

Pengaruh penambahan inhibitor ekstrak ubi ungu terhadap laju korosi pada material baja low carbon di lingkungan NaCl 3,5% = Effects of green inhibitors concentration of purple potatoes for low carbon Steel in NaCl 3,5%

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Abstrak

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Ubi ungu merupakan salah satu bahan organik yang dapat dikembangkan sebagai inhibitor untuk mengurangi laju korosi pada baja karbon rendah di lingkungan air laut. Inhibitor ubi ungu diharapkan akan menjadi inhibitor yang aman digunakan, ramah lingkungan, murah serta bio-degradable. Metode polarisasi digunakan untuk mengetahui kadar penggunaan yang optimal dari inhibitor ubi ungu dengan variasi konsentrasi 2ml, 4ml, 6ml, dan 8ml. Hasil yang diperoleh menunjukkan bahwa ekstrak ubi ungu cukup efektif sebagai inhibitor dalam menghambat laju korosi baja karbon rendah di lingkungan NaCl 3,5%. Ekstrak ubi ungu bekerja cukup optimal dan mampu menghambat laju korosi hingga 79,4%.

ABSTRACT

Purple potatoes is one of the organic material that can be developed as an inhibitor to reduce the rate of corrosion in low carbon steel in sea water environment. Inhibitors of purple potatoes extract are expected to be safe to be used, environmentally friendly, cheap and bio-degradable. Polarization method is used to determine optimal levels of use of inhibitors of purple potatoes with various concentration of 2ml, 4ml, 6ml and 8ml. The results showed that the purple potatoes extract is effective as an inhibitor in inhibiting low carbon steel corrosion rate in environment of 3.5% NaCl. Purple potatoes extract works are optimal and can inhibit the corrosion rate up to 79.4%.