OsteoGraf®/LD-300 Handling Instructions

Basic Tips for Application

1. Sterile saline or sterile water are recommended to hydrate (wet) OsteoGraf/LD-300. Since the material is porous, wetting it thoroughly prior to use will make it more cohesive and enable ease of use. OsteoGraf/LD-300 should be hydrated for at least 10-15 minutes; however, the material can remain in solution for a period of hours without having any adverse effect. Hydrating for less than ten minutes will only reduce the handling properties of OsteoGraf/LD-300. To hydrate the material using the application syringe, load the OsteoGraf/LD-300 particulate into the syringe by connecting the tip of the syringe into the top of the vial, invert and draw back the syringe plunger.

After adding the desired amount of OsteoGraf/LD-300 for the procedure, carefully remove the syringe tip from the vial, and place the nylon filter cap on the syringe. This will contain the OsteoGraf/LD-300 in the syringe. Next, draw sterile water or saline up through the filter cap until the liquid level is above the level of the OsteoGraf/LD-300 particles. Make sure that the particles are completely submerged and can freely move in the liquid (this can be visually gauged and determined by tipping the syringe slightly back and forth). After 10-15 minutes of hydration, expel excess liquid by gently depressing the syringe plunger (not hard enough to push off the filter cap). Make sure that all liquid is completely expressed.

To hydrate the material without using an application syringe, place the OsteoGraf/LD-300 into a sterile dish and add sterile water or saline to a level that covers the particulate. After 10-15 minutes, soak up the remaining water with sterile gauze. Make sure the doctor has removed as much water as possible.

2. Mixing OsteoGraf/LD-300, outside the body, with blood is a personal preference of the practitioner. Due to the wide variety of opinions on this topic, your salesperson may choose not to contradict the doctor’s habits. Consequently, if a doctor is accustomed to mixing his graft materials with blood he may continue to do so. However, please be aware that it could adversely affect the graft procedure results. Many clinicians use blood to hydrate the material as they find it makes it more cohesive and believe that it will improve the efficacy. However, it has been found that as the red blood cells die, they create an acidic environment that may have a negative effect on bone formation. Additionally, there is no evidence that supports the premise that adding blood will improve the osteoinductivity of a graft.

3. Mixing OsteoGraf/LD-300, outside the body with anesthetics and/or antibiotics is a personal preference of the practitioner. Although sterile and convenient, anesthetics can contain a vasoconstrictor (epinephrine). Since ample vascularity is essential to the success of any graft, epinephrine containing anesthetics should NOT be used as a wetting agent (for hydrating). Any antibiotics used should be appropriately diluted, as a concentrated solution may adversely affect cellular activity. The amount to dilute the antibiotic to avoid impairment of regenerative cells is a 250-milligram capsule to 400-milliliters of sterile saline or sterile water. This concentration does not significantly affect the cellular bioactivity, while exceeding the MIC (minimum inhibitory concentration) that will inhibit growth of 90% of bacteria.
1. Extraction of the tooth should be done as atraumatically as possible. Preservation of the socket walls will aid in healing and graft material containment.

2. After the tooth has been extracted from the alveolus, thorough curettage and removal of all debris and residual tissue from the socket walls is essential. Once the socket has been copiously irrigated and aspirated, it is ready to receive the OsteoGraf/LD-300.

3. OsteoGraf/LD-300 can be loaded directly from the vial into sterile syringe(s). After hydration, the OsteoGraf/LD-300 is expressed directly into the socket and packed firmly, but not tightly, allowing for vascularity into the graft.

4. If syringes are not used, the appropriate amount of OsteoGraf/LD-300 is dispensed into a sterile dappen dish. Once hydrated, the material is brought to the socket with the aid of any sterile instrumentation. OsteoGraf/LD-300 should be packed firmly but not tightly, allowing for vascularity into the graft.

5. OsteoGraf/LD-300 should be packed to the height of the alveolar crest. Over-packing of the socket(s) should be avoided.

6. Primary closure is not always possible. A simple suture technique will confine the OsteoGraf/LD-300 and the containment device. Placing a periodontal dressing will help reduce the chances of particle loss.

7. Multiple extractions should be treated identically to single sites.

8. Patients may require interim prosthesis. All temporary prosthesis should be for esthetics only and considered non-functioning.

Patients should be given post-extraction home-care instructions and scheduled for routine re-check and evaluation.

Ridge Preservation Technique.
Following tooth extraction, as much as 40-60% ridge resorption can occur within 1-3 years.* Grafting fresh extraction sockets with OsteoGraf/LD-300 can significantly reduce the level of ridge resorption allowing for a more predictable, esthetic restoration. As with all procedures, proper preparation and patient compliance are of equal importance in achieving the best possible results.