



Comparison between OX and Bio-Oss

Feature	OsteOXenon	Bio-Oss	Comment
Deantigenation process	Enzymatic, low temperature (37°C)	Thermal, high temperature (600°C)	<p>The thermal process alters the surface of the bone. Cells can not adhere over it properly. For this reason Bio-Oss is scarcely resorbable.</p> <p>On the other hand the enzymatic process is mild (normal body temperature): the surface of the bone is not altered and cell adhesion is ok. This means OX will be reabsorbed at a physiological rate</p>
Resorption time	Physiologic (6 to 12 months)	Not physiologic (at 10 years about 5-10% material still present)	With Bio-Oss a real regeneration (i.e. achieving again the bone of the patient, and the patient's bone only) is not possible. OX allows to do that. Grafting OX implants will be placed, or finally will be surrounded, only by vital, functioning bone.
Bone (natural) collagen	Present	Absent	<p>The thermal method destroys everything, comprising natural bone collagen. Bio-Oss has no bone collagen. OX preserves bone collagen unaltered. This means:</p> <ul style="list-style-type: none"> a) better mechanical qualities b) better biological qualities
Mechanical properties	Normal physiologic mechanical strength	Very fragile	Since it has no bone collagen, Bio-Oss is very fragile. It can not be manufactured as resistant-to-load blocks but as granules only. OX, instead, has the natural resistance of natural bone and can be manufactured as tough, resistant blocks.
Biological properties	Normal cell adhesion on material	Impaired cell adhesion	Since it has no bone collagen, Bio-Oss can not be recognized by cells. Osteoxenon, instead, can. The remodeling is much more physiologic.
Formats	Many formats (comprising flexible sheets)	Only granules	Due to the production process, OX bone substitutes can be manufactured in many different sizes and formats. Bio-Oss has no mechanical resistance and can be manufactured only as granules or a mixture between granules and collagen, in shape of block, that yet is not a real block.