

Thesis title Identification of Anopheles dirus sibling species by Non-Radioactive (Digoxigenin) DNA Probes

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ABSTRACT

Instead of radioactively DNA labelling, the non-radioactively digoxigenin was applied to label the species-specific DNA probe for identification of Anopheles dirus complex in Thailand by nucleic acid hybridization technique. The development was focused on field application. It was illustrated that the non-radioactive system was complied well with the radioactive system, in term of the simplicity, sensitivity, and specificity. The developmental stages of mosquitoes were also studied. The detection system revealed that it is able to identify different stages of mosquitoes and even some parts of mosquitoes. In this study, we could identify 800 wild-caught specimens. Moreover, the preservation of mosquito specimens from the field was studied. The simplest way for field specimen preservation was demonstrated in this study by keeping it in 70% ethanol at room temperature for at least four weeks. In addition the method for DNA probe labelling was performed by polymerase chain reaction that could increase the sensitivity and amount of DNA probe.