

Electrochemical Evaluation of n-Butanolic Extract of *Taxus Baccata* as Corrosion Inhibition for Carbon Steel in Acidic Medium

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Abstract. The aim of this work is the evaluation of *n*-butanolic extract (BE) obtained from the aerial part of “*Taxus Baccata*” as corrosion inhibitor for carbon steel in HCl solution (1N), using electrochemical techniques (potentiodynamics polarization, electrochemical impedance spectroscopy SIE). The SIE curves showed an increase in the size of the impedance spectrum and hence increase in charge transfer resistance (which is inversely proportional to the corrosion current) according to the increasing of inhibitor concentration proofing the formation of a protective layer. The polarization curves revealed that the BE is mixed type. The experimental results show that the BE is a good corrosion inhibitor and the increasing of its concentration leads to an increase of corrosion inhibition effectiveness of carbon steel which reached 83.28 % for a concentration of 700 ppm at 293K.

Keywords: *n*-butanolic extract, corrosion inhibitor, carbon steel.