



ChemTech

## International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.10 No.9, pp 131-138, 2017

# Thermodynamics of *Azadirachta indica* (Neem) Leaves Ark's as Corrosion Inhibitors for Aluminum in HCl

P. S. Desai\*

Department of Chemistry, Arts, Science and Commerce College, Kamrej Char  
Rasta, Surat -394 185, Gujarat, India.

**Abstract** : Corrosion inhibition of aluminum in 0.5 M HCl by *Azadirachta indica* (Neem) leaves arks was investigated by using gravimetric technique at 313K to 333K. The results point out that the extract inhibited the corrosion process in the medium by good quality of adsorption and inhibition efficiency improved with concentration. Inhibition mechanisms were assumed from the temperature dependence of the inhibition efficiency as well as from activation parameters that direct the process. Adsorption of plant extracts on the aluminum surface was found to obey the Langmuir, Freundlich and Termkin's adsorption isotherm. The phenomenon of physical adsorption is proposed from the obtained thermodynamic parameters.  
**Keywords** : Adsorption; Aluminum; Corrosion; Hydrochloric Acid; *Azadirachta Indica* (Neem).

P. S. Desai /International Journal of ChemTech Research, 2017,10(9): 131-138.

\*\*\*\*\*