Demineralized Bone Fiber Technology

3Demin Benefits

Bacterin’s 3Demin Technology utilizes demineralized cortical bone fibers that are entangled and shaped into sizes engineered to complement specific surgical applications. This unique process creates an interconnected graft material that contains BMPs and other growth factors necessary for the promotion of new bone formation. 3Demin allografts are flexible upon hydration and each allograft has a sterility assurance level of $10^{-6}$ via low-dose gamma sterilization. 3Demin allografts are also available as loose cortical fibers in three volume options.

Learn more about 3Demin at bacterin.com

3Demin Features

- 100% human demineralized cortical bone fiber
- Osteoconductive matrix
- Osteoinductive potential
- Rehydrates in minutes for ease of use
- Pliable and compressible handling characteristics
- Excellent scaffold for bone marrow aspirate
- Sterility assurance level (SAL) $10^{-6}$
- 5 year shelf life
- Room-temperature storage
- Multiple graft sizes and volumes to complement surgical applications
Representative histology showing *in vivo* bone formation at 28 days post-implantation of 3Demin Cortical Fibers in an athymic rat muscle pouch (H&E staining, 100x magnification). The DBM fiber implant is pictured rimmed with osteoblasts and associated with areas of new bone formation. Production of osteoid is evident and consistent with early bone formation.

CM: Condensed Mesenchyme  
DBM: Residual DBM Implant  
NB: New Bone Matrix  
O: Osteons  
OB: Osteoblasts  
OC: Osteocytes

### Applications

3Demin allografts may be used in a number of orthopedic and reconstructive applications, particularly spinal procedures. The allografts can be used as a stand-alone bone graft, or in combination with autologous bone or other forms of allograft bone. With the 3Demin product line, Bacterin has optimized the handling characteristics of cortical bone, allowing the grafts to be used as a malleable bone void filler and bone graft substitute for voids or gaps that are not intrinsic to the stability of the bony structure.