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## Effect of Poly(Vinyl Alcohol) Addition on the Properties of Hydrothermal Derived Calcium Phosphate Cement for Bone Filling Materials (Conference Paper)

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### Abstract

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The effect of addition of poly(vinyl alcohol) on hydrothermal derived calcium phosphate cement has been studied. The precursors used to prepare the cement were calcium oxide (CaO) and ammonium dihydrogen phosphate (NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>); the reaction was conducted in water at 80-100°C. To improve properties of CPC, poly(vinyl alcohol) (PVA) of 1wt% and 2wt% was added to the liquid phase of CPC and the results were compared to CPC without PVA addition. The addition of PVA was proved to bring remarkable effects on cohesion, setting time and mechanical strength of CPC which make it suitable physically for injectable bone filler applications. © Published under licence by IOP Publishing Ltd.

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