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CORROSION INHIBITION OF ALUMINIUM IN ACIDIC MEDIA BY THEACEAE EXTRACT

Issaad Fatima Zohra, Louafi Fadila et Sellami Seif Eddine

Abstract : Corrosion is the destructive attack on a metal or metal alloy by chemical or electrochemical reaction with its environment, the use of inhibitors can protect the metal by forming a film on the surface. Large numbers of compounds were studied but most of these are toxic and expensive, fortunately the plant extract could be present the ideal solution through the presence of some phytochemical constituents which is adsorbed on the surface of the metal and protect it. The effect of ethanolic extract of *Camellia Sinensis* as an inhibitor on the corrosion of aluminium alloy in 1 M HCl was investigated by the gravimetric technic. The inhibiting efficiencies of the extract were found to increases with increasing concentration of inhibitor but decreases with increasing in temperature. The results obtained shows that the adsorption of plant extracts on the surface obey Langmuir adsorption isotherm. The physical adsorption is proposed according to the thermodynamic parameters.

Keywords : corrosion inhibition, Aluminium, adsorption isotherm, *Camellia Sinensis*