COVENANT UNIVERSITY

CHEMISTRY INTERNATIONAL CONFERENCE - CUCIC 2014

BOOK OF ABSTRACTS

Turning the Knowledge of Science into Development

9-10th July, 2014

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DEPARTMENT OF CHEMISTRY
SCHOOL OF NATURAL & APPLIED SCIENCES
COLLEGE OF SCIENCE & TECHNOLOGY

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VENUE: CU GUEST HOUSE CONFERENCE HALL

SYNTHESIS, CHARACTERIZATION AND ANTIMICROBIAL EVALUATION OF POLYESTERAMIDE RESIN BASED ON *Moringa oleifera* SEED OIL (MOSO)

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ABSTRACT

The depletion of world's petroleum reservoir coupled with global economy and environmental issues surrounding the complete dependence on petroleum have led researchers to develop alternate resource materials for industrial uses. This paper describes the antimicrobial and corrosion inhibitive properties of polyesteramide resin from *Moringa oleifera* seed oil (MOSO). N,N'-bis (2-hydroxyethyl) *Moringa oleifera* oil fatty amide (HEMA) was

synthesized via aminolysis. The amide obtained from aminolysis (HEMA) undergoes condensation reaction with adipic acid to form polyesteramide (MOPEA). The synthesized polyesteramide resin was characterized by FTIR, ^{1}H NMR and ^{13}C NMR spectroscopic analyses. Selected physico-chemical parameters of MOSO, HEMA and MOPEA were measured. Coating performance, thermal stability and antimicrobial properties of the cured resin were evaluated.