



OsteoBiol® TSV Gel

by TecnoSS

The thermosensitive resorbable solution for graft stabilization



CHARACTERISTICS

The purpose of this product is to provide mechanical stability to bone substitutes and barrier membranes.

OsteoBiol® TSV Gel is sterilized by Gamma irradiation and is radio-transparent. It contains Heterologous type I and III collagen gel with

polyunsaturated fat acids diluted in aqueous solution containing a biocompatible synthetic copolymer that gives OsteoBiol® TSV Gel thermo-reversible and thermo-gelling properties. At low temperature (+4°C) the gel is relatively flowable and easy to mix and manipulate with the graft but becomes more viscous when in situ and exposed to body temperature.



OsteoBiol® TSV Gel
Source: TecnoSS s.r.l.



HANDLING

OsteoBiol® TSV Gel must be refrigerated for at least 20 minutes at +4°C before use, in order to reach the low viscosity (LV) phase, which makes it easier to mix with OsteoBiol® Gen-Os® or to apply on OsteoBiol® membranes.

At room temperature, the product remains at LV phase for few minutes, whereas once in situ its viscosity quickly increases with body temperature. OsteoBiol® TSV Gel in LV phase can be used instead of saline for hydrating and mixing with OsteoBiol® Gen-Os®. The result will be a sticky mixture easy to place and extremely stable once in situ.

OsteoBiol® TSV Gel can also be applied to the rough side of the OsteoBiol® Evolution membrane to stabilize it during graft covering and whilst suturing.

CLINICAL INDICATIONS OVERVIEW

OsteoBiol® TSV Gel can be used in GBR procedures together with OsteoBiol® bone substitutes and membranes to enhance graft stability. The viscosity reached by OsteoBiol® TSV Gel at body temperature improves significantly the stability of Gen-Os® granules and it is particularly beneficial in cases where there is little bony support around the defect i.e. lateral augmentation, sockets with a compromised buccal wall, dehiscences and periodontal two and one wall defects. Additionally the viscosity of OsteoBiol® TSV Gel improves the stability and handling of Evolution membranes, particularly during the delicate phase of flap closure.

OsteoBiol® TSV Gel can also be used as a cicatrizing agent for the treatment of cutaneous and mucosal lesions.

Composition

- Heterologous type I and III collagen gel
- Thermogelling synthetic biocompatible copolymer

Physical form

LV phase at <8°C
Gel viscosity at >13°C

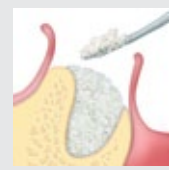
Packaging

Syringe: 0.5 cc, 1.0 cc

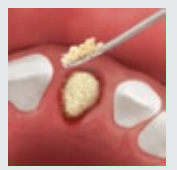
Available only in combination with OsteoBiol® Gen-Os® 0.5 g, 1.0 g



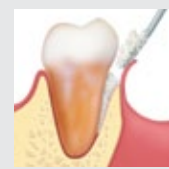
In association with OsteoBiol® Gen-Os® granules



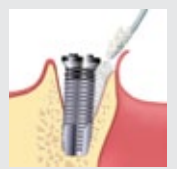
HORIZONTAL AUGMENTATION



ALVEOLAR REGENERATION



INTRABONY DEFECTS



DEHISCENCES

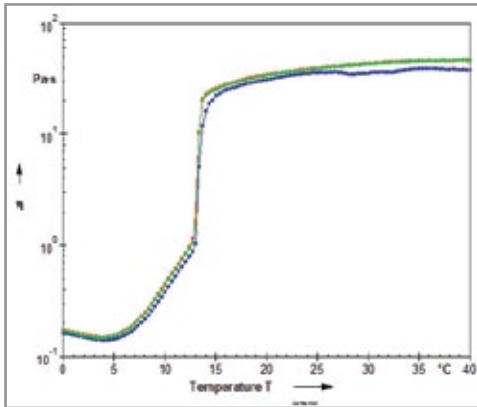


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OsteoBiol® TSV Gel GELIFICATION KINETICS



The graph shows the effect of temperature change on 3 OsteoBiol® TSV Gel samples. As temperature increases from 0°C (1°C/min), the viscosity of the gel reaches its minimum at 4°C. It then increases rapidly until it plateaus at 13°C. At room and body temperature the OsteoBiol® TSV Gel is gel-like. It does not harden but keeps a soft consistency that allows the mixture with Gen-Os® granules. Thanks to the hydrophilic properties of

Source: Politecnico di Torino, Italy

Gen-Os®, the mixture becomes a sticky, stable conglomerate that can be easily put in the defect site. OsteoBiol® TSV Gel is biocompatible and rapidly resorbed.



OsteoBiol® TSV Gel

Source: Courtesy of Prof Antonio J Murillo Rodriguez, Universidad Alfonso X, Madrid, Spain

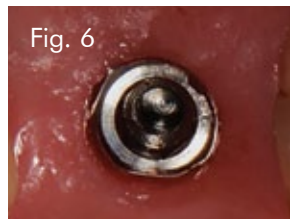
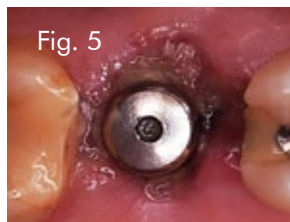


Fig. 1

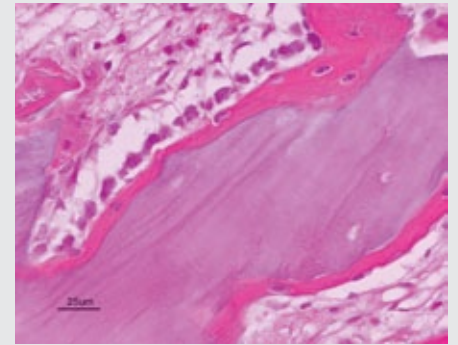
Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6



Part of a biopsy showing newly formed bone around a particle of OsteoBiol® Gen-Os® mixed with OsteoBiol® TSV Gel two weeks after grafting in rabbit. Htx-eosine.

Source: courtesy of Prof Ulf Nannmark, University of Göteborg, Sweden

CASE REPORT

Post-extraction implant in 1.6 with defect grafting with biomaterial left exposed

Sex: **female** | Age: **42**

Fig. 1 Initial situation

Fig. 2 After tooth extraction, bone and soft tissues are preserved

Fig. 3 Defect grafting with OsteoBiol® Gen-Os®

Fig. 4 Implant positioning

Fig. 5 Initial cicatrization

Fig. 6 Cicatrization at 3 months

Bone substitute: **OsteoBiol® Gen-Os®** hydrated with **OsteoBiol® TSV Gel**

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