



## **Electrochemical Behaviour of NI-TI Super Elastic Shape Memory Alloy in Artificial Saliva**

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**Abstract :** The aim of present study is to investigate corrosion resistance of orthodontic wire made of Ni-Ti Super Elastic Shape Memory alloy in artificial saliva in the presence of Limcee-500 mg and Shelcal-500 mg has been evaluated by polarization study and AC impedance spectra, artificial saliva taken as control. It is observed that in presence of the Limcee-500 mg the corrosion resistances of Ni-Ti SESM alloy increases. On the other hand in the presence of the Shelcal-500 mg the corrosion resistances of Ni-Ti SESM alloy decreases. Corrosion resistance increases due to linear polarisation resistance increases and corrosion current values decreases. It is suggested that people implanted with orthodontic wire made of Ni-Ti SESM alloy need not hesitate to take Limcee-500 mg but Shelcal-500 mg should avoid orally. The increase or decrease in corrosion resistance of Ni-Ti SESM alloy in presence of these tablets in artificial saliva is due to the ingredients present in tablets.

**Keywords :** Ni-Ti Super Elastic Shape Memory alloy (SESM), Artificial saliva, Limcee-500 mg, Shelcal-500 mg, Corrosion resistance, Polarization study and AC Impedance spectra.

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