EFFICACY OF SYNTHETIC PYRETHROIDS VS PLANT BASED INSECT REPELLENTS ON TEXTILES

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ABSTRACT

Vector borne diseases causes thousands of death annually where many of these diseases are preventable through protective measures. Insecticide treated fabric for use in garments are intended to reduce biting by mosquitos and possibly other insects. Treated fabrics with synthetic pyrethroids provide long term protection for users. For instance, permethrin treated fabrics have been developed and commercialized with +90% bite protection compared to an untreated control. On the other hand, spatial repellants containing plant based ingredient have gained popularity among consumers when they are perceived to be safe and environmentally sustainable. However, efficacy and longevity of these natural repellents is restricted due to the volatility of its components. In this presentation the concepts for new insect repellent fabrics, methods of application, value assessment (efficacy and durability), and test methods will be discussed.