

EVALUATION OF PERMANET® 2.0 MOSQUITO BEDNETS AGAINST MOSQUITOES, INCLUDING *ANOPHELES MINIMUS* S.L., IN INDIA

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Abstract. Wash resistance and field bioefficacy of PermaNet® 2.0 nets, long lasting insecticidal nets, against mosquitoes were evaluated in Assam, northeastern India. After repeated hand washings at 12-day intervals a decline in the mosquito killing ability of PermaNet nets was noted (trend χ^2 38.9, $p < 0.0001$), yet these nets retained good insecticidal efficacy for up to 15 wash cycles, producing a 72.5% mean mortality of *An. minimus* 24 hours after a 3-minute exposure in World Health Organization cones after 15 washings. Significantly fewer ($p < 0.001$) mosquitoes were captured in self-baited landing collections in houses equipped with PermaNet nets than in houses using untreated nets in the case of culicines ($p < 0.001$) but not with anophelines, including *An. minimus*. The use of PermaNet nets resulted in noticeably fewer bites from *Culex pseudovishnui* (68.5%) and *Cx. quinquefasciatus* (70%). Blood-feeding inhibition of mosquitoes in deliberately torn PermaNet nets was seen, indicating a protective effect for those sleeping under these nets. No serious adverse effects of the PermaNet nets were reported by users.

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