Title (5)	:	**Application of biodiesel as carrier fuel in insect aerosol system**
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UniKL Author	:	Mohd Razealy Anuar; Kelly Yong Tau Len; Ahmad Azahari Hamzah
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Abstract	:	The unfavorable condition of biodiesel market could be avoided by varying the usage of this biofuel in our daily life. Thus, this project addressed the application of biodiesel as a carrier fuel in common aerosol system. Chemical insecticide spraying through aerosol system was used in controlling the population of larvae and adult mosquito. The ideal dilution ratio of insecticide-biodiesel and the potential of biodiesel as carrier are yet to be investigated. Biodiesel was produced from palm oil through transesterification reaction catalyzed by hydrotalcite. An indoor field trial and spread ability test of biodiesel aerosol system were conducted in a transparent container. To evaluate the mortality profiles of mosquitoes, the larvacidal and adulticidal testing were carried out by varying the dilution ratio of permethrin as active ingredient and biodiesel as carrier to 1:9, 3:7 and 1:1. It can be deduced that, the 3:7 ratio showed an effective result which recorded 16 minutes and 4 minutes for larvae and mosquitoes deceased, respectively. Spread ability test was conducted in three different water level which are 0.5, 2.0 and 3.5 cm of height. It can be deduced that biodiesel as liquid carrier capable to enhance the solubility of permethrin to reach larvae in the water. Without biodiesel, time taken for the larvae to be deceased is longer. This is due to the insoluble permethrin caused the insecticide penetration is not effective when increase the water level. Biodiesel was proven to be easily mixed with permethrin and the mist dispersion distance up to 40 cm still can reach the mosquitoes.