

**EFFECT OF HALIDE ION ON THE CORROSION INHIBITION
EFFICIENCY OF SUS304 BY COCONUT HUSK EXTRACT IN
SULFURIC ACID**

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**Final Year Project Proposal Submitted in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science (Hons.) Applied Chemistry
in The Faculty of Applied Sciences
Universiti Teknologi MARA**

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ABSTRACT

EFFECT OF HALIDE ION ON THE CORROSION INHIBITION EFFICIENCY OF SUS304 BY COCONUT HUSK EXTRACT IN SULFURIC ACID

Corrosion is a natural phenomenon that causes the destruction of metal or alloys. The need to control the chemical or electrochemical reactions in a corrosive environment is very important. Organic corrosion inhibitors incorporated with additives is a good strategy to ensure excellent practice in inhibiting corrosion since the individual effects of organic corrosion inhibitors are less efficient. The main objective of this work is to study the effect of halide addition in organic corrosion inhibitors in an acidic medium. green corrosion inhibitor derived from coconut husk extract (CHE) was obtained. The extract was characterised via FTIR and UV-vis. The corrosion inhibition efficiency of CHE with halide ion on SUS304 was evaluated via weight loss test for 3 hours immersion in H₂SO₄. Observation of the corrosion effect on the surface of SUS304 was carried out using an optical light microscope. The result shows that the characterised Che contained O-H, C=O, C-O, and aromatic ring, recaps this natural extract was a good material to act as a Corrosion inhibitor. This study shows that adding halide has enhanced the corrosion inhibition from 20% to 97%. The order of halide effectiveness is I⁻ > Br⁻ > Cl⁻. The addition of halide has reduced the roughness of SUS304 as viewed from an optical light microscope. CHE and halide ions have inhibited the uniform type of corrosion. The significant result from this study would be a good reference for future research, specifically in developing green CI.