

Figure 2: Extrusion of the mixture BCP (52.6% in weight, particles $<40\mu\text{m}$) with water or water solution with HPMC 1,5 % through a hole of 4.5mm to a speed of 0.1mm / second. Compression strength measurements on the piston of an injection syringe

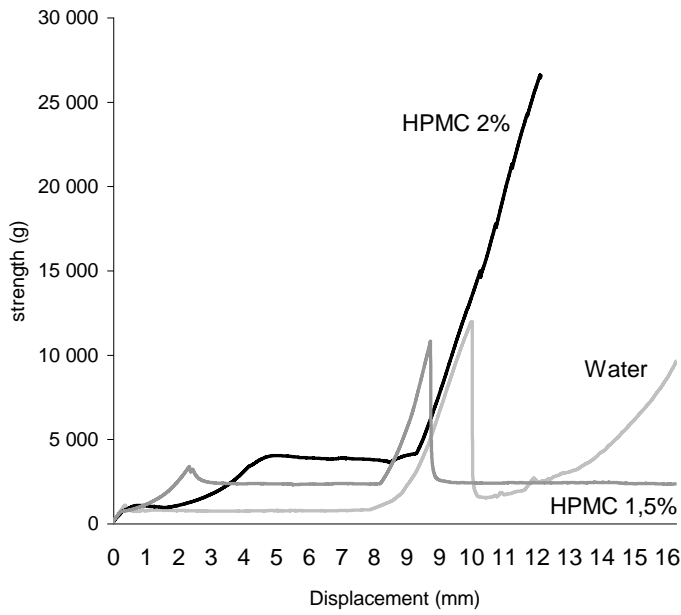


Figure 3: Injection of the BCP mixture (50% in weight, particles 40-80 μm) with water or aqueous polymer solution (HPMC 1.5% or 2%) through a 0.8X25 mm needle at a rate of 0.1 mm per second. Apparent composite viscosity was 40,000 Mpa s for the water suspension, 200,000 Mpa s for the 1.5% HPMC in water suspension and 600,000 for the 2% solution (Brookfield® RDV1+, 1 RPM). Compression strength measurements on the piston of an injection syringe were recorded with a computer to obtain this profile

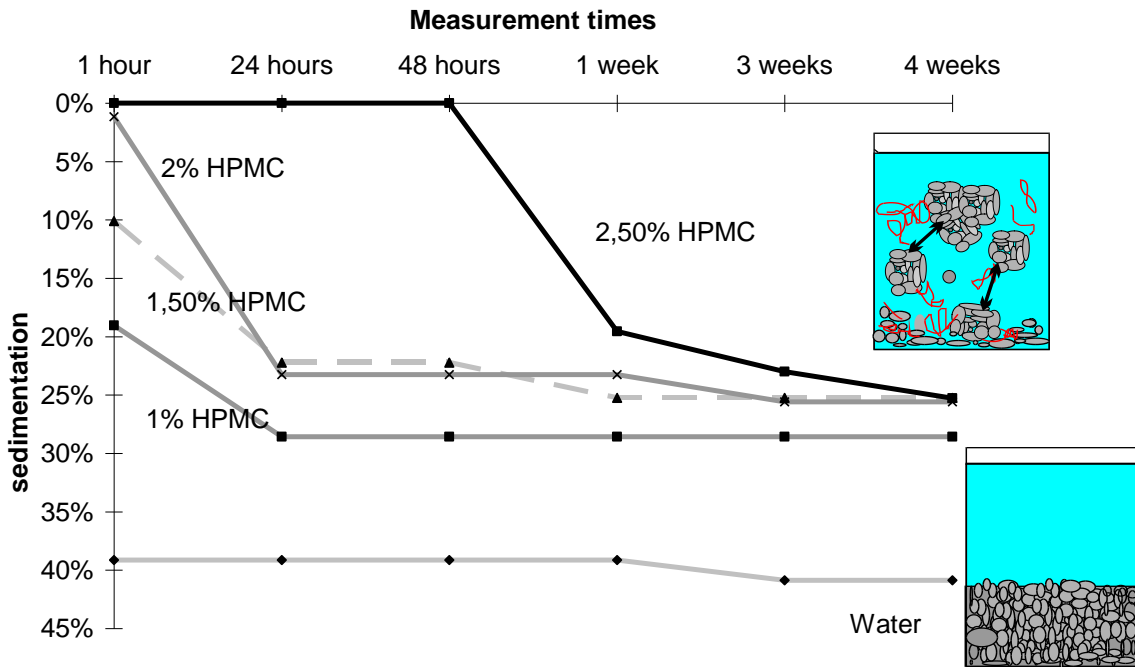


Figure 4: Stability of suspensions to 33% (W/W) of BCP granules sifted between 200 and 500 μm in different aqueous solutions of HPMC polymers with a concentration ranging from 0 to 2.5% in weight/volume.

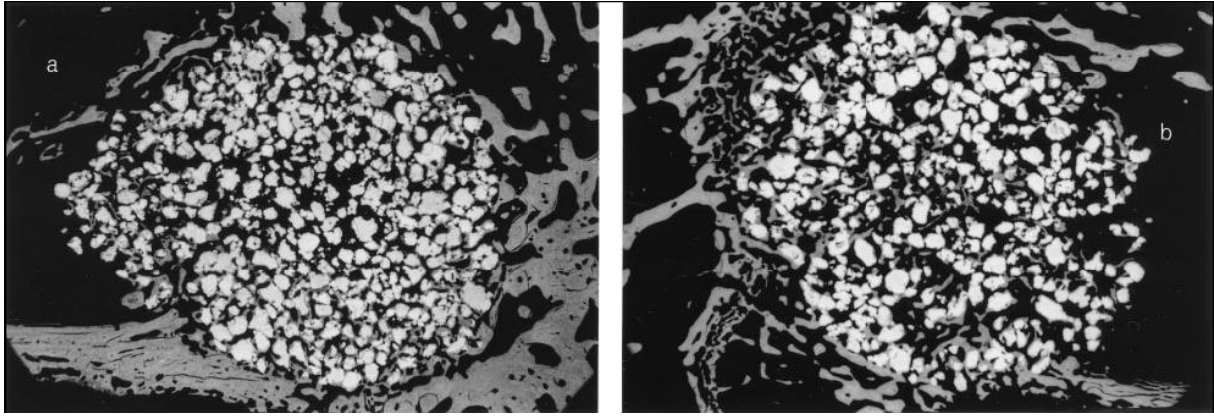


Figure 5: Scanning electron Microscopy (backscattered electrons) of two femoral implantations in rabbit bone of ceramics granules (a) or injectable bone substitutes (b) after 3 weeks. (Original magnification X 10).

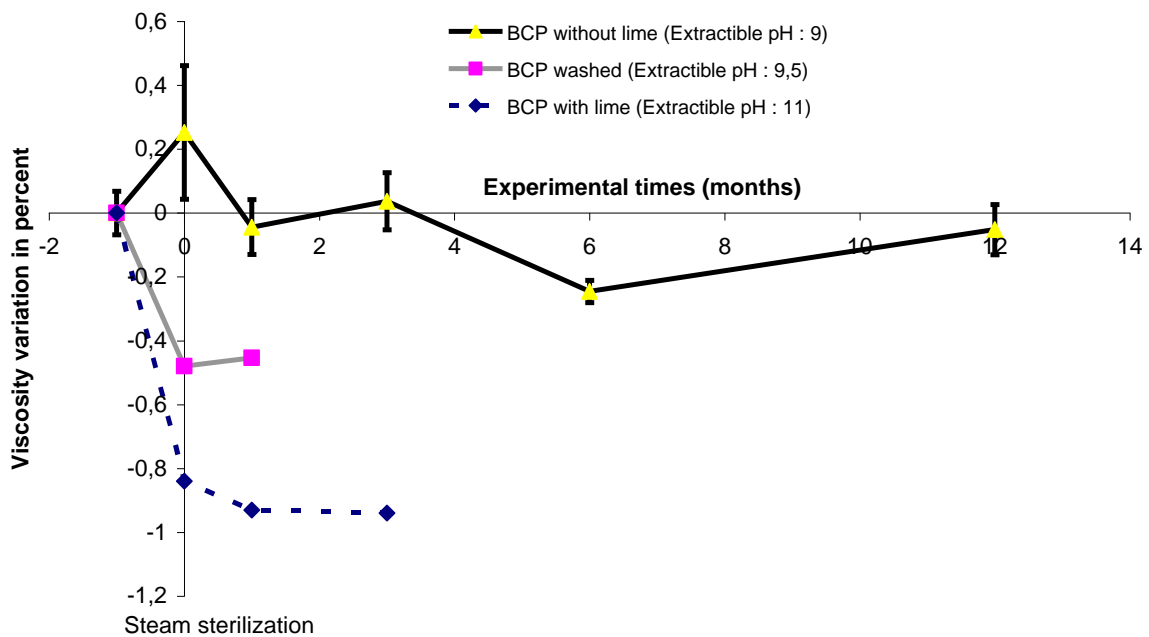


Figure 6: Viscosity variation as a percentage of initial viscosity (before sterilization) of the composite mixtures. The 2% HPMC polymer in water was mixed with different BCP concentrations synthesized and treated by different processes in order to obtain different extractable pH (1 g of powder in 20 ml of bidistilled water). These measurements were performed for up to 12 months of storage using a Brookfield RDVI+ Viscometer (1 rpm).