

Vitoss

BA

Bioactive glass - mechanism of action

Literature shows that bioactive glass exhibits good bonding-to-bone properties in animal models.³⁷⁻³⁹ Upon implantation, the ionic constituents (silicon, sodium and calcium) of bioactive glass are released into the surrounding environment and react with bodily fluids.⁴⁰⁻⁴³ This reaction produces the deposition of a thin layer of physiologic calcium phosphate at its surface, favorable for osteoblast attachment.⁴⁴ This is commonly referred to as a bioactive effect.^{37-39, 42, 45-47} This may lead to the bonding of new bone to the scaffold.

Vitoss BA has a unique porosity, structure and chemistry to drive 3D regeneration of bone. The addition of bioactive glass helps create a surface favorable for osteoblast attachment and assists the host to regenerate new bone.^{37-39, 42, 45-47}

Figure 1⁴⁸

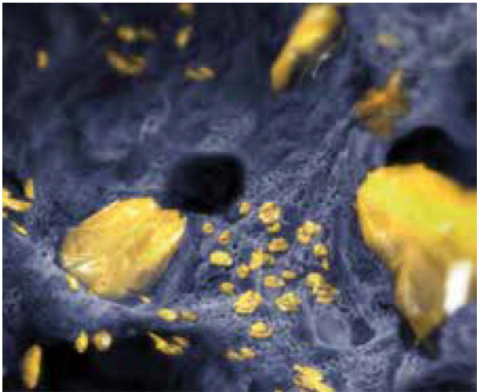
Hematoxylin and Eosin stained sample of Vitoss BA at six weeks of implantation in a canine metaphyseal defect. New bone is forming between morsels of the Vitoss scaffold, resulting in an interconnected trabecular unit.

Figure 2⁴⁸

Backscattered electron (BSE) image of an unstained histology slide from Vitoss BA at six weeks of implantation in a canine metaphyseal defect. New bone can be seen enveloping the glass particle and bridging the Vitoss scaffold.

Vitoss BA

Reference number	Description
2102-1601	Bioactive Foam Pack, 1.2cc
2102-1602	Bioactive Foam Pack, 2.5cc
2102-1605	Bioactive Foam Pack, 5cc
2102-1610	Bioactive Foam Pack, 10cc
2102-1500	Bioactive Foam Strip 25 x 100 x 4mm, 10cc
2102-1505	Bioactive Foam Strip 25 x 50 x 4mm, 5cc
2102-1510	Bioactive Foam Strip 25 x 50 x 8mm, 10cc
2102-1520	Bioactive Foam Strip 25 x 100 x 8mm, 20cc



Bioactive glass



Figure 1
Product: Vitoss

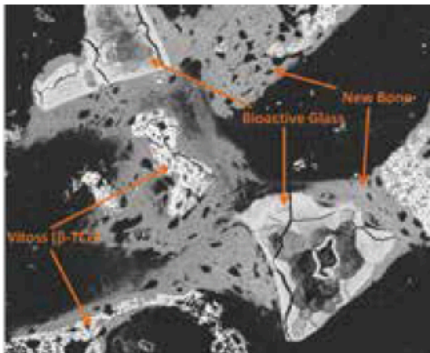


Figure 2
Product: Vitoss