

A SELECTION OF SCIENTIFIC LITERATURE ON CORD BLOOD COMPONENTS

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1. Gelmetti A, et al. Cord blood platelet gel for the treatment of inherited epidermolysis bullosa. *Transfus Apher Sci.* 2018;57:370-3.
2. Campos E, et al. Topical Treatment with Cord Blood Serum in Glaucoma Patients: A Preliminary Report. *Case Rep Ophthalmol Med.* 2018; doi:10.1155/2018/2381296.
3. Buzzi M, et al. Comparison of growth factor and interleukin content of adult peripheral blood and cord blood serum eye drops for cornea and ocular surface diseases. *Transfus Apher Sci.* 2018;57:549-55.
4. Volpe P, et al. Efficacy of cord blood platelet gel application for enhancing diabetic foot ulcer healing after lower limb revascularization. *Semin Vasc Surg.* 2017;30:106-12.
5. Sindici E, et al. Cord blood platelet gel alone or in combination with photobiomodulation therapy for the treatment of oral ulcerations in patients with epidermolysis bullosa: A pilot clinical comparative study. *Photodermatol Photoimmunol Photomed.* 2017 Nov 15. doi: 10.1111/phpp.12366.
6. Piccin A, et al. Impressive tissue regeneration of severe oral mucositis post stem cell transplantation using cord blood platelet gel. *Transfusion.* 2017;57:2220-4.
7. Sharma N, et al. Comparison of Amniotic Membrane Transplantation and Umbilical Cord Serum in Acute Ocular Chemical Burns: A Randomized Controlled Trial. *Am J Ophthalmol.* 2016;168:157-63.
8. Longo V, et al. Proteomic characterization of platelet gel releasate from adult peripheral and cord blood. *Proteomics Clin Appl.* 2016;10:870-82.
9. Ferri AL, et al. Osteogenic differentiation of adipose tissue-derived mesenchymal stem cells cultured on a scaffold made of silk fibroin and cord blood platelet gel. *Blood Transfus.* 2016;14:206-11.
10. Rebullà P, et al. Multicentre standardisation of a clinical grade procedure for the preparation of allogeneic platelet concentrates from umbilical cord blood. *Blood Transfus.* 2016;14:73-9.
11. Parazzi V, et al. Extensive Characterization of Platelet Gel Releasate From Cord Blood in Regenerative Medicine. *Cell Transplant.* 2015;24:2573-84.
12. Bianchi M, et al. Allogeneic umbilical cord blood red cell concentrates: an innovative blood product for transfusion therapy of preterm infants. *Neonatology.* 2015;107:81-6.
13. Rosso L, et al. Pleural tissue repair with cord blood platelet gel. *Blood Transfus.* 2014;12 Suppl 1:s235-42.
14. Yoon KC. Use of umbilical cord serum in ophthalmology. *Chonnam Med J.* 2014;50:82-5.
15. Erdem E, et al. Umbilical cord blood serum therapy for the management of persistent corneal epithelial defects. *Int J Ophthalmol.* 2014;7:807-10.
16. Petri C. Ethical and legal considerations regarding the ownership and commercial use of human biological materials and their derivatives. *J Blood Med.* 2012;3:87-96.
17. Parazzi V, et al. Platelet gel from cord blood: a novel tool for tissue engineering. *Platelets.* 2010;21:549-54.

DISCLAIMER

This medical device is intended for use by qualified health personnel only. The present information does not constitute and does not intend to constitute recommendations for medical treatment. The company assumes no responsibility for improper use of the device and for incorrect application of the instructions contained in the package leaflet. The use of blood components is the responsibility of the qualified health personnel.



The image shows a woman with blonde hair smiling and holding a baby. Overlaid on the image are four circular diagrams representing different cord blood components and their uses:

- CBSC** (Cord blood stem cells): TRANSPLANT
- CBRBC** (Cord blood red blood cells): TRANSFUSION
- CBPLT** (Cord blood platelets): TOPICAL USE
- CB PLASMA** (Cord blood plasma): TOPICAL USE

At the bottom left of the image area is the **BAGS A·B·C BIONEST SYSTEM** logo. At the bottom right is the text: **A medical device for Multicomponent Cord Blood Banking**.

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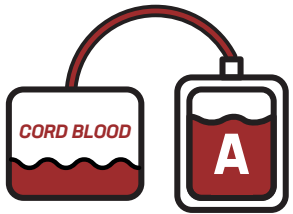
Intended use

Medical device for the preparation, storage and use of Cord Blood components.

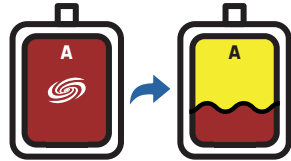
Fields of application

- Neonate to neonate red blood cell transfusion
- Wound healing
- Eye drops

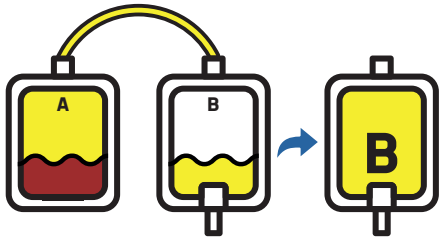
MADE IN ITALY



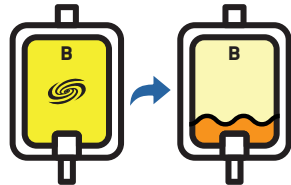
1 CB is aseptically transferred from the original collection bag into bag "A" by sterile connection



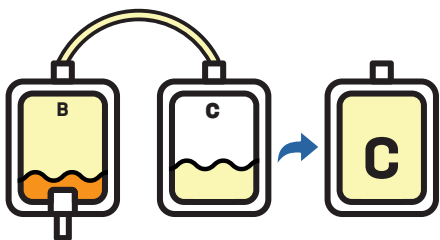
2 Bag "A" is centrifuged with bags "B" and "C" at low speed to sediment the red blood cells and to concentrate the white blood cells and the platelets into the supernatant platelet rich plasma (PRP)



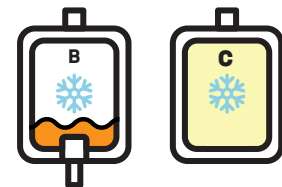
3 Transfer of PRP into bag "B", sealing, separation and storage at 2-6 °C of bag "A", which contains red blood cells



4 High speed centrifugation of "B-C" bags



5 Transfer platelet-poor plasma (PPP) into bag "C" except the volume necessary to ensure a predefined concentration of the platelets concentrated in the bottom of bag "B" (for example: 1 million per microliter)

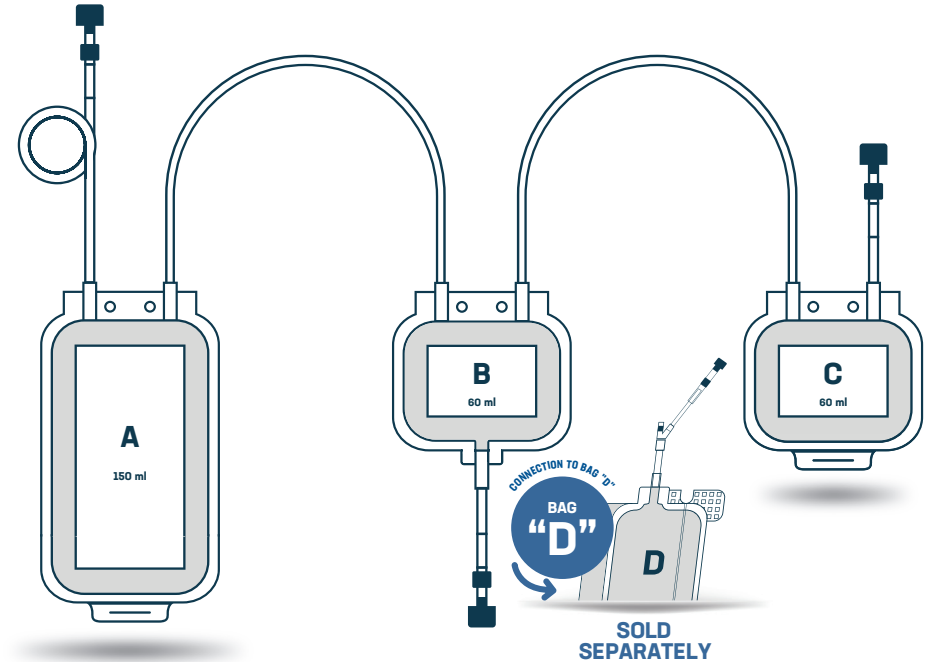


6 Sealing, separation and freezing of "B" and "C" bags at temperatures below -25 °C



INFORMATION
for BioNest system users

Besides the classical use as a source of hemopoietic stem cells for allogenic transplantation, Cord Blood can be fractionated into "A" red blood cells, "B" platelets, and "C" platelet poor plasma.



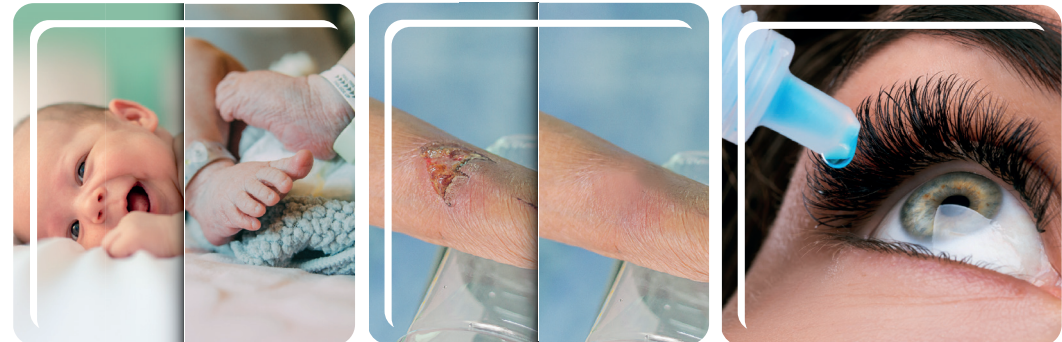
BAG "A"
CBRBC
Neonatal Transfusion

BAG "B"
CBPG*
Wound Healing

BAG "C"
CBPPP
Eye Drops

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*Cord Blood Platelet Gel (CBPG) can be prepared and easily administered using the BioNest transfer bag "D" (sold separately, product code 4211000000).



Project design by: Giroidea.it - Mi - Italy

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