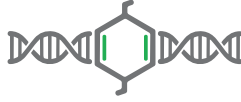


BioMedical EMPORIUM



BIOMEDICAL EMPORIUM WOUND OCCLUSIVE & WOUND OCCLUSIVE PLUS

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Wound Occlusive
range is available in
the following pack sizes:
10 ml (single use sachet);
15 ml, 50 ml, 80 ml,
120 ml (multidose
units)

THERAPEUTIC INDICATIONS

Wound Occlusive is indicated for chronic and acute wounds that are infected or where the possibility of infection by bacteria is a concern.

Chronic and acute wounds may include post-surgical wound/sutures, burns, abscesses, diabetic ulcers, decubitus ulcers (bed sores-stadium I – IV), skin tears.

Wound Occlusive Plus has an additional synergistic antiseptic action used in the treatment of skin infections, decubitus ulcers, wounds, cuts, abrasions, burns and for post-operative wounds.

WARNINGS

Wound Occlusive

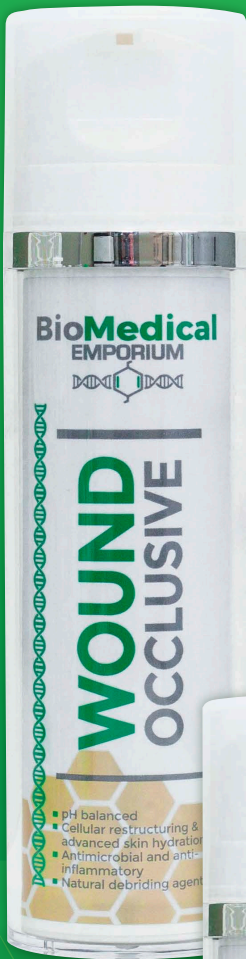
Hypersensitivity to honey, or to any of the components of this preparation.

Store at or below 25 °C

Wound Occlusive Plus

Hypersensitivity to povidone-iodine, honey, or to any of the components of this preparation.

Store at or below 25 °C



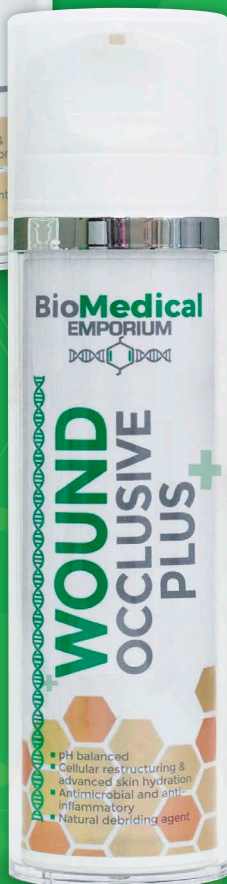
Is pH balanced, free of fragrances and dyes and paraben free

IS EFFECTIVE AGAINST WOUND TYPES I.E.

- Burns
- Post-surgical wounds
- Pressure sores
- Diabetic wounds

HAS CHARACTERISTICS SUCH AS

- Aesthetic healing
- Natural debriding properties
- Antiseptic, antimicrobial, antipyretic, anti-inflammatory and antioxidant properties
- Enhancer of skin elasticity and restorer of density
- Promoter of rehydration, biodegradable, and beneficial for all types of skin



WOUND OCCLUSIVE PLUS

- Broad-spectrum microbicide
- Povidone-iodine is used as a disinfectant and antiseptic for the effective treatment of contaminated wounds

PHASES OF WOUND HEALING

PHASE 1

Haemostasis

(30 minutes post-trauma)

Clinical features: ↑ Initial bleeding; stopped by ↑ blood clotting

Physiology: Blood vessels constrict; clot formation; ↑ growth factors (VEGF, EGF, PDGF, TGF-β, IGF-1, IL-1), ↑ matrix for cell migration

Wound Occlusive Ingredients involved in this phase:

Honey, Zinc oxide, Chlorhexidine, Hyaluronic acid

PHASE 2

Inflammation

(lasts 2-5 days)

Clinical features: ↑ Redness and swelling (until harmful agents are removed), ↑ heat, ↑ pain

Physiology: Neutrophils ↓ infectious agents; macrophages ↓ necrotic tissue and pathogens; ↑ growth factors and cytokines, ↑ supply of oxygen and nutrients, basal keratinocytes ↑ migration and proliferation, fibroblasts ↑ collagen, ↑ fibronectin, ↑ hyaluronic acid, ↑ cell recruitment, ↑ angiogenesis

Wound Occlusive Ingredients involved in this phase:

Honey, Zinc oxide, Chlorhexidine, Xylitol, Hyaluronic acid

PHASE 3

Proliferation

(2-3 days after injury until closing of the wound)

Clinical features: ↓ Inflammation, ↑ wound closing, ↑ connective tissue

Physiology: ↑ re-epithelialization, ↑ neovascularization, ↑ granulation tissue, ↑ fibroblast proliferation, ↑ collagen deposition, ↑ glycosaminoglycan, ↑ proteoglycan, ↑ angiogenesis, ↑ pro-inflammatory cytokines, ↑ Nitric oxide, ↑ growth factors, ↑ keratinocytes migration

Wound Occlusive Ingredients involved in this phase:

Honey, Zinc oxide, Lactic acid, Vitamin B, Vitamin E, Hyaluronic acid

PHASE 4

Remodelling

(21 days – 1 year after wound healing)

Clinical features: ↑ strength and ↑ flexibility of new tissue

Physiology: Fibroblasts become myofibroblasts, ↑ collagen, ↑ glycosaminoglycans, collagen production = breakdown, collagen III exchanges for collagen I, ↑ matrix metalloproteinase enzyme that ↓ extracellular matrix

Wound Occlusive Ingredients involved in this phase:

Honey, Zinc oxide, Lactic acid, Vitamin B, Vitamin E, Hyaluronic acid

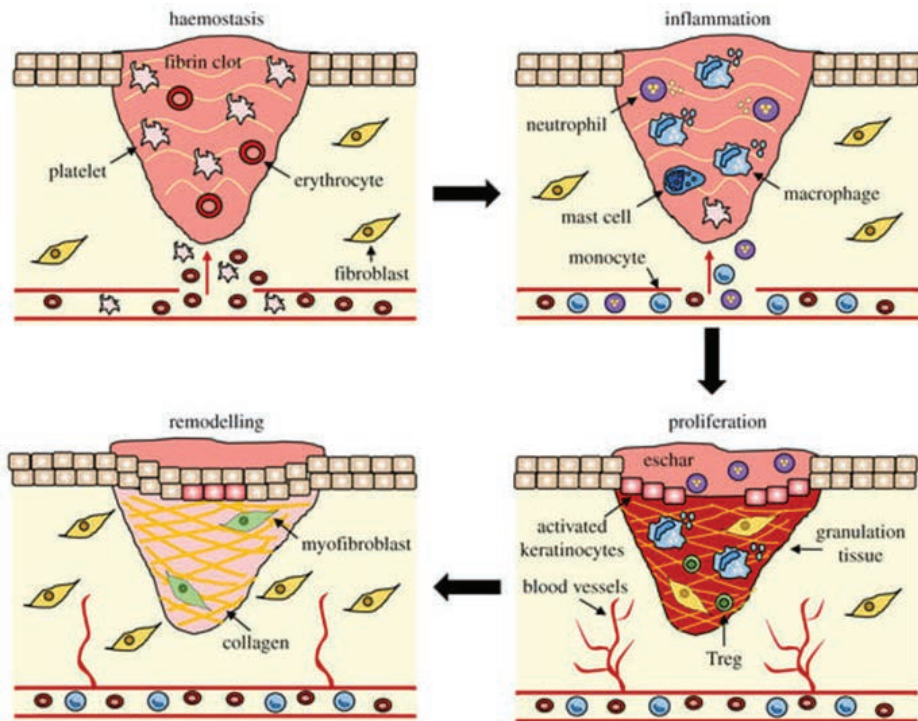


Figure 1. The stages of wound healing. The stages of wound healing involve an interaction between the extracellular matrix and multiple cell populations, including platelets, fibroblasts, keratinocytes, endothelial cells, and macrophages. (Ref: Downer, M.; Berry, C.E.; Parker, J.B.; Kameni, L.; Griffin, M. Current Biomaterials for Wound Healing. Bioeng, 2023,10, 1378, doi: 10.3390/bioengineering10121378.)

List of abbreviations

VEGF	Vascular endothelial growth factor
EGF	Epithelial growth factor
PDGF	Platelet-derived growth factor
TGF- β	Transforming growth factor- β
IGF-1	Insulin-like growth factor-1
IL-1	Interleukin 1

Table 1: Ingredients included in the Wound Occlusive® Product Range to assist the main ingredient, honey, in creating an optimised environment for wound healing

INGREDIENT	CLASSIFICATION	REASON FOR INCLUSION
Honey	Apitherapy agent	Antimicrobial, autolytic, debriding, anti-inflammatory
Zinc oxide	Micronutrient	Increased wound healing, increased reepithelialisation, decreased rates of infection and decreased rates of deterioration of ulcers
Lactic acid	Alpha hydroxy acid	Enhances skin wound closure, scar reduction, reduced inflammation and fibrogenesis thereby improving angiogenesis in the wounded skin
Vitamin B	Water-soluble vitamin	Accelerated wound closure and consequently facilitates wound healing
Vitamin E	Lipid-soluble vitamin, antioxidant	Fat-soluble antioxidant, used to accelerate wound healing and prevent hypertrophic scarring
Chlorhexidine	Cationic surfactant synthetic biguanide	Contributes to the antimicrobial properties of the Wound Occlusive®
Xylitol	Non-fermentable sugar alcohol	Act as anti-biofilm, consequently inhibiting biofilm formation of dangerous strains of bacteria
Hyaluronic acid	Anionic, nonsulfated glycosaminoglycan	Regulates or is involved in tissue repair process on multiple levels (inflammation, granulation and re-epithelialization), and modulates the hydration and osmotic balance
WOUND OCCLUSIVE PLUS (CONTAINS ALL INGREDIENTS ABOVE + 10 % (w/w) POVIDONE-IODINE)		
Povidone Iodine	Category and class: A.14.1 Wound disinfectants Pharmacotherapeutic group: Antiseptic and disinfectant, Antiseptic and germicides	Povidone-iodine is a multivalent broad spectrum local disinfectant having bactericidal and fungicidal properties. The effect on vegetative cells of various bacteria and fungi is due to the liberation of free iodine from the complex. Many viruses, protozoa, yeasts, cysts and spores are also susceptible.



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