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Malaysian seashells based hydroxyapatite for biomedical application

Abstract

Hydroxyapatite (HA, Ca10 (PO 4) 6 (OH) 2) is widely used in dentistry and orthopaedics as a bone substitute or replacement material. The material is chemically and crystallographically identical to the mineral component of human biological bone. Natural materials such as animal bones, clay, eggshells, corals, and seashells can be used as a main source of calcium precursor to synthesise HA. Using Malaysian shell waste materials is sustainable and economical. Thus, these advantages have attract researchers to explore potential products from shell trash. This chapter presents the synthesis method and characterisation of hydroxyapatite synthesised from several Malaysian local seashells such as Paphia textile (lala), Corbiculacea (etok), and Polymesoda expansa (lokan) shells.

Keywords

Anadara granosa; Corbiculacea; Hydroxyapatite; Paphia textile; Polymesoda expansa; Precipitation