



“Gheorghe Asachi” Technical University of Iasi, Romania



ACID EXTRACT OF *ALOE VERA* AS INHIBITOR FOR THE CORROSION OF MILD STEEL IN ACIDIC MEDIA

Maureen Ndibe^{1*}, Matthew Menkiti^{1,2}, Martin Ijomah³,
Dominic Onukwuli¹, Paul Ejikeme^{4,5}

¹Chemical Engineering Department, Nnamdi Azikiwe University, Awka, Nigeria

²Water Resources center Texas Tech University, Lubbock, Texas, USA

³Materials and Metallurgical Engineering Department, Nnamdi Azikiwe University, Awka, Nigeria

⁴Department of Pure and Industrial Chemistry, University of Nigeria, Nsukka, Nigeria

⁵Department of Chemistry, University of Pretoria, Pretoria 0002, South Africa

Abstract

The corrosion inhibition of mild steel in acidic media at 303 – 333K in 0.1 - 0.5M acids (hydrochloric acid - HCl and trioxonitrate (v) acid - HNO₃) and 0.01-0.03g/L *Aloe Vera* extract (AVE) were investigated by standard weight loss method. The corrosion rate was calculated in the absence and presence of the inhibitors. The inhibition efficiencies of AVE in both acid media increased with increase in concentration and decreased with increase in temperature and period of immersion. Results showed that acid extract of *Aloe Vera* (AV) could act as adsorption inhibitor and that inhibition efficiency of up to 77.32% could be obtained. Values of the activation energy obtained in AVE are greater than that of the blank. Thermodynamic results indicated that adsorption of AVE on mild steel surface was spontaneous, physically controlled and occurred according to Langmuir adsorption isotherm.

Key words: Aloe Vera, corrosion inhibition, HCl, HNO₃, mild steel

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* Author to whom all correspondence should be addressed: e-mail: obyndibe@yahoo.co.uk, Phone: +447990078769