

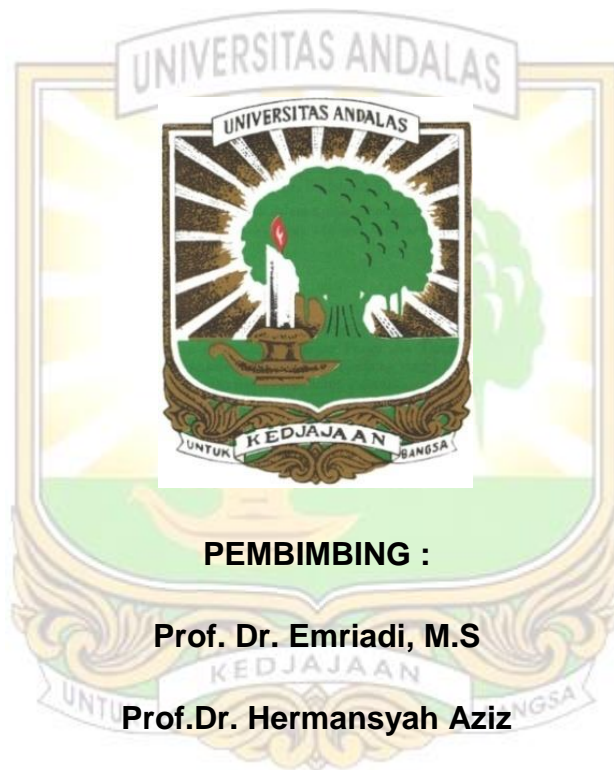
**EFEK SINERGETIK ION IODIDA TERHADAP INHIBISI KOROSI BAJA  
DENGAN EKSTRAK KULIT BUAH MELINJO (*Gnetum gnemon* L)  
DALAM LARUTAN ASAM KLORIDA**

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## ABSTRACT

### SYNERGISTIC EFFECT OF IODIDE ION ON THE CORROSION INHIBITION OF MILD STEEL USING *Gnetum gnemon* L PEEL EXTRACT IN HYDROCHLORIC ACID MEDIUM

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The synergistic effect of *Gnetum gnemon* L. peel extract as mild steel corrosion inhibitor in the medium of HCl without and with addition of Iodide ion has been studied using weight loss method, potentiodynamic polarization, and SEM analysis. Based on the research results obtained decreased corrosion rate with addition of *Gnetum gnemon* L. peel extract. The highest inhibition efficiency was obtained at 1 g/L extract concentration of 84% and increased by 0.15 g/L iodide addition of 93.65%. Measurements with potentiodynamic polarization indicate that *Gnetum gnemon* L. peel extract is an cathodic inhibitor. In SEM analysis shows the difference of surface morphology of steel soaked in HCl and with addition of extract and addition of Iodide. The value of the synergistic effect is obtained from 1. Adsorption of *Gnetum gnemon* L. peel extract according to the mild steel surface in accordance with Langmuir isotherms.

**Keywords:** *Gnetum gnemon* L, peel extract, corrosion inhibitor, Langmuir adsorption isotherm, synergistic effect