

ArthroZheal®

Autologous bioactive matrix



Transforming the overall arthroscopic surgery experience for patients and their surgeons while its bioactive and biocompatible properties successfully provides supportive effects for sealing, healing and regeneration of ligaments, tendons and cartilage.

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ArthroZheal® is designed to improve patient outcomes through fast recovery¹.

ArthroZheal® is a autologous, biocompatible and bioactive matrix improving regeneration of cartilage, ligaments, menisci, tendons.

ArthroZheal® is prepared and applied using the Vivostat® System



The **Vivostat® System** is the first and only system for on-site preparation and application of the fully autologous platelet rich bioactive matrix – ArthroZheal®.

- The **Vivostat® Processor Unit** automatically prepares the bioactive matrix from 120 ml of the patient's own blood, in a well-defined and reproducible dose.
- ArthroZheal® is easily applied using the **Vivostat® Applicator Unit** with the arthroscopic handle specifically designed with and for orthopaedic surgeons. Furthermore, the **Vivostat® Co-Delivery** system makes it possible to simultaneously co-apply BMAC, stem cells, chondrocytes or medications (i.e. antibiotics) alongside ArthroZheal®.

Three steps to prepare and apply



Step 1: Draw the patient's blood

120 ml of the patient's blood is drawn into the Preparation Unit.



Step 2: Process the patient's blood

The preparation time is approx. 30 minutes and hereafter ArthroZheal® is ready for use.



Step 3: Load Applicator Unit

ArthroZheal® is applied to the surgical site using one of the unique arthroscopic application devices.

ArthroZheal® – the only product with immediate polymerization both in dry and in the water/saline environment

Sealing



ArthroZheal® provides fast sealing and hemostasis^{1,3}

ArthroZheal® induces immediate polymerization and great adhesion – remaining where applied even on vertical and moist surfaces²- supporting positioning of grafts. ArthroZheal® improves control of bleeding and reduces hemarthrosis³.

ArthroZheal® may offer control of potential contamination through its anti-inflammatory and antimicrobial platelet properties^{4,6}.

Healing & Regeneration



ArthroZheal® supports regeneration and healing of ligaments, tendons, menisci, cartilage and bone

Through a combination of fibrin matrix and a sustained release of high concentrations of growth factors ArthroZheal® improves regeneration and healing of tissue (cartilage, ligaments, menisci, tendons and bone) and support osteo-ligamentization, osteo-integration and graft maturation³.

Easy application



ArthroZheal® is easy to apply - also during arthroscopy with saline inside the joint cavity

ArthroZheal® is easy to apply – even in water environment and can be used during arthroscopy with saline inside the joint cavity. The arthroscopic handle is specifically designed with and for orthopaedic surgeons.



Sealant and hemostat – less hemarthrosis

Regenerative product – graft maturation, osteoinduction

Scaffold – membrane

Platform for antibiotic applications (Co-Delivery)

Platform for stem cells application (Co-Delivery)

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Product and order information

Code	Product description
AZ 500	ArthroZheal®Set
AZ 520	ArthroZheal®Set - Endoscopic
AZ 506	ArthroZheal®Preparation Kit
AZ 220	Arthroscopic Handle
PRO 800	Processor Unit
APL 400	Applicator Unit
APL 404	Applicator Unit Co-Delivery
VS 222	Foot Switch to be used with APL 400/404

References

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2. Kjaergaard HK, et al. Comparative kinetics of polymerization of three fibrin sealants and influence on timing of tissue adhesion. *Thrombosis Research*; 96: 221-228.
3. Beyzadeoglu T, Pehlivanoglu T, Yildirim K, Buldu H, Tandogan R, Tuzun U. Does the application of platelet-rich fibrin in anterior cruciate ligament reconstruction enhance graft healing and maturation? A Comparative MRI study of 44 cases. *Orthop J Sports Med*. 2020; 8(2):2325967120902013.
4. Bayer A, et al. Platelet-released growth factors induce the antimicrobial peptide human beta-defensin-2 in primary keratinocytes. *Exp Dermatol*. 2016; 25: 460-465.
5. Knäfl D, et al. In-vitro release pharmacokinetics of amikacin, teicoplanin and polyhexanide in a platelet rich fibrin—lyser (PRiP)—a laboratory evaluation of a modern, autologous wound treatment. *PLoS ONE* 12(7): e0181090. <http://doi.org/10.1371/journal.pone.0181090>
6. Tohidnezhad M, et al. Thrombocytes are effectors of the innate immune system releasing human beta defensin-35. *Injury, Int. J. Care Injured* 42 (2011) 682-686.

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