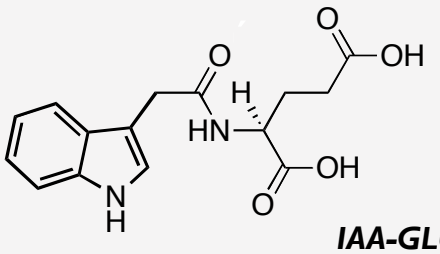
AUXISTIM G®

AUXISTIM G® is a hydroglycolic solution containing 1% of IAA-GLU



IAA-GLU

AUXISTIM G nature-identical

AUXISTIM G® is an auxin (indolacetic acid (IAA)), conjugated to an amino acid (glutamic acid). IAA is an ubiquitous auxin. This phyto-hormone takes part in all the key processes of the vegetal growth.

AUXISTIM G®, patented from a structure-activity research, is a more stable form than IAA. Properties directly linked to phyto-hormone, such as anti-oxidation, and metabolism stimulation, have been evidenced.

In order to preserve biodiversity, we have chosen not to extract auxins, usually found in tiny quantities in plants, but to produce nature-identical replica.

NOM INCI: GLUTAMAUXIN* (AND) METHYLPROPANEDIOL (AND) WATER

SKIN BENEFITS

Metabolism stimulation
Collagen booster
Natural neuroprotector

Introduced at IN-COSMETICS 2010

COSMETIC APPLICATIONS

Firming
Anti-aging - anti-stress
Tissue regeneration

EXSYMOL MONACO

APPLIED RESEARCH: EVIDENCING ACTIVITIES

AUXISTIM G®

Anti-oxidant property

The anti-oxidant property of phyto-hormones is described in the literature, and we have been able to confirm this property for **AUXISTIM G®**. The free radicals OH°, scavenging constant Ks, has been evaluated. OH° are selectively generated by the system: iron chloride + EDTA + deoxyribose + H_2O_2 + ascorbic acid.

	IAA-GLU	Vit. C	Melatonin
OH° scavenging Ks (10^9 M^{-1}. s^{-1})	48 +/- 7	10 +/- 3	[27-40]

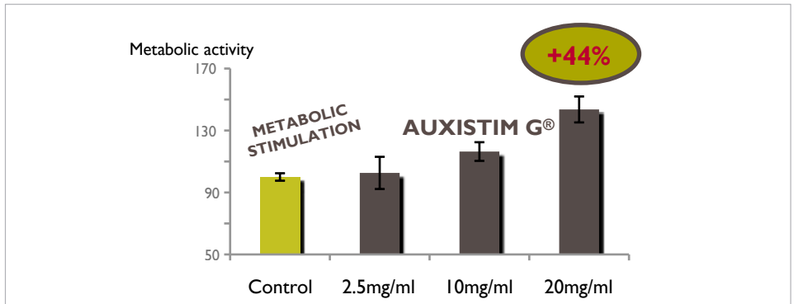
Confirmation of the anti-oxidant property of **AUXISTIM G®** has been obtained on a blend of free radicals. Protection of deoxyribose, submitted to free radicals generated by system: hypoxanthine/xanthine oxydase/FeCl2/EDTA, has been observed.

At 2 mM, IAA-GLU scavenges more than 40% of free radicals

Stimulation of cell metabolism and collagen formation

Stimulation of fibroblasts metabolism.

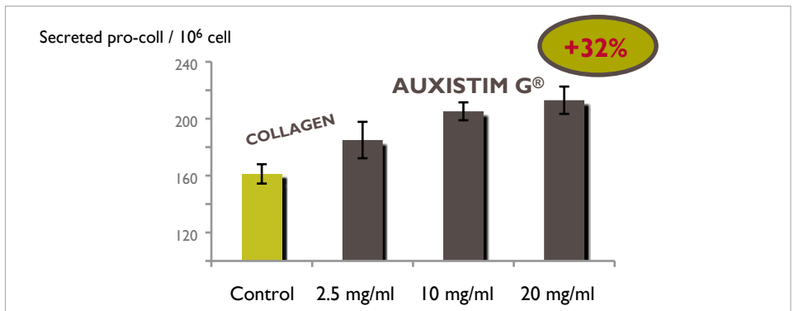
This property has been evidenced on human primary fibroblasts after 24 hours of incubation with different concentrations of IAA-GLU. The technique used allows to quantify biotransformed MTT, as a ratio of the overall number of cells.



=> Metabolic activity on primary human fibroblasts

Formation of collagen.

Additionally, we have been able to evidence the increase in secretion of pro-collagen I, induced by IAA-GLU, resulting from the stimulating activity on fibroblastic metabolism.



=> Secretion of pro-collagen I on primary human fibroblasts

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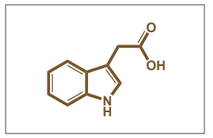
APPLIED RESEARCH: EVIDENCING EFFECT

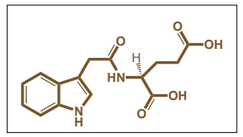
AUXISTIM G®

Conjugated form = stability

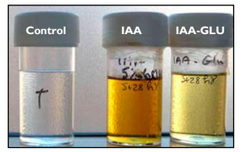
Auxins are found in vegetal, either as a non-conjugated form, or in smaller proportions, as a conjugated form. For instance N-indol-3-ylacetyl-L-glutamic acid (IAA-GLU) is the conjugated auxin, by glutamic acid, of the original indol 3-acetic acid (IAA). The non-conjugated form is particularly unstable, in particular when exposed to sun light, whereas the conjugated form (**AUXISTIM G®**) shows a much higher stability. **AUXISTIM G®** is also significantly more stable at high temperature (40°C, 28 days) than the original non conjugated form (IAA).



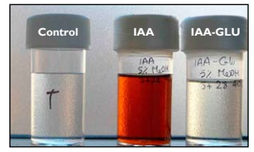
Non-conjugated auxin (IAA)



Conjugated auxin (IAA-GLU)



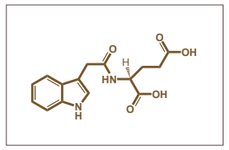
Light exposure for 28 days



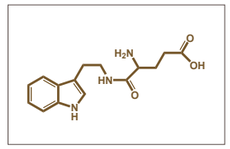
40°C for 28 jours (away from light)

Neurotrophic and neuroprotector effect

The structural analogy between GLISTIN® (first neurotrophic active developed by Exsymol) and **AUXISTIM G®** has guided us to explore the neurotrophic properties of this nature-identical compound.

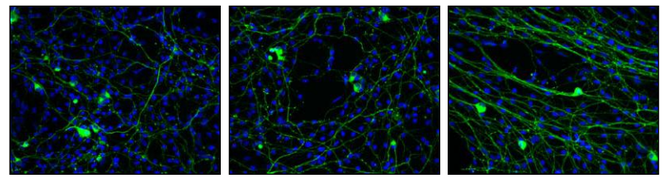


AUXISTIM G®



GLISTIN®

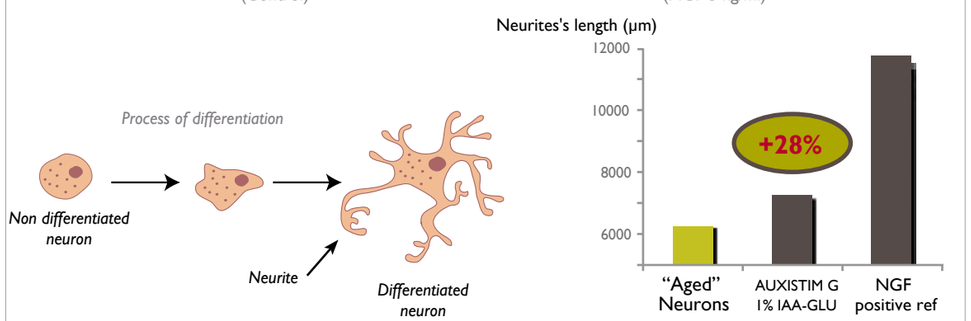
Neurotrophic properties of **AUXISTIM G®** have been explored on culture of sensory neuron by measuring the neurites' lengths by tubuline quantification. Tubuline is a protein produced during neurons differentiation. The measure is performed after 72 hours of incubation.
The "aged" sensory neurons are maintained in presence of a suboptimum quantity of NGF (1 ng/ml).



"Aged" sensory neurons (Control)

IAA-GLU, 0.1 mg/ml

Positive reference (NGF 5 ng/ml)



=> neurites' total length obtained by measure of tubuline from a culture of sensory neurons

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TECHNICAL CHARACTERISTICS

AUXISTIM G®

ANALYTICAL COMPOSITION

N-indol-3-ylacetyl-L-glutamic acid (IAA-GLU)	1%
Methylpropanediol	30%
Water	sq 100%

TECHNICAL CHARACTERISTICS

Limpid to slightly opalescent liquid, colorless to slightly yellow
Soluble in water
pH: about 6.5

PRESERVATIVE

Without preservative

TOLERANCE STUDY

AUXISTIM G® does not show any intolerance.
Tolerance studies were undertaken by *in-vitro* alternative methods (cell culture and reconstructed epidermis) and on volunteers.
Details on the tolerance studies can be found on the product's MSDS.

FORMULATION

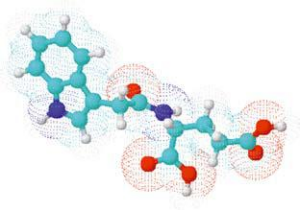
AUXISTIM G® is hydrosoluble and can be formulated in any type of product (gels, lotions, emulsions...), excepted in anhydrous formulation.
The minimum suggested using dose is approximately 1%.

USING AND WAREHOUSING RESTRICTIONS

There is no particular using or warehousing restrictions for this product.

AVAILABILITY

1, 5 and 30 kg



STUDIES

* *Metabolic stimulation on primary human fibroblasts*
* *Increase of secretion of pro-collagen I induced by IAA-GLU.*
* *Effect of Indole alkanoic acid conjugates on neurite outgrowth of primary sensory neurons in vitro. IID - Kyoto, May 2008.*
* *Neurotrophic effects of IAA-GLU.*
* *Organoleptic stability of conjugated of auxins in solution.*

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