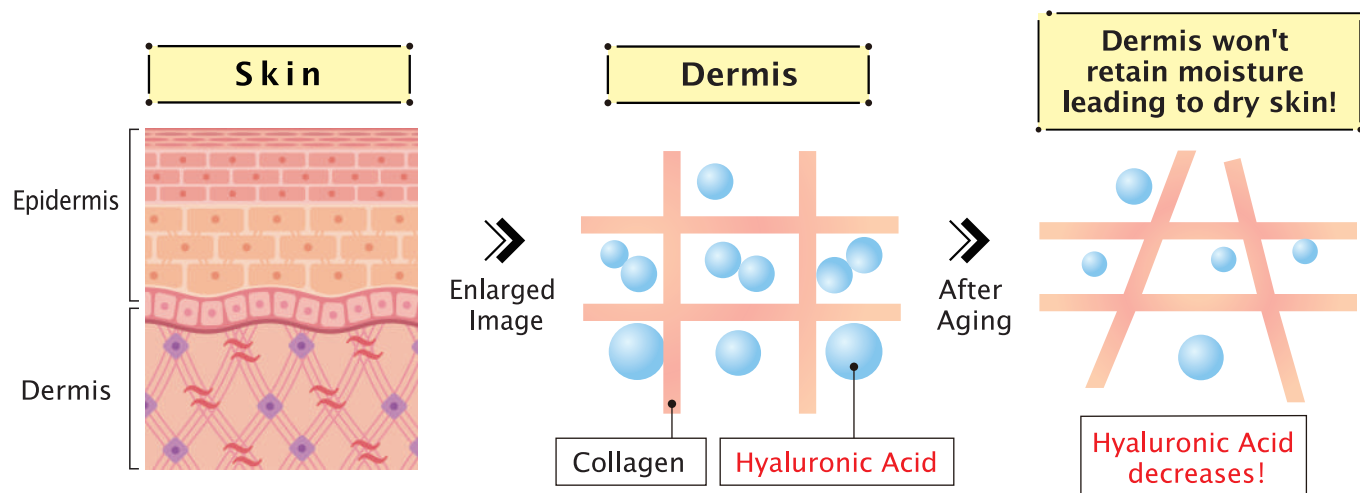
 **Hyabest[®]**



**Clinically Proven Inner Beauty Hyaluronic Acid
(as Sodium Hyaluronate)**

kewpie 

- Hyaluronic Acid is a type of glycosaminoglycans composed of disaccharide units of D-glucuronic acid and N-acetyl-D-glucosamine.
- Hyaluronic Acid is distributed in the human body such as skin, synovial fluid and in the vitreous body of the eyes.
- Hyaluronic Acid in the body decreases with age.



Why Kewpie's Hyaluronic Acid?

- Strong evidence with over 30 years of researches
- Strict manufacturing management system guaranteeing high quality
- High purity
- Controlled molecular weight

What is Hyabest® ?

Highly pure, powdered Hyaluronic Acid (as Sodium Hyaluronate).
Hyabest® (S)LF-P conforms to Japan's Foods with Function Claims with clinical evidence and specific to "Beauty from within" concept. Best for dietary supplements.

Advantages of using Hyabest®

- Bio Fermentation
 - GMO Free
 - U.S. FSMA compatible
 - Canada NNHPD registered
 - Corresponding to Japan's Foods with Function Claims
- ※Notification : It has been reported that sodium hyaluronate helps retain moisture in the skin and leads to the alleviation of dryness.

Application for Hyabest®

- Dietary Supplements (capsules/ tablets/ powders)
 - Nutritional drinks (liquids/ powders)
 - Gummies, hard chews
- ※ Applications vary depending on national laws and regulations

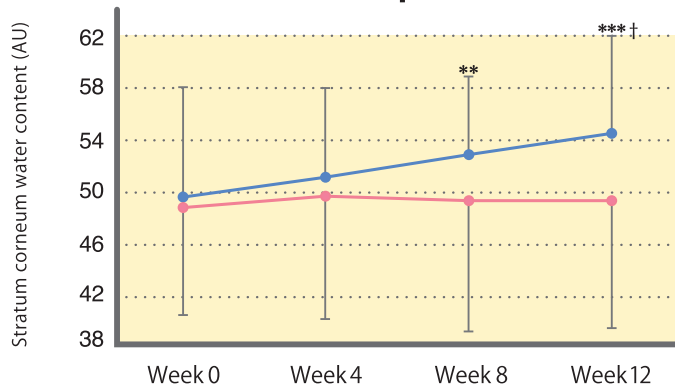
Hyabest® Logo (Trademark)

- Can be used after concluding an Agreement.
- ※ Conditions need to be confirmed individually



Evidence

Improvement of dry skin after oral intake



- : Group of Hyabest®(S)LF-P 120mg/day (20 people)
- : Group of Placebo (20 people)

Measurement of skin hydration using Corneometer (Face)

Testee: Taiwanese male and female
N=40, age 30-64

* p-values (Dunnett's test), compared with week 0; ** indicates $p < 0.01$, and *** indicates $p < 0.001$; † p-values (t-test), comparisons between values in the Hyabest (S) LF-P and placebo groups; ‡ indicates $p < 0.05$

< Oral Hyaluronan Relieves Wrinkles and Improves Dry Skin : A 12-Week Double-Blinded, Placebo-Controlled Study. Nutrients 2021, 13, 2220. >

Improvement of wrinkles after oral intake

Hyabest®

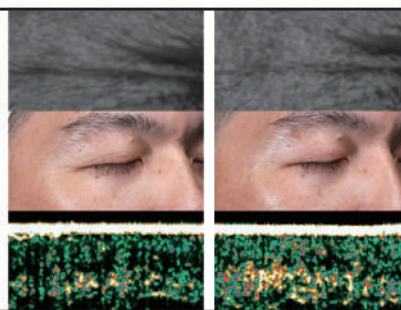
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12W

Visioscan®VC98 photographic images

VISIA® photographs

DermaLab® collagen intensity



Group of Hyabest®(S)LF-P 120mg/day (20 people)

Placebo

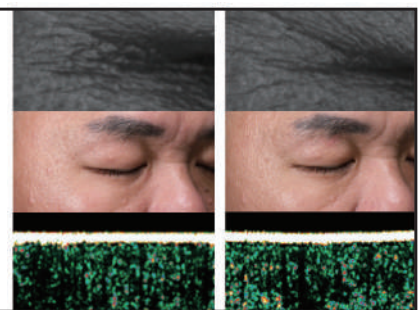
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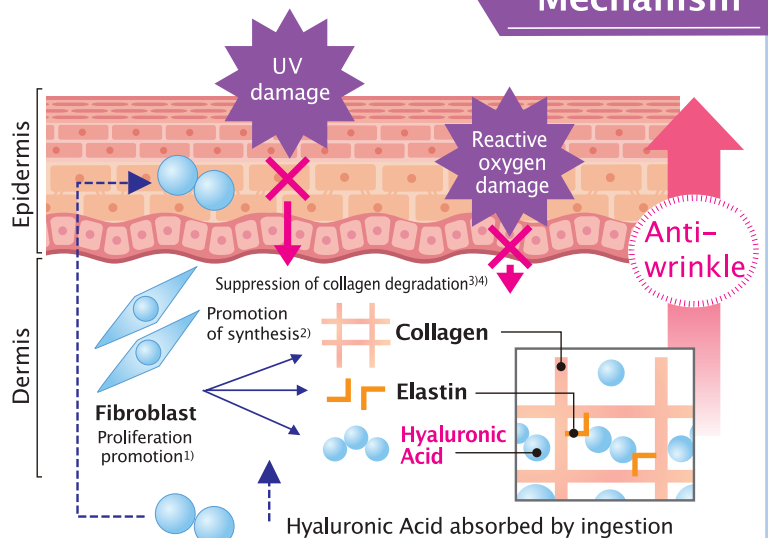
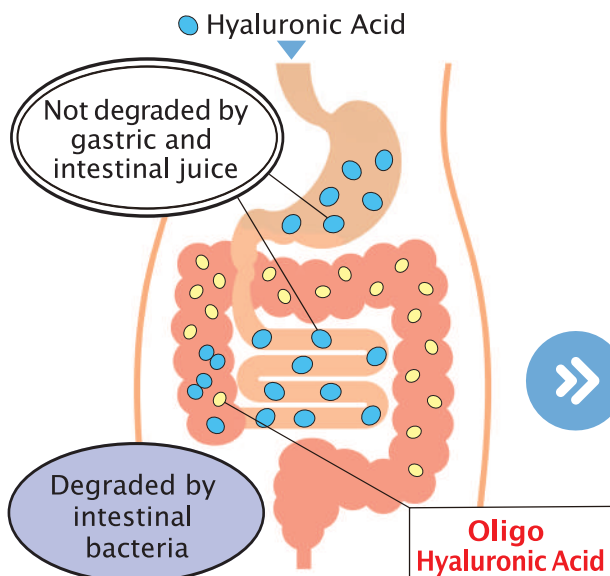


Group of Placebo (20 people)

< Oral Hyaluronan Relieves Wrinkles and Improves Dry Skin : A 12-Week Double-Blinded, Placebo-Controlled Study. Nutrients 2021, 13, 2220. >

Mechanism

- Oral ingestion of Hyaluronic Acid is not decomposed in the small intestine by digestive enzymes.
- Hyaluronic Acid is decomposed and absorbed by the intestinal bacteria in the large intestine into oligo Hyaluronic Acid.
- Oligo Hyaluronic Acid is absorbed into the host body and transferred into the skin through blood.
- After reaching to the skin leads to activating the collagen metabolism and fibroblast to promote the production of Hyaluronic Acid to improve moisture.



Absorbed into the body

Transferred into the skin through blood

- Hyaluronic Acid absorbed by ingestion
- Activates the collagen metabolism
- Hyaluronic Acid is produced in the skin

1) Hyaluronic Acid Stimulates Human Fibroblast Proliferation Within a Collagen Matrix. Greco RM, Iacono JA, Ehrlich HP. / J Cell Physiol. 1998;177(3):465-73.
2) Synthesis and shedding of hyaluronan from plasma membranes of human fibroblasts and metastatic and non-metastatic melanoma cells. Lücke HJ, Prehm P. / Biochem J. 1999;1:343 Pt 1:71-5.
3) Pathophysiology of premature skin aging induced by ultraviolet light. Fisher GJ, Wang ZQ, Datta SC, Varani J, Kang S, Voorhees JJ. / N Engl J Med 1997;337:1419-28.
4) Oral administration of hyaluronan prevents skin dryness and epidermal thickening in ultraviolet irradiated hairless mice. Kawada C et al. / J Photochem Photobiol B 2015; 153: 215-21.

Product Name	Characteristics	Average molecular weight*1(range)	Shelf life*2 (storage condition)
Hyabest®(S) LF-P	Highly pure, powdered Sodium Hyaluronate. Clinical evidence of improvement in skin moisture and wrinkles. Suitable for "Beauty from within" concept dietary supplements.	200k~500k	1080 days (15~25°C)
Hyabest®(J)	Highly pure, powdered Sodium Hyaluronate. Efficacy against knee joint pain and has been confirmed by human oral ingestion tests.	600~1,200k	
Hyabest®(S) LF5-A	Low molecular weight, highly pure, powdered Hyaluronic Acid. Best used for mixing with beverages.	Less than 50k	
Hyabest®(A)	Low molecular weight, high purity, powdered Hyaluronic Acid and/or Sodium Hyaluronate. Acts physiologically, such as in alleviating skin inflammation.	about 2k	720 days (15~25°C)

*Distribution of these materials maybe subject to change due to national, regional laws and regulations.

※1: It is not the specification item of the products.

※2: Shelf life is based on the unopened condition after the production.

For Skin Beauty Evidence

Title	Authors	Journal, year published
Orally administered hyaluronan affects skin dryness and epidermal thickening in photoaged hairless mice	Kawada C et al.	Bioscience, Biotechnology, and Biochemistry, 2016
Oral administration of hyaluronan prevents skin dryness and epidermal thickening in ultraviolet irradiated hairless mice	Kawada C et al.	Journal of Photochemistry & Photobiology, B : Biology, 2015
Ingestion of hyaluronans(molecular weights 800k and 300k) improves dry skin conditions : a randomized, double blind, controlled study	Kawada C et al.	Journal of Clinical Biochemistry and Nutrition, 2015
Ingested hyaluronan moisturizes dry skin	Kawada C et al.	Nutrition Journal, 2014
Dietary Hyaluronic Acid Migrates into the Skin of Rats	Oe M et al.	The Scientific World Journal, 2014
Oral hyaluronan relieves wrinkles: a double-blinded, placebo-controlled study over a 12-week period	Oe M et al.	Clinical, Cosmetic and Investigational Dermatology, 2017
Absorption of Orally Administered Hyaluronan	Kimura M et al.	JOURNAL OF MEDICINAL FOOD, 2016
Oral hyaluronan relieves wrinkles and improves dry skin: A 12-week double-blinded, placebo-controlled study	Tzu-Fang Hsu et al.	Nutrients, 2021

For Knee Joint Pain Relief Evidence

Title	Authors	Journal, year published
Oral hyaluronan relieves knee pain : a review	Oe M et al.	Nutrition Journal, 2016
Oral Administration of Polymer Hyaluronic Acid Alleviates Symptoms of Knee Osteoarthritis : A Double-Blind, Placebo-Controlled Study over a 12-Month Period	Tashiro T et al.	The Scientific World Journal, 2012
Oral Administration of High Molecular Weight Hyaluronan (900 kDa) Controls Immune System via Toll like Receptor 4 in the Intestinal Epithelium	Asari A et al.	THE JOURNAL OF BIOLOGICAL CHEMISTRY, 2010
An Effectiveness Study of Hyaluronic acid[Hyabest®(J)] in the Treatment of Osteoarthritis of the Knee on the Patients in the United States	Sato T et al.	J.New Rem.&Clin. 2009



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