

DENTAL

# Osteoplug®

Alveolar Ridge and Socket Preservation



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## Alveolar Ridge and Socket Preservation

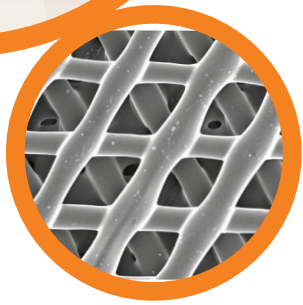
### 1 BIOMIMETIC

**Osteoplug®** is a conical shape 3D printed polycaprolactone (PCL) bioresorbable scaffold for fresh dental extraction sockets that has been proven to eliminate or limit the negative effect of post extraction bone resorption<sup>[1]</sup>. Its lattice structure with interconnected triangles of regular porous morphology promotes osteoblast formation within the socket which helps to facilitate natural bone healing<sup>[2,3]</sup> and maintain the contour of the dentoalveolar ridge for future dental implant placement.

### 2 FEATURES & BENEFITS



Porosity of Osteoplug®

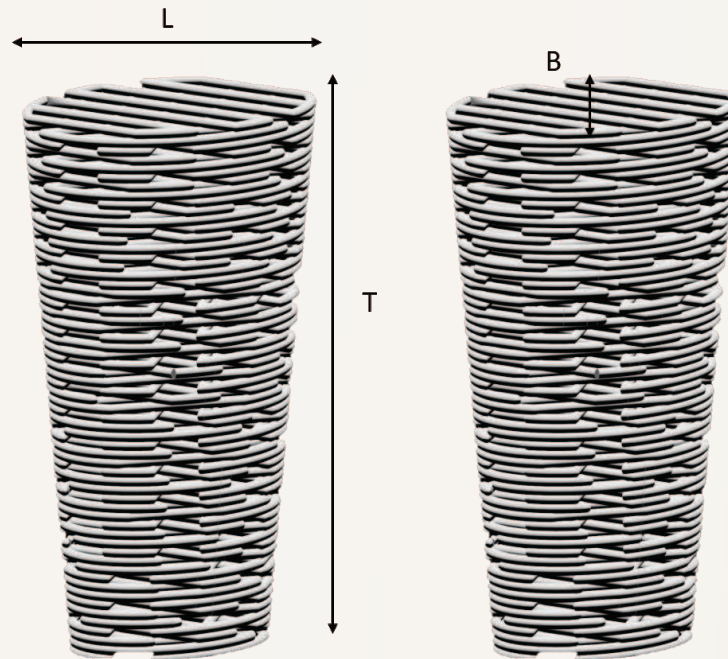


#### FEATURES

- Manufactured from PCL
- 100% synthetic
- Predictable resorption profile
- User friendly
- High Porosity

#### BENEFITS

- Bioresorbable, biocompatible, proven technology, and non-toxic.
- No animal tissue concerns such as disease transmission or cross reaction.
- Bone remodeling takes place before complete degradation at 18 - 24 months<sup>[4,5]</sup>.
- Conical design mimic the anatomy of the dental root and have sizes. It can be cut using surgical scissors or blade to the desire width and length.
- The space between the micropore system supports a clot and allows space for development of subsequent new vessels for optimal fluid circulation.



PRODUCT CODE	SIZE (L X B X T)/MM	OTHER SIZES AVAILABLE:
PC21(7,5,15)	7 x 5 x 15	<b>LENGTH</b> 4 – 9
PC21(9,7,11)	9 x 7 x 11	<b>BREADTH</b> 4 – 7
PC21(9,7,15)	9 x 7 x 15	<b>THICKNESS</b> 9 – 15

#### References

- <sup>1</sup>Goh BT, Teh LY, Tan DB, Zhang Z, Teoh SH. Novel 3D polycaprolactone scaffold for ridge preservation – a pilot randomised controlled clinical trial. *Clin Oral Implants Res.* 2015 Mar;26(3):271-7. doi:10.1111/clr.12486. Epub 2014 Sep 27. PMID: 25263527.
- <sup>2</sup>Teoh SH, Goh BT, Lim J. Three-Dimensional Printed Polycaprolactone Scaffolds for Bone Regeneration Success and Future Perspective. *Tissue Eng Part A.* 2019 Jul;25(13-14):931-935. doi:10.1089/ten.TEA.2019.0102. PMID: 31084409.
- <sup>3</sup>Woodruff MA, Lange C, Reichert J, Berner A, Chen F, Fratzl P, Schantz JT, Huttmacher DW. Bone tissue engineering: from bench to bedside. *Materials Today.* 2012 Oct;15(10):430-435. doi:10.1016/S1369-7021(12)70194-3.
- <sup>4</sup>Lam CX, Huttmacher DW, Schantz JT, Woodruff MA, Teoh SH. Evaluation of polycaprolactone scaffold degradation for 6 months in vitro and in vivo. *J Biomed Mater Res A.* 2009 Sep 1;90(3):906-19. doi:10.1002/jbm.a.32052. PMID: 18646204.
- <sup>5</sup>Lam CX, Savalani MM, Teoh SH, Huttmacher DW. Dynamics of in vitro polymer degradation of polycaprolactone-based scaffolds: accelerated versus simulated physiological conditions. *Biomed Mater.* 2008 Sep;3(3):034108. doi: 10.1088/1748-6041/3/3/034108. Epub 2008 Aug 8. PMID: 18689929.

For professional use.

CAUTION: See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.

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**Osteopore®**  
Empowering Natural Tissue Regeneration

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