Corrosion Control of Copper in Nitric Acid Solution using Chenopodium Extract

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Chenopodium extract was examined as a corrosion inhibitor for Cu in 1M HNO₃ by utilizing chemical and electrochemical techniques. The results displayed that Chenopodium extract (CE) could play important role as a corrosion inhibitor for Cu in 1 M HNO₃. The protection efficiency (PE) increases with rise of the CE concentrations (reached to > 92%) due to the adsorption of the CE molecules on the Cu surface. Furthermore, it was recognized that the adsorption obeyed Langmuir isotherm. The polarization data showed that this CE acts as mixed kind inhibitor. In addition some thermodynamic data were measured and explained.

Keywords: Corrosion inhibition, Cu, HNO₃, Chenopodium extract, Adsorption

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