

RESIDUAL EFFECTS OF MOSSMANN 100 (PERMETHRIN 10% EC) IMPREGNATED BED NETS AND ITS IMPACT ON MALARIA VECTORS AND INCIDENCE OF MALARIA

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Abstract. The objective of this field trial was to assess the residual effectiveness of permethrin 10% treated mosquito nets on malaria control compared with untreated nets. The study was carried out between July and December 2007 in the Pong Nam Ron District of Chantaburi Province, Thailand. Mosquito population densities were assessed using the landing catch method. Mosquitoes were collected between 6:00 PM and 12:00 PM. Residual effectiveness of the treated nets was assessed using standard WHO bioassay tests carried out monthly using *Anopheles dirus* mosquitoes reared in the insectary of the Department of Medical Entomology, Faculty of Tropical Medicine, Mahidol University, Thailand. The results showed the population densities of *Anopheles* spp, including the malaria vector *Anopheles minimus*, were unaffected in the study area where mosquito nets treated with Mossmann 100 (permethrin 10% EC) at 300 mg/m² were used. WHO bioassay tests showed the nets treated with Mossmann 100 remained biologically effective against *An. dirus* for up to six months. Indigenous cases of malaria were reduced by 27.7% at the site where the nets treated with Mossman 100 (permethrin 10% EC) were used but no changes in malaria cases at the control site were seen.

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