ROLE OF FLUORIDE ON CORRODABILITY OF DENTAL AMALGAMS

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ABSTRACT

The role of fluoride ions on the corrosion behavior of some commercial dental amalgam in artificial saliva solution at pH level 7.1 was studied by using impedance and potentiodynamic polarization techniques.

It was found that, the presence of F⁻ ions in an artificial saliva solution at pH 7.1 increases the corrodibility of different types of dental amalgam. Sever pitting corrosion occurred at level of 100 mM F⁻ ions.

The formulation of amalgam alloys greatly affect the resistance to pitting corrosion; the resistance of the amalgam to pitting follows the order: Dispersalloy >> Phasealloy > Orally > Tytin > Valiant - pH.D.

It is recommended to avoid oral treatment involving high F⁻ ions concentration in the