B. Braun Biosurgicals Lyostypt[®]

Superior hemostasis supplied by nature





Lyostypt®

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Versatility in the OR

Lyostypt[®] is used for topical hemostasis of capillary bleeding, oozing hemorrhages, bleeding from parenchymal organs and as a supportive measure for other techniques of hemostasis. In hemodialysis, Lyostypt[®] can also be used for local hemostasis at the puncture site. Lyostypt[®] offers what is needed:

- very efficient hemostasis
- excellent biocompatibility
- can be applied endoscopically
- can be combined with fibrin glue *
- can be combined with antibiotics **
- only small amount needed thus cost efficient
- swift uptake of liquids
- absorbable

* S. Uranüs et al., Laparoskopische Eingriffe an der Milz, Chir Gastroenterol 2004, 20 suppl. 2: 1–8

** Z. Wachol-Drewek et al., Comparative investigation of drug delivery of collagen implants saturated in antibiotic solutions and a sponge containing gentamicin, Biomaterials 1996, 17: 1733-1738

Collagen, <u>a material</u> you can trust

Collagen



- "Advantages of collagen fleece are fast induction of hemostasis, low tissue reaction, and fast resorption." *
- "Collagen was shown to be the best overall hemostatic agent in microvascular surgery." *
- "Voormolen concluded that collagen fleece established faster hemostasis than oxidized cellulose and that it was resorbed faster than oxidized cellulose." *
- "Direct platelet release stimulation, provides a surface, does not swell." *

C. Schonauer et al., The use of local agents: bone wax, gelatin, collagen, oxidized cellulose, Eur Spine J 2004, 13 Suppl. 1: S89-S96

Ordering Information



Lyostypt[®] is an absorbable collagen compress made of collagen fibrils of bovine origin. Lyostypt[®] is γ -sterilized. It is available in the following packs and sizes.

Sizes	Art. No.	Contents
Lyostypt° collagen compress 3cm x 5cm	1069128	12 pieces
Lyostypt° collagen compress 5cm x 8cm	1069152	6 pieces
Lyostypt° collagen compress 5cm x 8cm	1069020	12 pieces
Lyostypt° collagen compress 10cm x 12cm	1069209	4 pieces
Lyostypt° collagen compress 10cm x 12cm	1069039	8 pieces
Lyostypt [®] collagen compress 20cm x 30cm	1069250	2 pieces
Lyostypt° collagen compress 5cm x 30cm	1069306	4 pieces

Lyostypt®

Collagen, the driver of hemostasis

Collagen active in primary and secondary hemostasis

Lyostypt[®] is made of collagen, which is very active in primary hemostasis:

"vWF (von-Willebrand-factor) is building bridges between collagen and thrombocytes...Blood platelets carry receptors for subendothelial matrix proteins such as collagen." *



(adapted from: R. F. Schmidt, F. Lang, G. Thews: Physiologie des Menschen 2005, 526)

Collagen also plays an important role within the intrinsic system of secondary hemostasis:

"Here, factor XII gets into contact with negatively charged surfaces such as collagen or (in vitro) glass. In addition, further contributors to the activation and effect of factor XII are high molecular weight kininogen and proteolytic enzymes..." ** Due to these characteristics collagen reduces the bleeding time and the blood loss very efficiently in animal tests, as can be seen in the attached table.



(adapted from: H. E. Köhnlein et al., Zur Wirkung verschiedener Hämostyptika, Fortsch Med 1974, 13: 579-580)

Collagen stops bleeding, not cell growth

As collagen is a physiologic material found in several body tissues, it has almost no negative effect on normal cell growth as can be observed with other hemostatic agents (see attached table).



(adapted from: D. Heidemann et al., Der Einfluß lokaler Hämostyptika auf menschliche Gingivafibroblasten in Kultur, Dtsch Z Mund Kiefer GesichtsChir 1989, 13: 226–229).

- * R. F. Schmidt, F. Lang, G. Thews: Physiologie des Menschen 2005, 525, translated from German
- ** R. F. Schmidt, F. Lang, G. Thews: Physiologie des Menschen 2005, 527, translated from German



AESCULAP[®]

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