



NovaSterilis Awarded Patent for Novel Preparation and Sterilization Of Green State Devices

(Lansing, NY; September 19, 2011) – NovaSterilis Inc., a leader in the development and commercialization of supercritical carbon dioxide technology, has been granted US Patent No 7,988,892. The patent, dated August 2, 2011 is entitled “Preparation and Sterilization of Green State Devices Using a Supercritical Fluid Sterilant.”

This patent describes the use of a novel process of forming a molded article during a terminal sterilization cycle in a high pressure supercritical carbon dioxide (CO₂) environment. The pressurization and depressurization of the chamber is controlled to form the finished molded article in final packaging ready for utilization. One potential application combines this patent with other NovaSterilis patents to produce a high quality demineralized bone matrix “formed finished product” ready for surgical implantation.

“This is a novel manufacturing process utilizing the supercritical CO₂ environment to produce a sterile molded product” commented David Burns, President of NovaSterilis. “This invention has the potential to shorten production time while producing finished sterile products without the use of heat or chemical processes; imagine a molded, finished, sterile product in one step! Supercritical CO₂ is an amazing material and we marvel at the number of processes we have developed in this environment.”

This invention holds the potential to utilize numerous green state materials to manufacture sterile medical devices, hardening the material in mold without the negative effects of heat or chemical solutions. This single step method results in the formed, cured and sterilized product in final packaging using NovaSterilis established supercritical CO₂ process. Carbon dioxide is nontoxic and inexpensive, making this attractive as a commercial manufacturing process. NovaSterilis supercritical CO₂ sterilization is capable of achieving a sterility assurance level of 10⁻⁶ (SAL6) in the Nova 2200 unit, SAL6 is the standard for medical devices.

NovaSterilis is currently commercializing other patents, including terminal sterilization of biomedical materials using supercritical CO₂ and Patent # 7,771,652 B2 for “Combined Use of an Alkaline Earth Metal Compound and a Sterilizing Agent to Maintain Osteoinduction Properties of a Demineralized Bone Matrix”

About NovaSterilis

NovaSterilis currently markets terminal sterilization technology and equipment related to their supercritical carbon dioxide platform. The supercritical or the fluid phase of CO₂ occurs at low pressure (72.9 atm) and moderate temperatures (31.1° C). Supercritical CO₂ retains advantageous properties of the gas and liquid phases of carbon dioxide making it an ideal fluid for manufacturing processes. The company currently markets the Nova 2200, a 20 liter fully automated supercritical CO₂ terminal sterilization chamber and is in final development of an 80 liter unit. NovaSterilis is a privately held biotechnology company located in Lansing New York. NovaSterilis is the recipient of a 2007 Presidential Green Chemistry Challenge Award presented by the Environmental Protection Agency.

For more information on NovaSterilis and supercritical carbon dioxide visit www.novasterilis.com