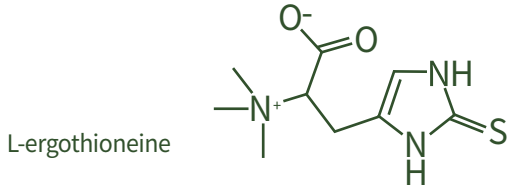
华熙生物 BLOOMAGE BIOTECH | BIOACTIVE 生物活性物

Bioyouth™-EGT

- Important active substances in human body
- Multi-Strain Fermentation
- Anti-photoaging,Anti-oxidant

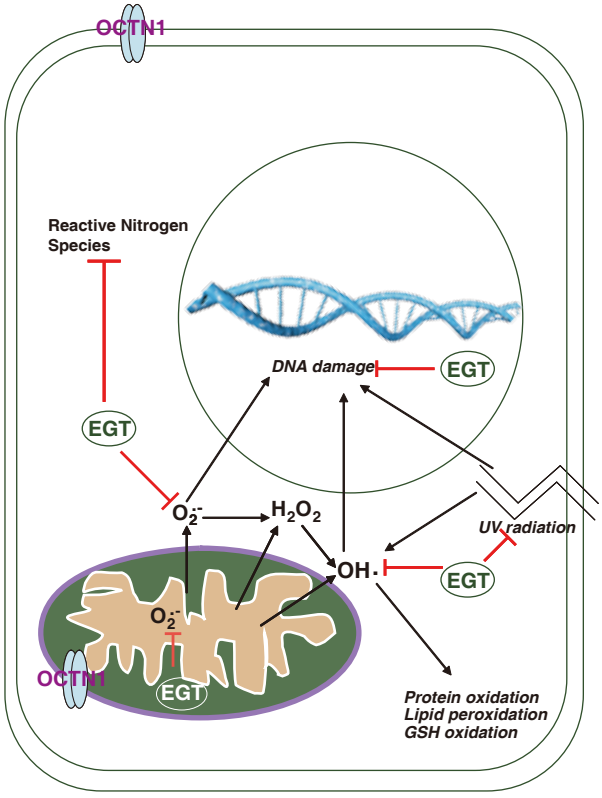
Introduction

Bioyouth™-EGT is obtained by multi fermentation of *Hericium Erinaceum & Tricholoma Matsutake*. Multi fermentation can increase the yield of L-ergothioneine (EGT), which is a sulfur-containing derivative of the amino acid histidine, a unique stable antioxidant and cytoprotective agent, existing in the human body.



L-ergothioneine

Ergothioneine(EGT) can be transferred inside mitochondria by the transporter OCTN-1 in skin keratinocytes and fibroblasts, thus playing the anti-oxidation and protection functions there.



Instruction

INCI Name:
Ergothioneine, Tricholoma Matsutake Mycelium Ferment Extract

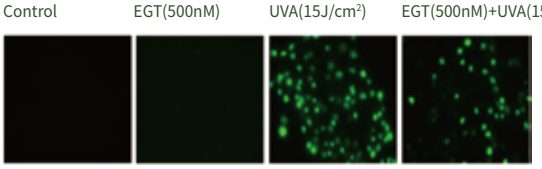
Application:
Anti-aging products, sun care products, antioxidant products, skin protection, skin regeneration.

Recommended Dosage:
0.5-2%

EGT is accumulated into different cellular compartments via its specific transporter OCTN1, abundantly expressed in mitochondria. Mitochondrial DNA is especially vulnerable to stress because unlike nuclear DNA, there are no histones to protect mitochondrial DNA. Reactive oxygen species, like superoxide O_2^- generated in the mitochondria by respiration, are directly scavenged (indicated by red lines) by EGT. EGT present in the cytoplasm also scavenges a variety of ROS and reactive nitrogen species. EGT absorbs UV radiation and prevents DNA breaks and mutations.

Efficacy

【Protect the DNA in skin cells 】 Protect against UVA-induced apoptotic DNA fragmentation



(HaCaT cells,TUNEL)

Compared to the UVA group, EGT+UVA group shows less TUNEL-positive, indicating Ergothioneine(EGT) can protect DNA from UVA damage. Ergothioneine(EGT) can be used in sun care products protecting skin cells.

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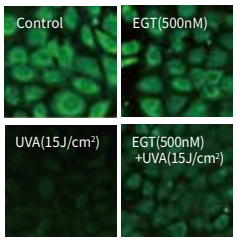
【Anti-apoptosis】

Protect mitochondria from UVA damage

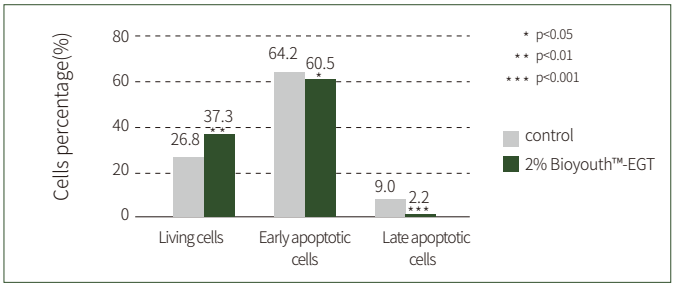
The fluorescent imaging of the mitochondria

(HaCaT cells)



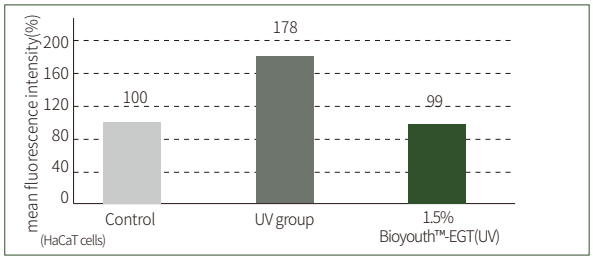
UVA leads to mitochondria damage, and in turn, causes the cell apoptosis. Results show that Ergothioneine(EGT) can protect mitochondria from UVA damage, and enhance skin cells vitality.

Decrease the cell apoptosis



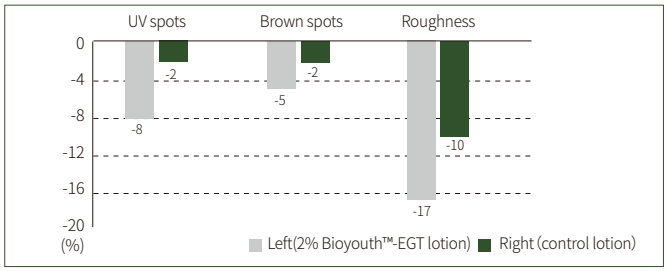
Bioyouth™-EGT can protect the human epidermal cells from apoptosis induced by UV. 2% Bioyouth™-EGT increased the proportion of living cells by 39%.

【Antioxidant】



Results show that Bioyouth™-EGT has a significant antioxidant activity. 1.5% Bioyouth™-EGT can almost completely eliminate the ROS free radicals produced by UV.

【Reduce pigmentation, Improve rough skin】



Results show that Bioyouth™-EGT can reduce UV spots by 8%, brown spots by 5% and roughness by 17% after 4 weeks application.

【In-vivo test】

2% Bioyouth™-EGT lotion,4weeks

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