World Academy of Science, Engineering and Technology
International Journal of Chemical and Materials Engineering
Vol:9, No:03, 2015

Toxicity and Larvicidal Activity of Cholesta-β-D-Glucopyranoside Isolated from Combretum molle R.

Authors : Abdu Zakari, Sai'd Jibril, Adoum A. Omar

Abstract : The leaves of Combretum molle was selected on the basis of its uses in folk medicine as insecticides. The leave extracts of Combretum molle was tested against the larvae of Artemia salina, i.e. Brine Shrimp Lethality Test (BST), Culex quinquefasciatus Say (Filaria disease vector) i.e. Larvicidal Test, using crude ethanol, n-hexane, chloroform, ethyl acetate, and methanol extracts. The methanolic extract proved to be the most effective in inducing complete lethality at minimum doses both in the BST and the Larvicidal activity test. The LC50¬ values obtained are 24.85 µg/ml and 0.4µg/ml respectively. The bioactivity-guided column chromatography afforded the pure compound ACM–3. ACM-3 was not active in the BST with LC50 value >1000µg/ml, but was active in the Larvicidal activity test with LC50 value 4.0µg/ml. ACM-3 was proposed to have the structure I, (Cholesta-β-D-Glucopyranoside).

Keywords : toxicity, larvicidal, Combretum molle, Artemia salina, Culex quinquefasciatus Say.
Conference Title : ICC 2015 : International Conference on Chemistry
Conference Location : Istanbul, Türkiye
Conference Dates : March 23-24, 2015

Open Science Index, Chemical and Materials Engineering Vol:9, No:03, 2015 publications.waset.org/abstracts/20228.pdf