Date Palm Waste Extract as Corrosion Inhibitor for 304 Stainless Steel in 1 M HCl Solution

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The inhibiting action of date palm waste extract, as a natural inhibitor on corrosion of 304 stainless steel in 1M HCl solution, was investigated via potentiodynamic polarization and electrochemical impedance spectroscopy EIS techniques. The results indicate that, the extract act as a mixed-type with an anodic predominance; 91.1 % inhibition efficiency, was achieved when 1, 5 g.L⁻¹ of extract is added. Impedance curves show that, the double layer capacity decreases as the concentration of the extract increases.

Keywords: Corrosion; 304 stainless steel; date palm extract; Polarization; EIS; 1M HCl solution.

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