

BIO-ACTIVE MATRIX
ENRICHED WITH **3** IONS:
MANGANESE, CALCIUM AND ZINC
CE MARKED IN CLASS III

Ca++

Mn++

Zn++

TRIONIC® - the power of 3 for haemostasis and healing

**USER GUIDE** 

#### **INDICATIONS**

#### Healing

Moderate to heavily exuding wounds

- Pressure ulcers
- Leg ulcers
- Diabetic foot ulcers
- Post operative wound dehiscence
- Amputation stumps
- Abscesses
- Burns

# MECHANISM OF ACTION

Upon contact with the wound, **TRIONIC 3.0** absorbs exudate and traps necrotic debris and bacteria  $^{1,2,3}$  in its interfibrilar matrix, thus promoting wound cleansing and granulation  $^{4,5,9}$ .

At the same time, **TRIONIC 3.0** frees its zinc, calcium and manganese ions into the wound bed. The 3 ions stimulate key cells of the healing process and fasten tissue regeneration 4,5,6,7,8,9.

Finally, upon contact with wound fluids **TRIONIC 3.0** gelifies and maintains a moist environment required for proper wound healing. **TRIONIC 3.0** is designed to minimize pain <sup>2,3,9</sup> and facilitate an easy removal, without damaging the newly formed tissue.

#### Heamostasis

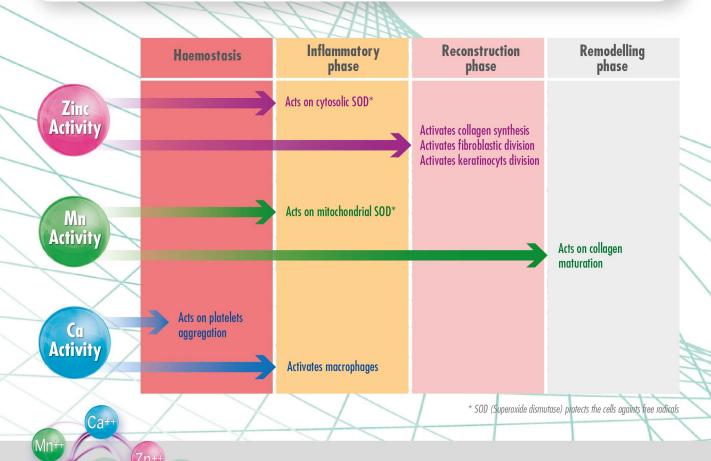
**TRIONIC 3.0** is efficient in patients with bleeding disorders whether congenital or acquired

- Haemorrhagic wounds
- Puncture sites
- Blood oozing
- Donor sites

Upon contact with the wound, **TRIONIC 3.0** absorbs sodium ions from the blood and frees its zinc, calcium and manganese ions into the wound bed. This process is called IONIC EXCHANGE.

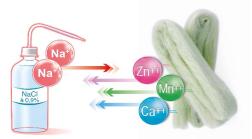
The 3 ions released into the wound stimulate platelets activation and aggregation, and contribute to the chain reaction of the coagulation cascade. **TRIONIC** 3.0 significantly accelerates haemostasis <sup>7,8,9</sup>.

**TRIONIC 3.0** can be used as interface with NPWT devices (follow the instructions of the device manufacturer).



**TRIONIC 3.0** enhances fibroblastic division by 50%, collagen type I production by 300% and collagen type III production by 400% <sup>6</sup>.

### **PROTOCOL OF USE\***



Moistening **TRIONIC 3.0**, with saline solution (NaCl 0,9%), upon application and before removal, triggers the ionic exchange between the calcium ions of **TRIONIC 3.0** and the sodium ions of the solution.

This ionic exchange speeds up the haemostatic and healing efficacy of **TRIONIC 3.0** and ensures its gellification.



A - Clean the wound with saline solution (NaCl 0.9%)



B - Moisten TRIONIC 3.0 (dressings 10x10cm and 10x20cm; rope) with saline solution



C - Apply the dressing on the wound surface



D - Or fill the voluminous cavity loosely with the rope



E - Leave in place for 48 hours or as indicated below in the change protocol\*



F - Moisten TRIONIC 3.0 with saline solution to facilitate its removal

## **CHANGE PROTOCOL\***

CLEAN WOUND	Every two days
WOUND WITH EXUDATE AND FIBRIN	Daily
INFECTED WOUND	Twice a day
DONOR SITE	Leave TRIONIC 3.0 in place until complete healing The dressing comes off spontaneously between 8 and 15 days

\* Always read the information leaflet before use

# TRIONIC

SIZE	REFERENCE	DRESSINGS PER BOX
TRIONIC 9,5 cm x 9,5 cm	TRI 301	10
TRIONIC 10 cm x 20 cm	TRI 302	10
TRIONIC rope 2 gr, 30 cm	TRI 303	6











Infected wounds

Deep wounds

**Exuding wounds** 

Haemorrhagic wounds

NPWT interface

- 1. Kinetic binding of bacteria on two types of dressings: Algosteril® and Gauze, 1st European workshop surgery-engineering: synergy in biomaterial applications, Montpellier 19-20 May, 1994.
- 2. Algosteril® dressing vs. Dextranomere in the treatment of Decubitus Ulcers at 20 French Centres. 8th Annual Symposium on the Treatment of the Wound, San Diego, USA, May 1995.
- 3. Algosteril® vs. Povidone lodine dressing in the treatment of infected wounds. IXth European Congress of Infectious Surgery, Paris, June 1996
- 4. ZIEGLER U.E. et al. The treatment of chronic wounds with a new calcium-zinc-manganese alginate dressing. Fortschritte der Medizin 121. Jg. — Originalien Nr.1/2003, S. 19-26.
  5. TARIN SAEZ J.J. et al. Effectiveness of bioactive dressing with ionic charge in the reduction of healing time
- in chronic wounds. Metas de Enferm 9(1): 58-64, February 2006.
- 6. CASTELLARNAU C. et al. The activating function of bioactive dressing with ionic charge on human fibroblasts. Metas de Enferm 8(7): 50-54, September
- 7. SERVANT J.M. et al. Calcium polyuronate dressing supplemented with zinc and manganese (TRIONIC®) in necrotizing dermohypodermitis of the extremities: a randomized multicenter study. Annals of Burns and Fire Disasters, Vol. XXIII, n.2, June 2010.
- 8. Algosteril®, calcium alginate, vs. Vaseline Gauze in the Treatment of Excised Lesions of Verneuil's Disease. 4th Australian Wound Management Association Conference, March 2002.
- 9. PANNIER et al., Efficacy and tolerance of Algosteril® vs. Jelonet® in the treatment of scalp graft donor sites in children. Annales de Chirurgie Plastique Esthétique 47 (2002) 1-6.



TRIONIC® is developed and manufactured in France by Les Laboratoires BROTHIER, 41 Rue de Neuilly - 92735 Nanterre Cedex, France. TRIONIC® is a trademark of Les Laboratoires BROTHIER.

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