



Madhuca Longifolia Corrosion Inhibition in Acid Medium-An Overview

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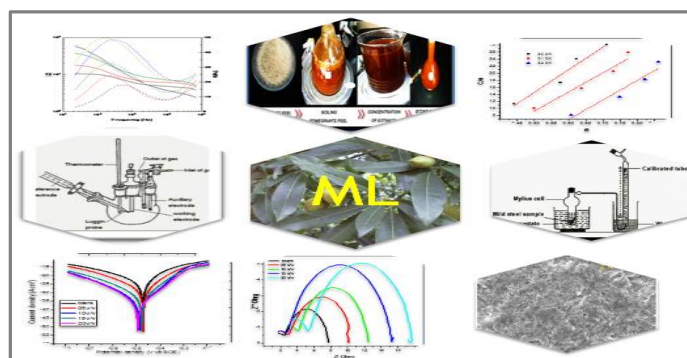
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ABSTRACT

The corrosion inhibition and adsorption behaviour of aqueous extract of plant select namely like as *Madhuca longifolia* mild steel surface in 1N HCl solution were investigated by mass loss with different time of contact, various temperature and evaluated by electrochemical impedance and Tafel studies. Polarization method indicates that the plant extract which was as mixed type inhibitor with predominately control of anodic reaction. EIS study showed a decrease in C_{dl} as the adsorption of inhibitor lead to structural change at electrode solution interface thereby controlling the mild steel dissolution by C_{dl} mechanism. The nature of Protective film formed on the MS surface has been confirmed by SEM analysis. The surface coverage values were test graphically to fitting of a suitable adsorption isotherm. The result indicates that the plant extract was efficient natural corrosion inhibitor in the acid medium.

Graphical abstract



Keywords: Metals, Corrosion test, EIS, SEM.