

论著

α -三噻吩对白纹伊蚊幼虫的毒杀作用

任晓燕¹,张玲敏^{2*},朱佩娴²,熊钟谨²,吴春云²

1 山东省聊城市人民医院中心实验室,聊城 252000

2 暨南大学医学院寄生虫学教研室,广州 510632

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摘要

目的 研究 α -三噻吩对白纹伊蚊幼虫的杀灭效果、影响因素及其对白纹伊蚊幼虫生长发育的影响。
方法 在实验室特定近紫外光 (UVA)下,计数不同药物浓度、不同黑暗处理时间的 α -三噻吩作用后蚊幼虫的死亡数、化蛹数及蛹的羽化数;在户外自然光下,观测不同药物浓度、不同施药时间的 α -三噻吩作用后蚊幼虫的死亡数。
结果 实验室特定UVA下, α -三噻吩对白纹伊蚊幼虫的半数致死量为2.37 μ g/L;药物与幼虫在黑暗中作用3h后再施以UVA照射能发挥其最大毒杀作用; α -三噻吩能够显著抑制白纹伊蚊幼虫的发育和蛹的羽化。户外自然光下,高浓度 α -三噻吩在强烈阳光辐射下可以快速杀灭白纹伊蚊幼虫,上午5时施药后24h的毒杀作用显著优于上午10时和下午1时。
结论 α -三噻吩是一种高效、实用、并能够抑制蚊幼虫生长发育的杀虫剂。

关键词 [\$\alpha\$ -三噻吩](#) [白纹伊蚊](#) [光活化](#) [近紫外光](#)

分类号

REN Xiao yan,ZHANG Ling min,ZHU Pei xia,XIONG Zhong jin,WU Chun yun

REN Xiao yan,ZHANG Ling min*,ZHU Pei xia,XIONG Zhong jin,WU Chun yun

Central Laboratory,Liaocheng People's Hospital,Liaocheng 252000,China

Abstract

Objective To investigate the toxicity of alpha terthienyl to the larvae of Aedes albopictus , its influencing factors and effect on the larva development. Methods Under experimental ultraviolet A (UVA),the number of dead,pupal or eclosive mosquito larvae was determined on the condition of different doses of alpha terthienyl and different disposal time in the dark;the number of dead larvae was also determined under sunlight on the condition of different doses of alpha terthienyl and different disposal time to water. Results The LC 50 of alpha terthienyl to Aedes albopictus larvae was 2.37 μ g/L under UVA. The best effect was shown when the larvae were incubated with alpha terthienyl 3 h in dark. Alpha terthienyl could significantly inhibit the larva development and the emergence of the pupae. Under strong sunlight, the larvae were quickly killed by high concentration alpha terthienyl. The 24 hours effect of alpha terthienyl was better when it was applied at 5AM than that of at 10AM and 1PM. Conclusion Alpha terthienyl is an effective, practicable larvicide which prohibits the growth and development of the larvae of Aedes albopictus .

Key words [Alpha-terthienyl](#) [Aedes albopictus](#) [Phototoxicity](#) [Ultra-violent A\(UVA\)](#)

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通讯作者

作者个人主页 任晓燕¹;张玲敏^{2*};朱佩娴²;熊钟谨²;吴春云²

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