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NATURALLY OCCURRING EXUDATES GUMS AS ECOFRIENDLY INHIBITORS FOR MILD STEEL CORROSION IN ACIDIC MEDIUM

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The corrosion inhibition potentials of gum exudates from *Daniella oliveri* (DO) and *Commiphora africana* (CA) for the corrosion of mild steel in H_2SO_4 have been studied using weight loss and thermometric methods at 303 and 333K. Results show that the exudates gums actually reduced the rates of corrosion of mild steel. Increase in the concentrations of the exudates gums increased their percentage inhibition efficiencies. Corrosion rate was found to increase with increase in temperature in the presence and absence of the gum exudates, though the corrosion rate was slower in the presence of the exudates gums. Both DO and CA exudates gums were found to obey Temkin and Langmuir adsorption models at all concentrations and temperatures studied. Physical adsorption mechanism was proposed from the adsorption parameters. Kinetic and thermodynamic parameters revealed that the adsorption process is spontaneous, exothermic and no significant difference was found between the inhibition efficiencies of DO and CA.

BIOGRAPHY

Onukwube N Dickson has completed his MSc. from Michael Okpara University of Agriculture, Umudike and also currently undertaking a Doctoral Degree program from the same University. He is a staff of Abia State Polytechnic, Aba, where he has held so many posts including;- Member, Abia State Polytechnic Think Tank committee, Member Local Organizing Committee (LOC) of the Quarter 3 National Executive Council (NEC) meeting of Academic Staff Union of Polytechnics (ASUP), Examination Officer, Chemistry Department . He has published many papers in reputable journals.

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