

**EFEK SINERGETIK ION IODIDA TERHADAP INHIBISI  
KOROSI BAJA DENGAN EKSTRAK DAUN SIAMIH  
(*Ageratum conyzoides* L) DALAM LARUTAN ASAM KLORIDA**

**OLEH  
LOVERA ANGGRAINI**

**BP 1520413003**



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JURUSAN KIMIA  
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN  
ALAM  
UNIVERSITAS ANDALAS  
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## ABSTRACT

### SYNERGETIC EFFECT OF IODIDE ION ON THE CORROSION INHIBITION OF MILD STEEL USING EXTRACT OF SIAMIH LEAVES (*Ageratum conyzoides* L) IN HYDROCHLORIC ACID MEDIUM

By:

Lovera Anggraini, S.Si (BP: 1520413003)  
Prof. Dr. Emriadi, MS dan Prof. Dr. Admin Alif

Siamih leaf extract (*Ageratum conyzoides* L) was tested as a corrosion inhibitor of steel St. 37 in HCl medium without and with the addition of iodide ions using the method of weight loss, potentiodynamic polarization and SEM analysis. Based on the method of weight loss can be seen that the corrosion rate decreases with the addition of siamih leaf extract. The highest inhibition efficiency is 85.33% with the addition of extract 8 g / L, without the addition of iodide ions. The highest inhibition efficiency is 98,51% with the addition of extract 8 g/L plus 8 g/L iodide ions. Influence of temperature causes the inhibition efficiency decreases with increasing temperature. Potentiodynamic polarization measurements showed that the leaf extract siamih a mixed type inhibitor. SEM analysis showed differences steel surface immersed in HCl without and with the addition of Siamih leaf extract. Siamih leaf extract adsorption on the steel surface according to the Langmuir adsorption isotherm.

**Key words:** *Melastoma candidum* D.Don, corrosion inhibitor, weight loss, potentiodynamic polarization, Langmuir adsorption isotherm, SEM, synergetic effect.