CORRODIBILITY OF HIGH COPPER DENTAL AMALGAM SYSTEM AND EFFECT OF SOME ANODIC INHIBI-TORS POLARIZATION ASSAY

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The corrosion behaviour of high copper amalgam containing 300 ppm (0.003%) sodium phosphate or sodium citrate in artificial saliva solutions of pH's 4.0, 7.0 and 10.0 in comparison to high copper amalgam without additives as control was studied by using potentiostatic polarization test. It was found that, at all pH's the presence of inhibitors in high copper amalgam decrease the corrosion current and the corrosion potential shifted to less negative values. Sodium phosphate was found to inhibit the corrosion more efficiently than sodium citrate. The maximum inhibition due to phosphate or citrate incorporation within amalgam structure was recorded with pH 7.0.