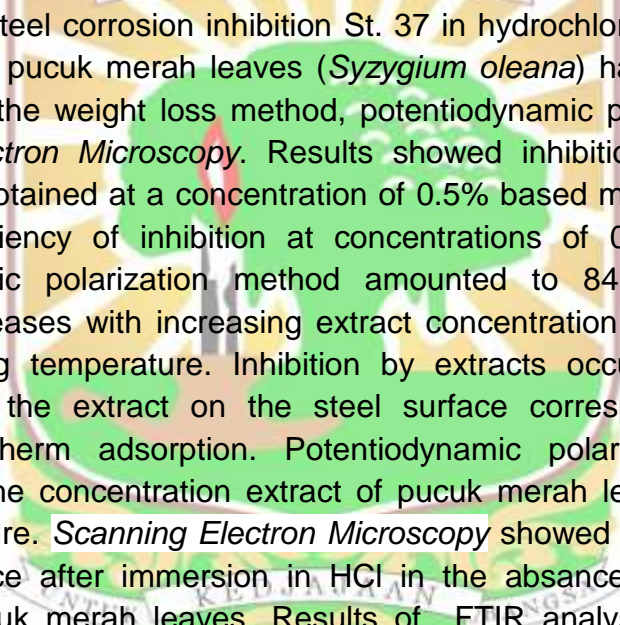


## ABSTRACT

### EXTRACT OF PUCUK MERAH LEAVES (*Syzygium oleana*) AS CORROSION INHIBITOR FOR STEEL St. 37 IN HYDROCHLORIC ACID CHLORIDE MEDIUM

By :

Ayu Fika Helmi (BP : 1110411005)  
Prof. Dr. Emriadi, MS and Drs. Yeni Stiadi, MS



Research on steel corrosion inhibition St. 37 in hydrochloric acid medium with extract of pucuk merah leaves (*Syzygium oleana*) has been carried out based on the weight loss method, potentiodynamic polarization, and *Scanning Electron Microscopy*. Results showed inhibition efficiency of 88.81% was obtained at a concentration of 0.5% based on weight loss and efficiency of inhibition at concentrations of 0.5% based on potentiodynamic polarization method amounted to 84.06%. Inhibition efficiency increases with increasing extract concentration and decreases with increasing temperature. Inhibition by extracts occurs due to the adsorption of the extract on the steel surface corresponding to the Langmuir isotherm adsorption. Potentiodynamic polarization method showed that the concentration extract of pucuk merah leaves is kind of inhibition mixture. *Scanning Electron Microscopy* showed the morphology of steel surface after immersion in HCl in the absence and presence extract of pucuk merah leaves. Results of FTIR analysis showed the interaction between the extract of pucuk merah leaves with steel surfaces.

**Keywords:** *Syzygium oleana*., corrosion inhibition, weight loss, Langmuir adsorption isotherm, potentiodynamic polarization, Scanning Electron Microscopy.