

[54] PROSTHETIC TEETH AND BONES

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[57] ABSTRACT

Prosthetic teeth and bones having superior affinity for the living body and having a compression strength of about 4×10^{-3} kg/cm² or higher and a flexural strength of about 2.7×10^3 kg/cm² or higher, which comprise a composite material comprising

(a) a sufficiently fine powder having an average particle size of about 2 μm or less comprising at least 50% by weight of Ca₁₀(PO₄)₆(OH)₂ and not more than about 50% by weight of at least one additive selected from the group consisting of Ca₃(PO₄)₂, AlPO₄, Al₂O₃, AlF₃, SiO₂, Mg(PO₄)₂, and the fluorides, chlorides and oxides of Li, Na, K, Mg and Ca, and

(b) at least one fibrous material having the coefficient of thermal expansion nearly equal to or slightly lower than that of the hydroxy-apatite selected from the group consisting of fibers, fine filaments and metal whiskers, ceramics or glass,

said fibrous material being present at least 50 μm inside the surface of the prosthetic teeth and bones, and said composite material being cold compression-molded and then sintered.

8 Claims, 3 Drawing Figures

