

endoret[®] (prgf[®])

Endogenous Regenerative Technology

FACIAL AESTHETICS

FOR PROFESSIONALS IN DENTISTRY



www.bti-biotechnologyinstitute.com



bti[®]

Human
Technology



LEADER IN REGENERATIVE MEDICINE

BTI Biotechnology Institute is a Spanish biomedicine company focused on the development of translational research projects (R&D+i). BTI is a world-level scientific leader in regenerative medicine using ENDORET in different fields of medicine.

ENDORET technology has extensive experience in the development of specific protocols for tissue regeneration, and is a pioneering technology manufactured exclusively by BTI Biotechnology Institute.

MORE THAN 150 INDEXED SCIENTIFIC PUBLICATIONS BACK THE EFFECTIVENESS AND BIOSAFETY OF ENDORET®



ENDORET® TECHNOLOGY

WHAT IS IT?

ENDORET® IS A BIOMEDICAL TECHNOLOGY AIMED AT STIMULATING TISSUE REGENERATION BY APPLYING AUTOLOGOUS PROTEINS

in such a way that provides the means necessary for the isolation and concentration of the blood proteins involved in tissue regeneration, as well as its suitable application at the injury site.

ACTIVE SUBSTANCES OF ENDORET®

GROWTH FACTORS

ENDORET stimulates tissue regeneration due to its content in growth factors, in greater concentrations than those of blood.

FIBRIN MATRIX

Enables the balanced and gradual release of a large number of molecules, including growth factors and other proteins.

ADVANTAGES OF ENDORET® TECHNOLOGY

OPTIMUM CONCENTRATION OF PLATELETS

The **right concentration of platelets** affects the final efficacy. ^{(1) (2)}

FREE FORMULATION OF LEUKOCYTES

The inclusion of **leukocytes** increases the pain and inflammation ⁽³⁾ and accelerates the deterioration of the fibrin. ⁽⁴⁾

CONTROLLED ACTIVATION

Enables the formation of the fibrin matrix in situ **and the gradual release of growth factors**, maintaining its efficacy over time. ^{(5) (6)}

AUTOLOGOUS

Taken from the patient's blood, so **there are no side effects**. ⁽⁷⁾

REPRODUCIBLE

The protocol for the preparation process and its clinical application is strictly defined and tested.

VERSATILE

4 preparations obtained in the same process means we can adapt the product to the patient's clinical needs. ^{(8) (9)}

VERSATILITY

The versatility of ENDORET technology enables it to be adapted to different clinical uses.⁽⁸⁾



Liquid for infiltration in skin.



Liquid for their use as a post-treatment mask.

APPLICATION IN FACIAL AESTHETICS

The ability of plasma rich in growth factors to enable tissue regeneration can counteract the degenerative changes in the skin and slow down the ageing process for the regenerative and corrective purpose. Therefore, treatment with Endoret aims to:

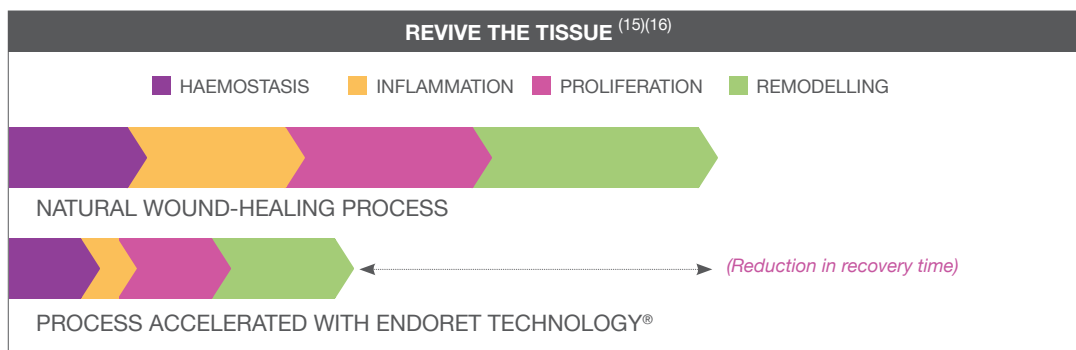
Increase the production of hyaluronic acid⁽¹⁰⁾

Increase the consistency and thickness⁽¹¹⁾

Increase hydration⁽¹²⁾

Reduce elastosis⁽¹³⁾

Reduce photodamage⁽¹⁴⁾



The use of the technology is also effective in other types of wounds such as burns or surgical wounds.⁽¹⁷⁾

EQUIPMENT AND COMPONENTS OF ENDORET TECHNOLOGY®

ENDORET® DISPOSABLE KIT FOR ONE TREATMENT

SYSTEM OF BLOOD EXTRACTION

- Extraction tubes (4)
- Winged blood collection set (1)
- Identification labels (5)

SYSTEM OF FRACTIONING

- Fractioning tubes (2)
- Plasma Transfer Device PTD2 (1)
- Guide needles 14G (4)



KMU-10
(It contains 10 disposable kits)

APPLICATION

- Activator (Ampoule of PRGF-Endoret®-Activator) (1)
- Activation syringe (1)
- Application needles: Fine-Ject® 21G (1), Sterican® 30G (4), Meso-Relle® 32G (4)
- Application syringe: BD 3 ml syringe (2)

EQUIPMENT

- System V centrifuge
- Activation containers
- Work rack



SAFETY AND REGULATORY ASSURANCE

The application of Endoret technology is a Medicinal Product for Human Use that complies with all the regulations required.



bti®

Human
Technology

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BTI APP

ENDORET® (PRGF®)

iPhone/smartphone version

iPad/tablet version (exclusive content for clients)

Scientific studies:

(1) Anitua E, Sánchez M, Zalduendo MM, de la Fuente M, Prado R, Orive G, Andia I. Fibroblastic response to treatment with different preparations rich in growth factors. *Cell Prolif.* 2009;42:162-170. / (2) Anitua E, Sanchez M, Prado R, Orive G. The type of platelet-rich plasma may influence the safety of the approach. *Knee Surg Sports Traumatol Arthrosc.* 2014 Jul;22(7):1708-9. / (3) Filardo G, Kon E, Pereira Ruiz MT, Vaccaro F, Guitaldi R, Di Martino A, Cenacchi A, Fornasari PM, Marcacci M. Platelet-rich plasma intra-articular injections for cartilage degeneration and osteoarthritis: single- versus double-spinning approach. *Knee Surg Sports Traumatol Arthrosc.* 2012 Oct;20(10):2082-91. / (4) Anitua E, Zalduendo M, Troya M, Padilla S, Orive G. Leukocyte inclusion within a platelet rich plasma-derived fibrin scaffold stimulates a more pro-inflammatory environment and alters fibrin properties. *PLoS One.* 2015 Mar 30;10(3):e0121713 / (5) Anitua E, Zalduendo MM, Alkhraisat MH, Orive G. Release kinetics of platelet-derived and plasma-derived growth factors from autologous plasma rich in growth factors. *Ann Anat.* 2013 Oct;195(5):461-6. / (6) Anitua E, Sanchez M, Nurden AT, Zalduendo M, de la Fuente M, Orive G, Azofra J, Andia I. Autologous fibrin matrices: a potential source of biological mediators that modulate tendon cell activities. *J Biomed Mater Res A.* 2006;77:285-293. / (7) Anitua E, Sánchez M, Nurden AT, Nurden P, Orive G, Andia I. New insights into and novel applications for platelet-rich fibrin therapies. *Trends Biotechnol.* 2006;24:227-234. / (8) Anitua E, Sánchez M, Orive G, Andia I. The potential impact of the preparation rich in growth factors (PRGF) in different medical fields. *Biomaterials.* 2007;28:4551-4560. / (9) Anitua E, Sánchez M, Orive G. Potential of endogenous regenerative technology for in situ regenerative medicine. *Adv Drug Deliv Rev.* 2010 Jun 15;62(7-8):741-52. (10) Anitua E, Troya M, Orive G. Plasma rich in growth factors promote gingival tissue regeneration by stimulating fibroblast proliferation and migration and by blocking transforming growth factor- α 1 induced myodifferentiation. *J Periodontol.* 2012 Aug;83(8):1028-1037. (11) Anitua E, Sánchez M, Zalduendo MM, de la Fuente M, Prado R, Orive G, Andia I. Fibroblastic response to treatment with different preparations rich in growth factors. *Cell Prolif.* 2009 Apr;42(2):162-170. (12) Anitua E, Sánchez M, Sarabia R, Sanz J, Aguirre JJ, Orive G. Eficacia y seguridad del PRGF (Plasma Rico en Factores de Crecimiento) en la regeneración cutánea facial. *Ensayo clínico, randomizado y controlado con ácido hialurónico.* *Journal of the AECEP.* 2011;Feb;23-33. (13) Blanca Díaz Ley. Efectos del PRGF en el tratamiento del envejecimiento cutáneo. *Oral communication at the XXV GEDET meeting.* Alicante 29-30 November 2013. (14) Diaz-Ley B, Cuevas J, Alonso-Castro L, Calvo MI, Ríos-Buceta L, Orive G, Anitua E, Jaén P. Benefits of plasma rich in growth factors (PRGF) in skin photodamage: Clinical response and histological assessment. *Dermatol Ther.* 2015(15) Sánchez M, Anitua E, Azofra J, Andia I, Padilla S, Mujika I. Comparison of surgically repaired Achilles tendon tears using platelet-rich fibrin matrices. *Am J Sports Med.* 2007;35:245-251. (16) Anitua E. Plasma rich in growth factors: preliminary results of use in the preparation of future sites for implants. *Int J Oral Maxillofac Implants.* 1999;14:529-535. (17) Platelets and wound healing. *Front Biosci.* 2008 May 1;13:3532-48.