



Corrosion Protection of Mild Steel in Hydrochloric acid Medium by *Dalgerbia latifolia* Leaves Extract

P. R.Sivakumar, M. Karuppusamy, R. Jeevitha,
M. J.Judithaa and A. P.Srikanth*

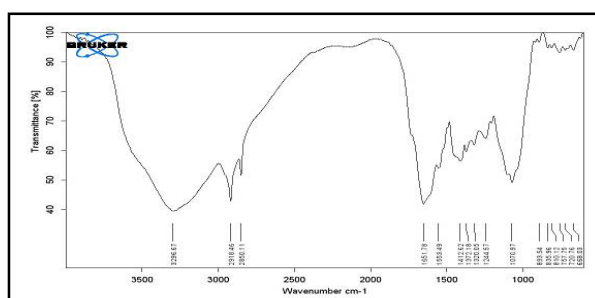
Post Graduate and Research, Department of Chemistry,
Government Arts College, Coimbatore, Tamil Nadu, **INDIA**
Email: apsrikanth8@gmail.com

Accepted on 6th January, 2019

ABSTRACT

The present work is devoted to the study of *Dalgerbia Latifolia* (DL) leaves as green corrosion inhibitor to afford the protection of mild steel in 1N HCl medium at room temperature. The weight loss measurements, Potentiodynamic polarization, and electrochemical impedance spectroscopy revealed that inhibiting action increased with increasing concentration of the inhibitor. The highest inhibition efficiency 86.67% was obtained at 10 ppm DL solution. Polarization measurements also showed that DL acts as good mixed type inhibitor. The SEM morphology of the absorbed protective film on the mild steel surface has confirmed the high performance of inhibitive effect of the plant extract.

Graphical Abstract



FTIR Spectra of *Dalgerbia Latifolia* leaves Extracts.

Keywords: Corrosion inhibition; EIS; Metals; SEM.