

Insect repellent essay



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An insect repellent is a substance applied to skin, clothing, or other surfaces which discourages insects (and arthropods in general) from landing or climbing on that surface. There are also insect repellent products available based on sound production, particularly ultrasound (inaudibly high frequency sounds). These electronic devices have been shown to have no effect as a mosquito repellent by studies done by the EPA and many universities.[1]

Insect repellents help prevent and control the outbreak of insect-borne diseases such as malaria, Lyme disease, dengue fever, bubonic plague, and West Nile fever.

Pest animals commonly serving as vectors for disease include the insects flea, fly, and mosquito; and the arachnid tick. Synthetic repellents tend to be more effective and/or longer lasting than “ natural” repellents.[9][10] In comparative studies, IR3535 was as effective or better than DEET in protection against mosquitoes.

[11] However, some plant-based repellents may provide effective relief as well.[9][10][12] Essential oil repellents can be short-lived in their effectiveness, since essential oils can evaporate completely. A test of various insect repellents by an independent consumer organization found that repellents containing DEET or picaridin are more effective than repellents with “ natural” active ingredients. All the synthetics gave almost 100% repellency for the first 2 hours, where the natural repellent products were most effective for the first 30 to 60 minutes, and required reapplication to be effective over several hours.

[13] For protection against mosquitos, the U. S. Centers for Disease Control (CDC) issued a statement in May 2008 recommending equally DEET, picaridin, oil of lemon eucalyptus and IR3535 for skin.[14] Permethrin is recommended for clothing, gear, or bed nets.[9] In an earlier report, the CDC found oil of lemon eucalyptus to be more effective than other plant-based treatments, with a similar effectiveness to low concentrations of DEET.[15] However, a 2006 published study found in both cage and field studies that a product containing 40% oil of lemon eucalyptus was just as effective as products containing high concentrations of DEET.[16] Research has also found that neem oil is mosquito repellent for up to 12 hours.[12] Citronella oil's mosquito repellency has also been verified by research,[17] including effectiveness in repelling *Aedes aegypti*, [18][19] but requires reapplication after 30 to 60 minutes.