

Multienzyme solution

Streptomyces Gougerotii Enzyme Extract

BACKGROUND

Actinomycetes are one of the most diverse groups of microorganisms that are well characterized and recognized for their metabolic versatility. In nature, actinomycetes play a vital role in the decomposition of organic matter, e.g. cellulose, chitin and pectin, therefore, they produce a wide variety of biochemical compounds, e.g. enzymes, antibiotics, nutraceuticals, antitumor agents, plant growth regulators and vitamins¹. Microbial enzymes play a key role as metabolic catalysts, leading to their diverse applications in various industries. Enzymes derived from microbial sources are generally regarded as safe and they are functional at a wide range of temperatures, pH, salinity or other extreme conditions.

Multienzyme complex, extracted from the strain of actinomycete *Streptomyces gougerotii* 101, has proteolytic, collagenasic, esterasic, amylolytic, lipasic, glucanasic, DNAsic and lysing activities, and may be employed developing cosmetics, antibacterial preparations and preparations for wound care.

PROPERTIES	Viscous, opaque, light brown liquid with no specific odor. Water soluble.
INCI	-
SAFETY AND QUALITY	Manufactured under GMP and validated by appropriate analytical methods. Extracts tested and are free of enterobacteria and other gramm negative bacteria, <i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i> . Optimal conditions for enzyme complex activity: 45±5 °C, pH 8,0–9,5.
APPLICATIONS	Cosmetics and cosmeceuticals, wound healing, antibacterial.
STORAGE	Store in tight containers, protect from light. Keep below 25 °C.
COUNTRY OF ORIGIN	EU

CONTENTS AND BENEFITS

- This enzyme complex removes the scaly layer of the skin, promotes faster skin regeneration and has an antibacterial effect.
- The enzymes collagenase and protease break dead skin cells, damaged collagen molecules without affecting healthy ones, thus softening and brightening the skin, participating in wound healing processes, especially burns, better healing of scars and making them less visible. Proteolytic activity of extracts is 3.6-4.2 v/cm³ while collagenase activity is 1440 – 1475 v/cm³.
- Elastase stimulates collagen synthesis, helps to restore the skin barrier.
- Glucanase and other lysing enzymes break down microbial cell walls and therefore inhibit their development at sites of skin damage, thus preventing infection.

REFERENCES

1 - DOI: 10.4172/jpb.1000456