COMPARATIVE EFFICACY OF *SOLANUM XANTHOCARPUM* EXTRACTS ALONE AND IN COMBINATION WITH A SYNTHETIC PYRETHROID, CYPERMETHRIN, AGAINST MALARIA VECTOR, *ANOPHELES STEPHENSI*

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Abstract. With a goal of minimal application of environmentally hazardous chemical insecticides, the larvicidal activity of cypermethrin was studied alone and in combination with the root extract of *Solanum xanthocarpum* against anopheline larvae. Petroleum ether extract was observed to be the most toxic, with LC_{50} of 1.41 and 0.93 ppm and LC_{90} of 16.94 and 8.48 ppm at 24 and 48 hours after application, respectively, followed by carbon tetrachloride and methanol extracts. The values for cypermethrin were an LC_{50} of 0.0369 ppm after 24 hours and 0.0096 ppm after 48 hours and LC_{90} of 0.0142 and 0.0091 ppm after 24 and 48 hours, respectively. The ratios of cypermethrin and petroleum ether extracts tested were 1:1, 1:2 and 1:4. Of the various ratios tested, the cypermethrin and petroleum ether extract ratio of 1:1 was observed to be more efficient than the other combinations. From the individual efficacy of each constituent, synergism was noted. This is an ideal ecofriendly approach for the control of malaria vector, *Anopheles stephensi*.

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