



Argan Plant Extract: Green Inhibitor for Copper Corrosion in Phosphoric Acid Solution

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ABSTRACT

Corrosion inhibition effect of Argan plant extract (APE) on copper in 2 M H₃PO₄ and NaCl 0.3 M was studied using gravimetric, electrochemical polarization and impedance spectroscopy (EIS) measurements. Inhibition efficiency increases with APE concentration to attain 95% at 4 g L⁻¹. We note good agreement between gravimetric and electrochemical methods (potentiodynamic polarization and EIS). Effect of temperature is also made in the 298- 328 K range. Polarization measurements show also that APE act as a mixed inhibitor. The thermodynamic data of activation are determined and discussed.

Keywords: Corrosion, Copper, Inhibition, Argan plant extract, Acidic solution.
