

عنوان مقاله:

Effect of synthesized biomimetic nano-hydroxyapatite on remineralization of enamel lesion and prevention of dental caries

محل انتشار:

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خلاصه مقاله:

biomimetic carbonate-hydroxyapatite nanocrystals (CHA) have been designed and synthesized in order to obtain a remineralization of the altered enamel surfaces. Nano CHA shows strong affinity to the tooth, and can strongly adsorb on enamel surfaces and induce changes in dental enamel crystallographic, mechanical properties and improve dental remineralization by making new biomimetic apatitic mineral deposition which progressively fills the surface scratches. The aim of this in vitro study was to evaluate the effect of Nano CHA on the remineralization of human enamel, which was produced by wet chemical methods and characterized by XRD, FTIR remineralization. In order to evaluate the remineralization effect, the Vickers Hardness Number of the enamel surface was evaluated at each step. Nano CHA with its good properties of biocompatibility, bioactivity and potential capacity for dental remineralization has a wide range of applications in medical cases such as toothpastes and oral health compounds.

کلمات کلیدی:

Hydroxyapatite; Remineralization; Synthesis; Nonstoichiometry

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