ORIGINAL RESEARCH ARTICLE

An essential oil-derived mosquito repellent renewable finish for fabrics

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ABSTRACT

Essential oils derived from aromatic plants like mint species, lemongrass, palmarosa, citronella, vetiver, geranium etc are finding extensive usage in perfumery, flavoring, cosmetics and pharmaceutical industries. Some of these essential oils also possess strong mosquito repellency feature that make them potential candidates for utilization in the huge market of insect repellents and insecticides. In this context, the oils obtained from the hydro-distillation of mint, citronella and lemongrass leaves are in high demand for making herbal formulations/products used in household hygiene and for mosquito repellency. Mosquito borne diseases such as dengue, malaria, filariasis and chikungunya have plagued the public health scenario, especially for the homeless people who live on roadsides and are under constant threat of mosquito bite. According to 2011 Census data about 449761 families in India are roadside dwellers. In the present study we have prepared an organic mosquito repellent renewable fabric finish using citronella oil as the base. Application of this product on fabrics has been found very effective in repelling the mosquitoes. Our study suggests that mixed or intercropping of mint species with citronella can be a profitable venture for farmers because of extra income that citronella oil can fetch for preparing above product.