Abstract

Abstract Petroleum ether, acetone, ethyl acetate, aqueous extract, methanol and ethanol fractionate of Eichhornia crassipes (Mart.) Solms was tested for their larvicidal efficacy against the different instars (I, II, III and IV) and pupae of Culex quinquefasciatus Say. The larval mortality was

observed after 24 h of the treatment. The extracts showed a dose-dependent toxicity to larvae. The toxicity of the extracts decreased with increase in larval stage. Ethanol fractionate of E. crassipes showed the highest larvicidal and pupicidal activity against C. quinquefasciatus compared to other solvent extracts and fractionates with LC50 71.43, 94.68,120.42, 152.15 and 173.35 ppm for I, II, III, IV and pupae, respectively. Presence of metabolites like flavonoids, alkaloids, anthroquinones and anthocyanins in the tested extracts might be the reason for the larvicidal and pupicidal activity of the plant extracts and fractionates of waterhyacinth. Mosquito-repellent activity was not exhibited by these extracts at the tested concentrations. The results demonstrated the potential of the aquatic plant E. crassipes in the successful control of the filarial vector C. quinquefasciatus