Inhibition Corrosion Effect of Extract from *Basella rubra* on Carbon Steel in HCl Solution

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doi: 10.20964/2020.05.57

Received: 9 January 2020 / Accepted: 17 february 2020 / Published: 10 April 2020

The inhibition behavior of fruit extract of *Basella rubra* on corrosion of carbon steel in 1 mol L⁻¹ HCl solution was studied by weight loss and electrochemical methods. The adsorption of extract obeys Langmuir adsorption isotherm. Electrochemical results reveal that the inhibitor acts as mix type inhibitor but cathodically predominant. The separated substituents can also inhibit the corrosion of carbon steel in HCl solution efficiently. SEM and XPS results demonstrate that the protective layer formed by extract molecules can effectively inhibit corrosion process at metal surface.

Keywords: Carbon steel; Corrosion inhibitor; Weight loss; EIS; HCl solution

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