

EFFECT OF INHIBITORY SPECIES ON ELECTROCHEMICAL CORROSION OF HIGH COPPER AMALGAM

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ABSTRACT

This investigation evaluates the corrosion potential of high copper amalgam containing inhibitory species, sodium phosphate and sodium citrate, in artificial saliva at different pH levels.

The data revealed that the phosphate incorporated in high copper amalgam leads to increase of passivation of the alloy as compared to less or even negative effect of citrate incorporation. The linear steady potential of the amalgam was closer to the reversible potentials corresponding to hydrogen evolution and tin oxide formation. The corrosion potential does not response reversibly to pH of the saliva solution due to the pronounced passivation of the high pH levels