



Leading Technology in Peptide Design & Production

MOBEL BIOMATERIALS TECHNOLOGY CO.,LIMITED

25 NO.BIO-CHEMICALS TECHNICAL ZOON,YUHANG DISTRICT, HANGZHOU CITY,ZHEJIANG P.R CHINA 310000

TEL:+86-571-85099223

FAX: +86-571-85099222

GHK-Cu

INCI Name: Copper Tripeptide - 1





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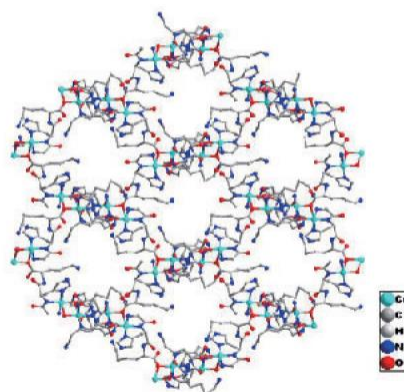
Why Buy Copper Peptide from Us?

- **Other brands** of copper peptide are usually in powder form, due to the traditional production process of freeze-drying. It takes more time, steps, and resources to produce, so the production cost is high. The powder has a large surface area, which causes it to absorb humidity and stick to the wall of the bottle, making it harder to store and weigh.
- **Our brand** of copper peptide is in crystal format due to our patented liquid-phase synthetic method and crystallization technology. Because of this, our peptide is **not prone to absorbing humidity** from the air and does not stick to the wall of the bottle, which makes it **easier to store and weigh**.

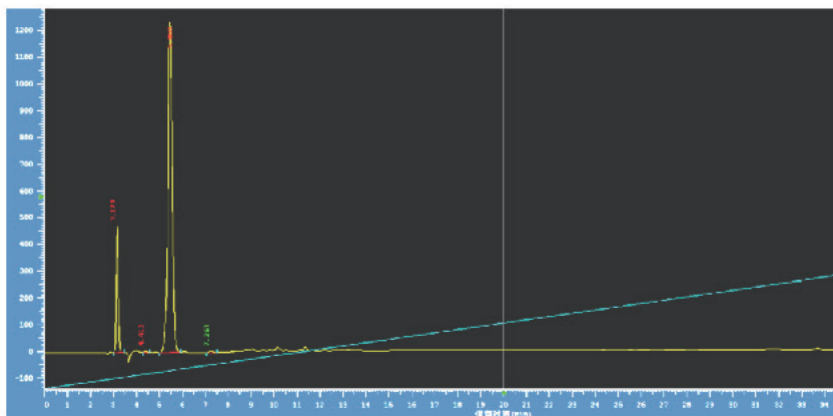


Proved High Purity with Crystal Format

- High purity copper peptide crystal and its single crystal X-ray absorption spectroscopy



- Active Peptide copper peptide HPLC spectrum



- High purity proved by third-party testing

 MICROCONSULT, INC. MICROBIOLOGICAL & ANALYTICAL TESTING LABORATORY 3119 Commander Dr., Suite 105, Carrollton, TX 75006 • Phone: 972.250.2802 • Toll Free: 888.226.7002 • Fax: 972.250.2903 • www.microconsultinc.com	
Certificate of Analysis	
Product Name:	GHK-Cu 2:1
Lot Number:	N/A
Lab Number:	CD038916
Analysis Date:	May 02, 2016
Analyst Name:	Carlos Parra, Carolyn Vercell
Methods:	CAM 216, CAM 475, CAM 77
Equipment Type:	HPLC, ICP, Karl Fischer
Sample Types:	Raw Material
Active	Test Results
Water Content	2.5%
Copper	6%
GHK-Cu	HPLC Area%: 100.0%; Impurities: 0.78%



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Our GHK-Cu Peptide Specifications

INCI Name Copper tripeptide-1

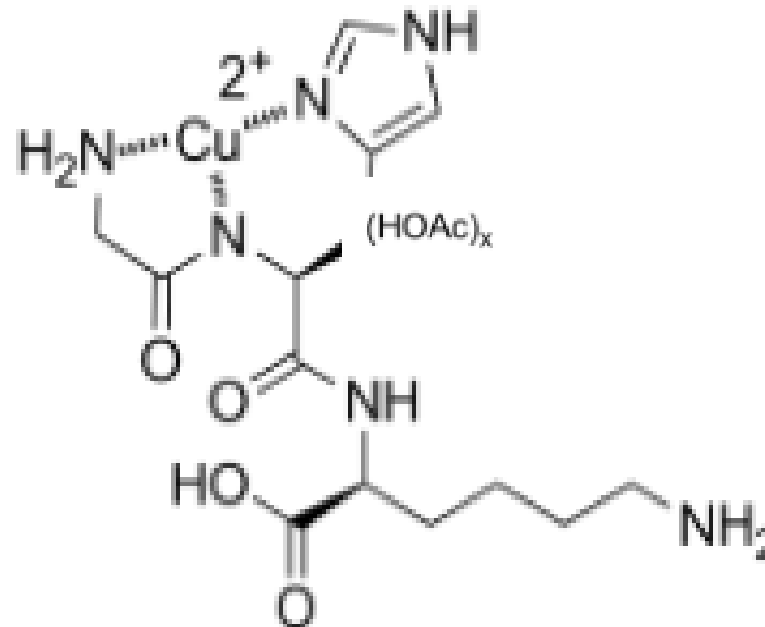
CAS 89030-95-5

Sequence Gly-His-Lys.Cu.xHAc

Specifications:

Appearance	<i>Blue Powder</i>
SKU No.	<i>AP103002</i>
Purity (by HPLC)	<i>> 98%</i>
Water (<i>k.F</i>)	<i>< 5%</i>
Molecular Formula	<i>C14H23CuN6O4</i>
Storage	<i>2 ~ 8°C, dry and dark place</i>
Package	<i>Plastic bottles or glass bottles of varied sized, or customized packages based on special requests</i>

This product is pure powder with purity >99%. No excipients, preservatives, anti-oxidants present, or used during the manufacturing process. It is 100% synthesized in laboratory so not involved with plant, vegetable, or marine. It is neither palm derived nor sustainably sourced.





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Our GHK-Cu Peptide Highlights

- High Purity and Competitive Prices (due to our unique technology)
- Short Lead Time (we build stock for key customers at our Boston office)
- Environment Friendly (no chromatographic purification needed)
- Recognized brand and quality (Recommended by copper peptide inventor)
- Quality Consistence and Stability: (kilograms produced in each batch)
- Excellent Customer Services





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Our Tips for Formulation

1. Avoid strong oxidation ingredients
2. Avoid ingredients that can form a complex with Cu ion. For example, carnosine has a similar structure to GHK thus so it may compete with Copper ion and change the solution's color to purple. Another example is that EDTA sometimes is used in the formula to remove trace amount heavy metal ion. It may grab copper ion from GHK-Cu and change the solution's color to green.
3. GHK-Cu is water soluble (1g GHK-Cu can be easily solved in 5ml water). We suggest taking it as the final step to add GHK-Cu to the solution, which means adding all other ingredients (including preservatives) before adding GHK-Cu. Because too low or too high pH may cause a breakdown of GHK-Cu, and an acid base has more possibility of changing the solution's color, the pH should be adjusted close to 7 (neutral) before having GHK-Cu added in the final step. All process should be done under 40°C.
4. When color change happens, you may want to figure out the responsible ingredients (usually these ingredients are acid-based). Try to mix GHK-Cu with each ingredient and observe the reaction, then consider having the responsible ingredients removed or changed.



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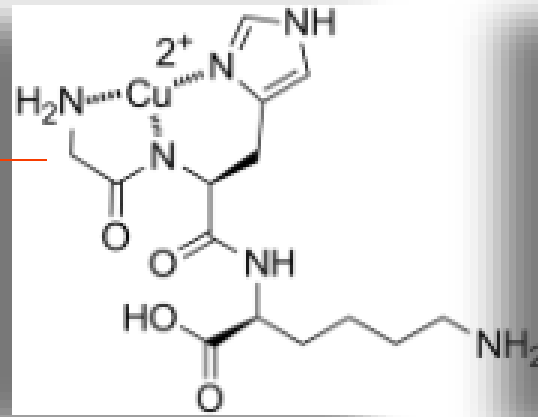
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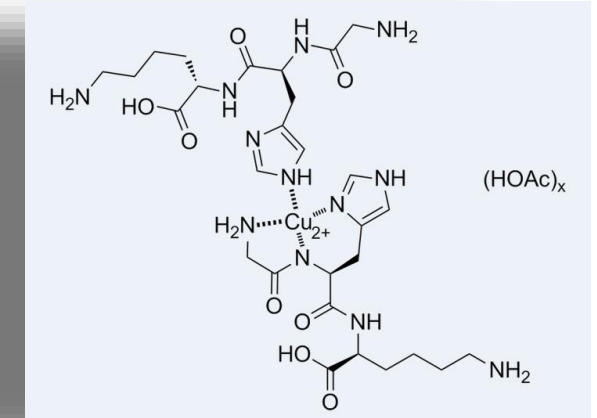
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Comparison of GHK-Cu 1:1 and 2:1



1:1



2:1

1. GHK-Cu 1:1 is a single compound while 2:1 is a mixture of GHK and GHK-Cu 1:1.
2. Due to our advanced technology, GHK-Cu 1:1 can be purified by recrystallization. GHK-Cu 2:1, as a mixture, usually needs to be formed by Lyophilization method and additional mixing. It costs more to produce GHK-Cu 2:1.
3. GHK-Cu 1:1 has 14% of copper content. GHK-Cu 2:1 has 7% of copper content.
4. There is no article referring to functional differences between the two. Which GHK-Cu to use is usually based on customers' preference. "As long as GHK-Cu 1:1 is pure enough, their functions have no difference." --- Dr. Loren Pickart, inventor of GHK-Cu



GHK -Cu General Introduction

- GHK is a tripeptide possesses a high affinity for copper(II) ions, with which it spontaneously forms a complex (GHK-Cu).
- This peptide was first described as a growth factor for a variety of differentiated cells.
- GHK naturally occurs in human plasma, saliva, and urine. The plasma GHK level is about 200 ng/mL(10⁻⁷M) at age 20, but declines to 80 ng/mL at age 60.

Mechanism

- Copper is delivered by copper peptides.
- Copper is essential to vital cellular and enzyme processes required for human health. It plays an important role in the enzyme systems which relate to tissue repair, hair growth and other biological responses.
- Copper is essential to Copper-dependent enzymes, including cytochrome C oxidase (energy production), superoxide dismutase(antioxidation) and lysyl oxidase (cross-linking of elastin and collagen).



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GHK -Cu Functions and Applications

Function Summary

GHK-Cu exhibits a broad range of anti-aging, reparative, and protective actions. It can increase production of key skin proteins such as collagen as well as other important components of dermal matrix. GHK-Cu modulates the skin remodeling process, being able to stimulate both breakdown and synthesis of dermal matrix components. It repairs and remodels skin, anti-wrinkle, anti-aging, firm skin. It enlarges hair follicles and stimulating hair growth.

Applications:

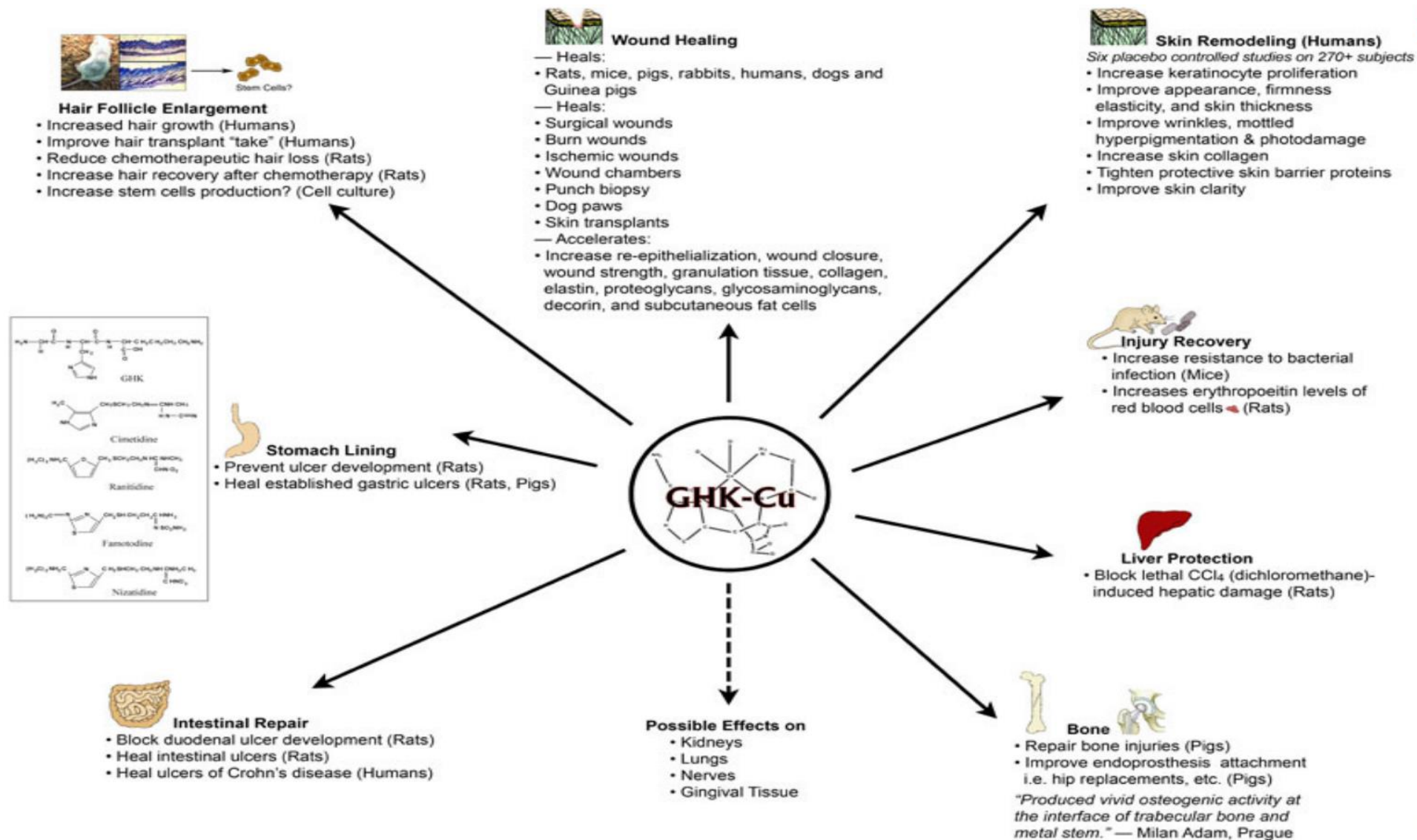
1. Slowing down aging, reducing wrinkles
2. Reducing inflammation and redness and other reparative formulations
3. Sun-protective formulations
4. Stimulation of Hair Growth

Recommended Dosage:

0.05-3%.

Click into <http://reverseskinaging.com/> to see how the GHK-Cu inventor Dr. Loren Pickart has been using GHK-Cu in his products

GHK-Cu Effect in Mammals





GHK-Cu for Skin Remodeling

Summary:

Skin Remodeling is the process that removes proteins and older cells from the skin to smooth skin, remove scars, lesions, and wrinkles Skin remodeling is very active in young people but declines rapidly as human pass age 20. Increasing skin remodeling is the key to producing a biologically younger skin.

- 67 volunteers, GHK-Cu vs. placebo were applied twice daily for 12 weeks on facial skin.

Result: GHK-Cu Improved skin laxity, clarity and appearance, reduced fine lines, coarse wrinkles and mottled hyperpigmentation and increased skin density and thickness.

Reference: Leyden, J.J., Stevens, T., Finkey, M.B. and Barkovic,S. Skin care benefits of copper peptide containing eye creams. In: American Academy of Dermatology 60th Annual Meeting (Gaspari, A.A., Goldberg, L.H., Gupta,A.K. et al., ed.), pp. 29, American Academy of Dermatology,New Orleans, LA, USA (2002).

- GHK-Cu was tested in a 12-week placebo controlled study , on facial skin of 71 women with mild to advanced photodamage.

Result:

- At week 1, compared with placebo, the skin laxity, clarity, fine lines and overall appearance were improvement.
- At week 2, skin elasticity significantly improved and consistent with ultrasound increase in overall skin density and thickness.

Reference: Leyden, J.J., Stevens, T., Finkey, M.B. and Barkovic,S. Skin care benefits of copper peptide containing facial cream. In: American Academy o Dermatology 60th Annual Meeting (Gaspari, A.A., Goldberg, L.H.,Gupta, A.K. et al., ed.), pp. 29, American Academy of Dermatology, New Orleans, LA, USA (2002).

GHK-Cu For Hair Growth

GHK-Cu increase hair growth by many ways:

1. Enlarging hair follicles and stimulating hair growth
2. Inhibit DHT expression
3. Improvement scalp damage and inflammation

How Copper Peptide Help Reduce Hair Thinning and Loss

Changes Associated with Thinning and Loss	SOLUTIONS
DHT accumulation	Copper ions are potent inhibitors of 5-Alpha Reductase
Follicle miniaturization	Copper peptides increase follicle size and this produces thicker hair.
The follicle's cycle shorten	Copper peptides increase follicle cell proliferation and decreases programmed cell death of follicles (apoptosis).
Inflammation	Copper peptides increase superoxide dismutase expression and reduce damage caused from interleukin-1, TGF-beta 1, and reactive carbonyl species.
Scalp damage	Copper peptides help repair scalp damage.
Hair grays with age	Copper peptides supply copper that tyrosinase needs to produce melanin.

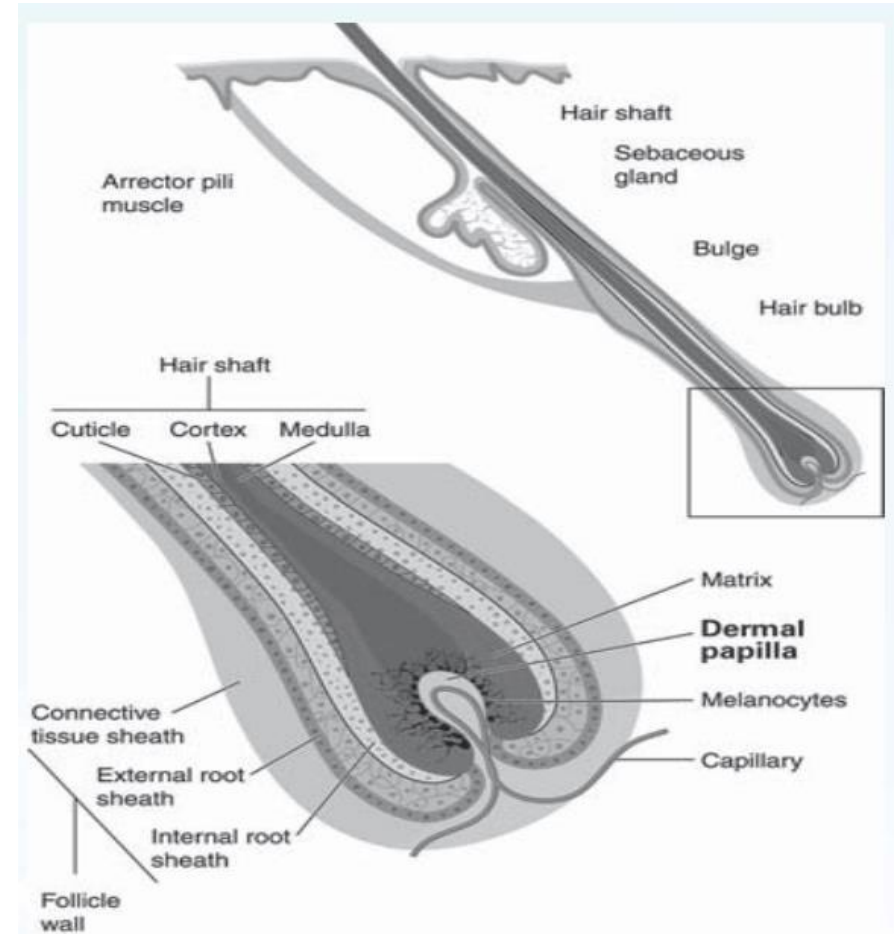
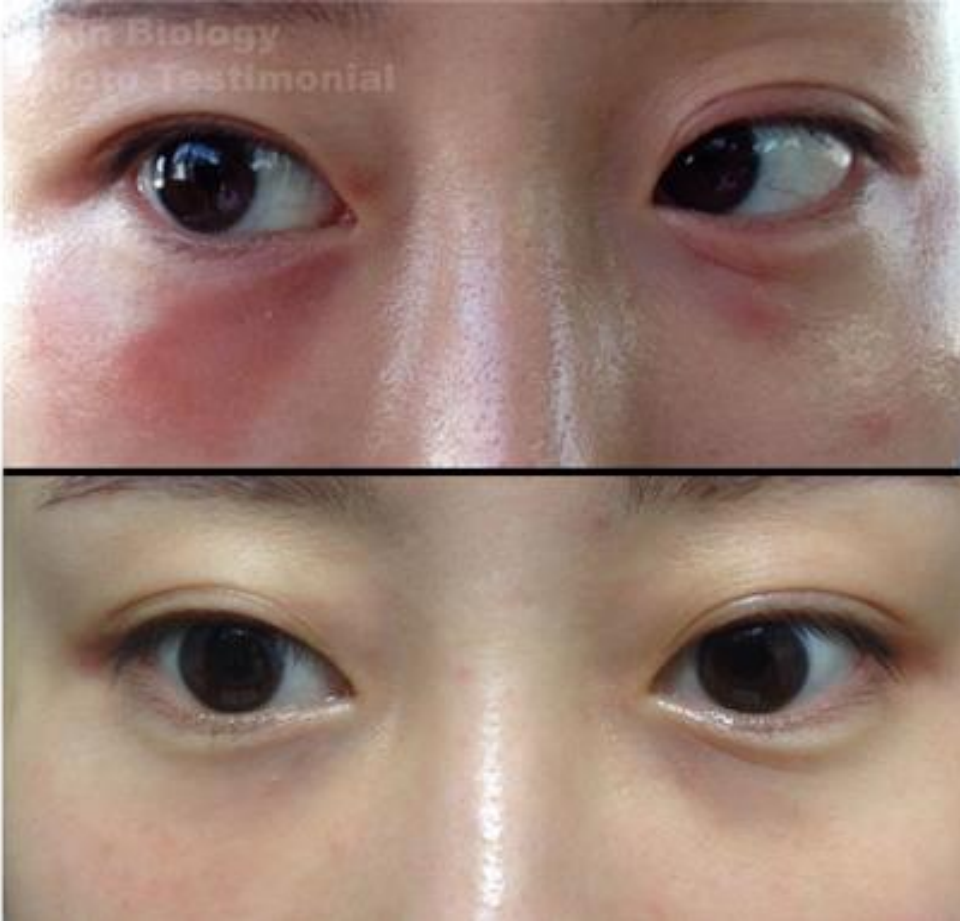


Photo Testimonials



3 weeks, before and after



3 weeks, before and after

*All pictures were submitted by users; for more photo testimonials

Photo Testimonials



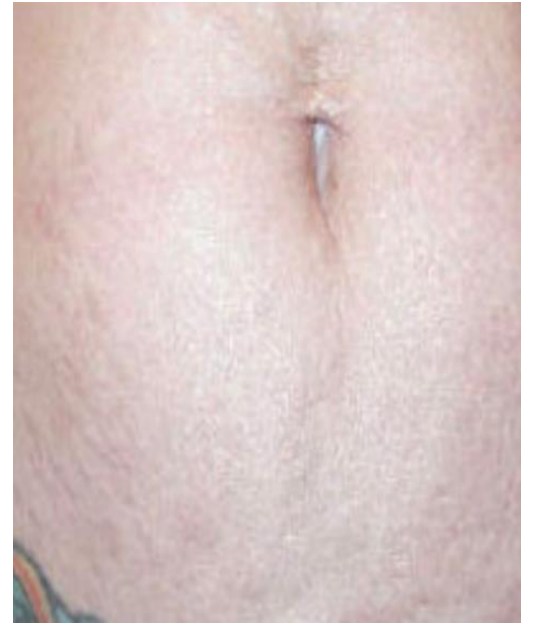
Day 1



Day 15



Day 30



Day 60

*All pictures were submitted by users; for more photo testimonials

Photo Testimonials



Day 1

Day 10

Day 18

*All pictures were submitted by users; for more photo testimonials

Dedicated to Providing Cosmetic Companies, Pharmaceutical Companies, Distributors and Research Institutions with Our High Quality Copper Peptides



(Up to December 2023)



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Company Introduction

- ❑ Established in 2012,mobelbio.,llc is headquartered Hongkong. Its manufacturing center, is located at Hangzhou city,Zhejiang province Tech Industrial Development Zone.
- ❑ We produce kilogram-scale batches of high purity peptides with patented technologies for cosmetic companies and distributors.
- ❑ We serve the world's most reputable customers in 28 countries and areas.



Producing High Quality Cosmetic Powder & Solution





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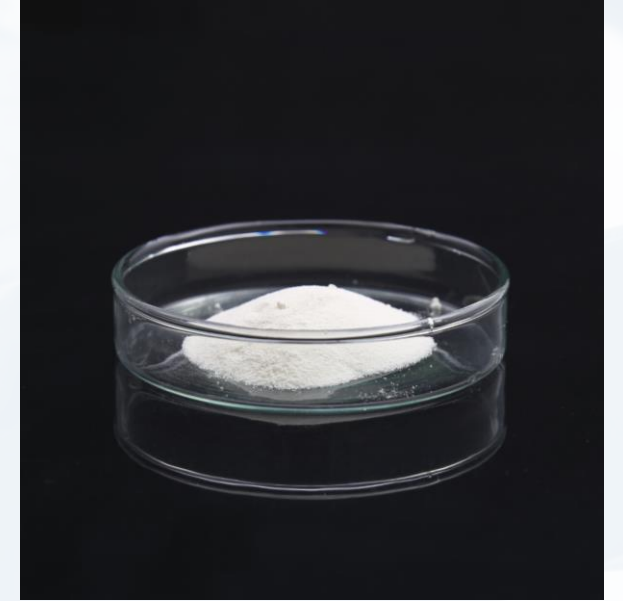
Our Pure Peptide Powder



Peptide Powder Standard Packages



Copper Peptide (Blue) and Other Peptide Powder



We Produce a Broad Range of Cosmetic Peptides (Purity>98%)

Our Broad List of Peptide Powder

■ Anti-Wrinkle
 ■ Hair Growth
 ■ Eye Bag Reduction
 ■ Skin Lightening and Elasticity
■ Muscle Relaxation & Skin Comfort
■ Skin Firming
■ Lip Fullness
■ Skin Moisturizing
■ Whitening

INCI		Other Name	Cat. No.
■ ■	Copper Tripeptide-1	GHK-Cu 1:1	AP103002
■ ■	Bis(Tripeptide-1) Copper Acetate	GHK-Cu 2:1	AP103001
■ ■	Acetyl Dipeptide-1 Cetyl Ester	NATAH	AP102002
■ ■	Hexapeptide-11		AP106005
■	Dipeptide-2	VW	AP102001
■ ■	Tripeptide-1	GHK	AP103008
■ ■	Palmitoyl Tripeptide-1	Pal-GHK	AP103005
■ ■ ■	Palmitoyl-Tripeptide-5 *	Pal-KVK	AP103006
■	Dipeptide Diaminobutyroyl *		
	Benzylamide Diacetate		AP103011
■	Biotinoyl Tripeptide-1	Biotin-GHK	AP103010
■ ■	Palmitoyl Tetrapeptide-7	Pal-GQPR	AP104001
■ ■	Palmitoyl-Pentapeptide-4	Pal-KTTKS	AP105001
■	Nonapeptide-1 *		AP109001
■	Acetyl Hexapeptide-8	Argireline**	AP106003



** Product Trademark of Origin Company



**We are Committed to Becoming Your
Best Resource for Peptides!**

Peptides For Anti wrinkles

Peptides For Hair Growth

Peptides For Skin Repair

Cosmetic Peptides

Peptides For Skin Brightening

Peptides For Eyelash Growth

Peptides For Eyebags Treatment


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