

EKITI STATE UNIVERSITY
ADO-EKITI

OFFICE OF RESEARCH AND DEVELOPMENT

2nd

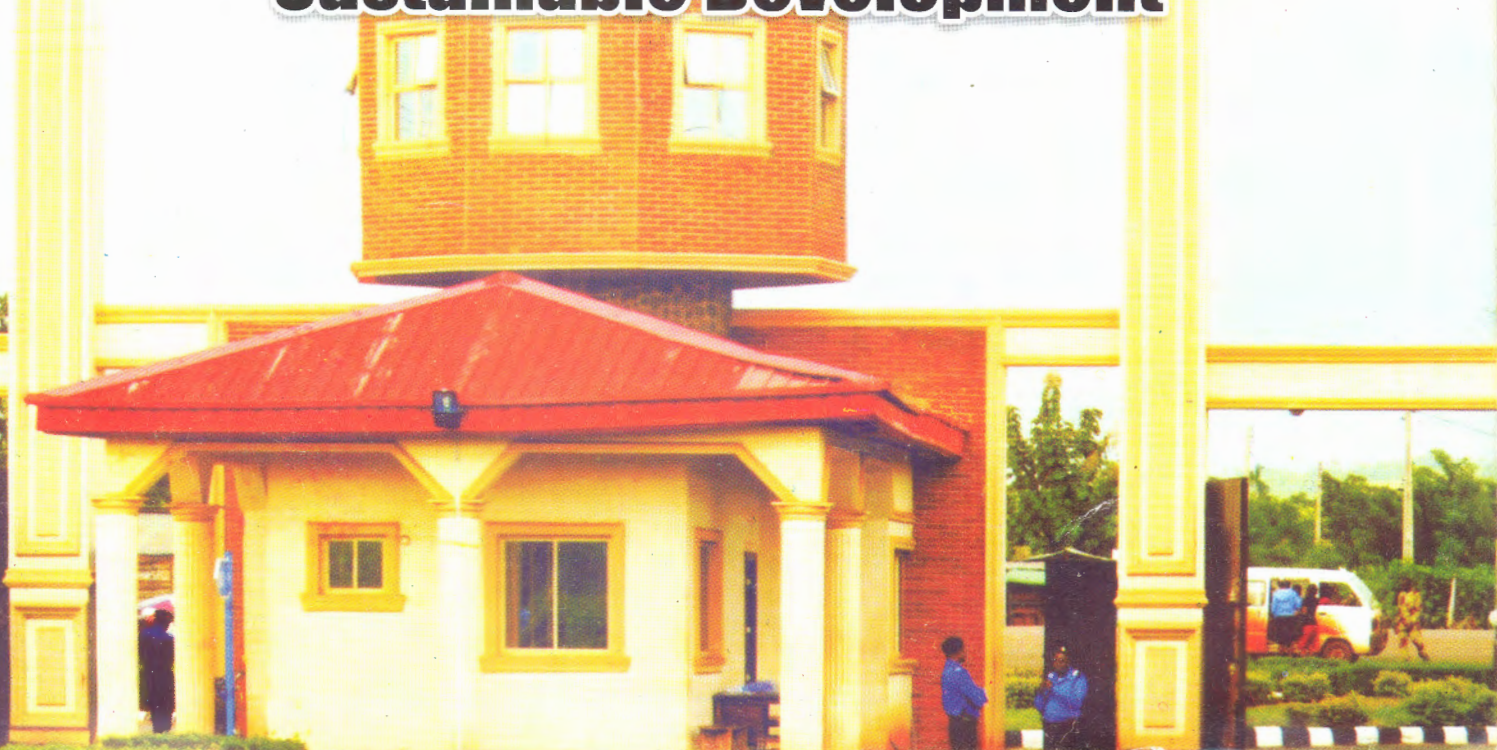
**EKSU International
Conference/Research Fair** *2014*

**BOOK
OF
ABSTRACTS**

THEME:

Research
for

Sustainable Development



SCIENCE BASED

**THERMAL AND ANTIMICROBIAL EVALUATIONS OF NEWLY SYNTHESIZED
HYBRID URETHANES FROM *THEVETIA PERUVIANA* SEED OIL**

**Siyanbola T.O.^{1,2*}, Adekoya J.A.¹, Ogunniran K.O.¹, Ajanaku K.O.¹, Olasehinde G.I.³,
Ajayi A.A.³, Narayan R.², Olaofe O.⁴, Akintayo E.T.⁴, Raju K.V.S.N.²**

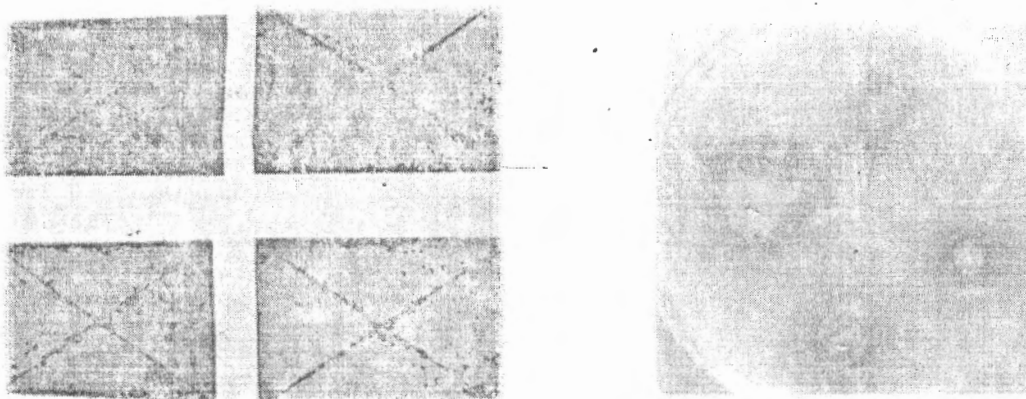
¹Chemistry Department, College of Science and Technology,
Covenant University, P.M.B. 1023, Ota, Ogun state, Nigeria.

²Polymers and Functional Materials Division,
Indian Institute of Chemical Technology, Hyderabad- 500007, India.

³Biological Science Department, College of Science and Technology,

— Abstract

The thermal and antimicrobial properties of air drying polyesteramide-urethanes (hybrid) synthesized from *Thevetia peruviana* (a tropical and underutilized ornamental shrub) seed oil (TPSO) were evaluated. Physico-chemical characterizations (such as hydroxyl value, iodine value, saponification value, refractive index, inherent viscosity) of the resins were carried out using standard procedures. The polyesteramide was synthesized by reacting N, N'- bis(2-hydroxyethyl) *Thevetia peruviana* (HETA) [a product of aminolysis of TPSO] with Isophoronediiisocyanate (IPDI). FTIR, ¹H-NMR and ¹³C-NMR spectroscopic methods were used in structural elucidation of the air dried hybrid urethanes. Antimicrobial activities as well as thermal stability (using TGA and DSC) of the coating films were evaluated. The SEM micrograph of the hybrid film and corrosion inhibitive test was also examined.



Corresponding author: tolu.siyانبola@covenantuniversity.edu.ng

MOLLUSCIDAL PROPERTIES OF *PARQUETINA NIGRESCENS* AND *DATURA STRAMONIUM* IN THE CONTROL OF SCHISTOSOMIASIS IN NIGERIA

*Olofintoye L. K., *Oniya M. O. and *Simon – Oke I. A.*

Department of Zoology, Faculty of Science, Ekiti State University, Ado-Ekiti, Ekiti State.

**Department of Biology, Faculty of Science, The Federal University of Technology, Akure, Ondo State, Nigeria.*

Email: toyetalk@yahoo.com

Abstract

Concentrations of ethanol, methanol and Crude aqueous extracts of leaf, root and leaf-root of *Parquetina nigrescens* and *Datura stramonium* at 20, 40, 100, 200, 300, 400 and 500 mg/l were introduced as contact for 24hr to kill *Bulinus globosus*, the intermediate host of *Schistosoma haematobium*. The peak molluscicidal activity of the leaf, root and leaf-root party of *P. nigrescens* and *D. stramonium* with ethanol and methanol extracts at 500 mg/l ranging from 64.6 to 81.5% and 48.2 to 100.0% respectively in the mortality rates of *B. globosus* within 24hr. The crude aqueous extracts of the leaf, root and leaf-root parts of *P. nigrescens* (400mg/l and 500mg/l) produced 56.3% mortality of the snails and *D. stramonium* (400mg/l and 500 mg/l) produced 70.0% mortality of snails within 24hr. Lc50 of *P. nigrescens* were 300mg/l and 500mg/l of the leaf, 200mg/l and 400mg/l of the root an 300mg/l and 400mg/l of the leaf root. Lc90 was 400mg/l of the Leaf-root for both ethanol and