



Type-1 Collagen in Triple Helical Structure

# Coltyp™ 1-MM Flakes

Purest Form of Collagen - Bovine origin



## Product Overview

Treating chronic non-healing ulcers like diabetic foot ulcers, pressure sores etc is a real challenge for the surgeons.

Conventional treatment options available may not suffice or resolve the challenge of closing the wounds, in turn lead to various complex situations leading to devastating and catastrophic outcomes.

Such catastrophic and traumatic outcomes affect the quality of life badly, especially in case of diabetic foot ulcers patients leading to the extent of amputation.

This is for this reason medicated biomaterials like **Coltyp1- MM flakes** play a vital role in chronic wound management to alleviate the sufferings of millions of victims and their family members in this category

Collagen is an extra cellular matrix protein playing a major role in connective tissue. It is the most abundant protein in humans and performs multiple functions. Collagen as a biomaterial and its role in wound management is well documented subject. Collagen encourages wound healing through the deposition and organization of freshly formed fibers and granulation tissues in the wound bed and thus creating a very conducive environment to wound healing

COLTYP1 MM is made of native triple helical collagen shows...

- Excellent homeostasis
- Sterile adsorbable
- Biodegradable
- Protective bacterial barrier
- Hypoallergenic flexible
- Cost - effective

**Coltyp1- MM flakes** is primarily a type 1 collagen in lyophilized flakes form with mupirocin USP 2%w/w and Metronidazole IP 1% w/w of specified volumes. **Coltyp1- MM flakes** is gamma sterilized and supplied in convenient easy to use pet containers. **Coltyp1- MM flakes** posses good absorbing characteristics and is non-toxic, non-allergic and non-immunogenic

- Non healing ulcers
- Diabetic foot ulcers
- Pressure ulcers
- Venous ulcers
- Traumatic wounds
- Surgical wounds
- Infected wounds / burns
- Minimally to heavily draining wound
- Tunneled wounds

COLTYP 1 MM Wound healing made easy Help line +91 9884482572 / 9884492572

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### MUPIROICIN USP:

- Topical Mupirocin is very effective against S.aureaus and this agent is invaluable in the eradication of Staphylococci (Oxford text book of Medicine 3<sup>rd</sup> Edn Vol1 p 526)
- Mupirocin is an antibiotic used in the treatment of various bacterial skin disorders (Martindale -The extra Pharmacopoeia 31<sup>st</sup> edn p 251)
- Mupirocin is an antibacterial agent and active against a wide range of gram +ve bacteria (PDR 55<sup>th</sup> edn 2001 p 3075)
- Mupirocin is active against Strep. Pyogenes ( Penicillin sensitive /resistant), Staph. aureaus. MRSA, etc ( KD Tripathi- Essential of medical pharmacology, 6<sup>th</sup> edn, p 733-34)

### METRONIDAZOLE IP

- Metronidazole topical cream is indicated in the treatment of Gram –ve bacterial infections (PDR 55<sup>th</sup> edn 2001 p 3075)
- Topical formulation of metronidazole has proven effective in various skin disorders (Martindale -The extra Pharmacopoeia p 624)
- Metronidazole has been used to treat anaerobic infections (Oxford text book of Medicine 3<sup>rd</sup> Edn Vol1 p 575)
- **Role of collagen in Wound healing:**
- Collagen is a excellent Haemostatic agent (Hovig et al 1968)
- Provides a matrix for tissue and vascular growth (klienman et al 1981a)
- Binds with fibronectin which promotes cell binding (klienman et al 1981b)
- Attracts fibroblasts and helps in directed migration of cells (Dunn & Ebendal 1978)
- Helps in wound debridement by attracting monocytes

### How to Apply Coltyp1- MM flakes

- Cleanse the wound
- Apply medication to the wound if indicated
- Apply **Coltyp1- MM flakes** ¼ inch thick to the wound surface. Do not pack tightly, allow for expansion of flakes.
- Cover with non stick dressing
- Use **Coltyp1- MM flakes** until wound is fully healed
- Maintain a moist wound environment

### How to remove Coltyp1- MM flakes

- Change as directed by the amount of drainage and instruction provided with the absorbent cover dressing
- After removal of the cover dressing, repeat steps under product application as needed.
- Precautions & Warnings:
- Wound may appear to be larger during the initial days of treatment due to a reduction in swelling.
- An increase in drainage may be seen on the initial days of treatment
- The product is made from bovine source. DO NOT USE IF YOU ARE ALLERGIC TO BOVINE DERIVED MATERIALS, (Milk, Beef products , leather etc)
- Discontinue use of **Coltyp1- MM flakes** if you experience redness, pain, swelling or blistering and inform your physician without delay.

● **Store at normal room temperature**  
**A WHO-GMP certified product manufactured in ISO 9001 -2008 certified company**

### Ordering Information

Coltyp1 MM flakes Pet Containers	2.5 ml	5 ml	10 ml	15 ml
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● Sold as set of ten individually packaged units.

## Benefits

### Hemostasis:

Collagen binds to specific receptor sites on platelet membranes, which swell and release substances to initiate hemostasis

Collagen binds to fibronectin, causing platelet adhesion and aggregation.

### Wound Debridement:

Collagen is chemo tactic to monocytes and leukocytes. Monocytes transform into macrophages which scavenge and phagocytise foreign bodies and debris.

### Granulation & Angiogenesis:

Collagen attracts monocytes which transform into macrophages. Macrophages release substances that result in fibroplasias and angiogenesis.

Collagen provides support for the growth of new capillaries. The presence of new capillaries is essential for the deposition of new fibres.

### Fibroblastic Activity:

Collagen binds fibronectin, which promotes cell binding and fibrillogenesis, influences fibril dimensions and stimulates fibroblast proliferation and migration.

Collagen is chemo tactic to fibroblasts, which direct the restoration of new tissue by depositing oriented and organized fibres. Collagen provides a substrate for directed migration and permeation of fibroblasts.

### Re-epithelialisation:

Collagen directly supports the growth, attachment, differentiation and migration of keratinocytes by binding with fibronectin.

Collagen offers a provisional matrix for keratinocytes migration.

### Wound Remodelling:

Collagen reduces scarring by depositing oriented and organized fibres and by regulating the amount of collagenase expressed by keratinocytes



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