

Feasibility of chili and kamias mosquito repellent



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Chapter 1: Introduction Mosquitos are common flying insects that are found around the world. There are about 2, 700 species of mosquitoes. Female mosquitoes are usually larger than males. Females drink blood and the nectar of plants while the males only sip nectar of plants. When female mosquitoes bite, they inject an anticoagulant (anti-clotting chemical) into the prey to keep the victim's blood flowing. Not all mosquito species bite humans. That is why females, who drink blood, can carry diseases from one animal to another as they feed.

Mosquitoes are often carriers of diseases such as malaria, encephalitis, yellow fever, dengue fever, dog heartworm, West Nile virus, and many others.

Mosquito larvae are important food for fish and other predatory aquatic animals. Adult mosquitoes are also important food for birds, bats and other arthropods, including dragonflies and spiders. Kamias is the Filipino name for a tree scientifically known as *Averrhoa bilimbi*. In English, it is known as the cucumber or sorrel tree. This tropical tree is found naturally in Malaysia and Indonesia, and its fruit is used both for cooking and traditional medicine.

Though kamias is a highly acidic fruit, it can be consumed after certain preparations are taken, and it does provide trace amounts of vitamins and minerals. Kamias fruit contains a small amount of vitamins and minerals. Due to the acidic nature of kamias fruit, it is quite sour and not often eaten raw. In Costa Rica, the fruit is used as a relish, and people in other countries use it in recipes that require a sour taste such as chutneys or pickled foods. Kamias can be substituted for vinegar, used in Juices like lemonade, or even combined with large amounts of sugar to make Jams.

Medicinally, kamias can be made into a paste and applied topically to itchy or swollen skin or skin affected by bug bites. In traditional Malay medicine, they create an infusion of the fruit and leaves to remedy a cough, as well as administer a tonic to women after they give birth. This infusion is also used on pimples, hypertension, dizziness and diabetes. Those in Indonesia use the kamias fruit as a treatment for fevers, inflammation, rectal bleeding, boils and other conditions. The flowers of the kamias are also used as a remedy for toothaches.

Do not consume kamias without first checking with a healthcare provider, and do not attempt to treat any medical condition or problem by consuming, drinking or topically applying the fruit. Chilis are often used as condiments, ingredients, or a main meal. Even though they may sting a little, a lot of people keep begging for more. There is something about chili that leads people to addiction. Chili peppers contain a substance called "capsaicin" which is the active component in it and is also responsible for the burning or stinging feeling every time you take a bite into one of these spicy treats.

Capsaicin is released and immediately starts to cause burning sensation in your mouth or whatever else it touches. As soon as our brain detects the pain, it releases an "Endorphin" which is a natural painkiller the human body produces. We conducted this research because we wanted to see if Kamias and Chili is a good alternative mosquito repellent. Mosquito repellents are really expensive nowadays, and we wanted to see if this mosquito repellent of ours would be a cheaper alternative. Chapter 2: Review of Related Literature In the past, chili was used only as spices because of its taste.

After a while, it was discovered that is also good as a mosquito killer because of its pesticidal property. Kamias, on the other hand, was also used in food spices before it was also discovered by Battistelli in 1939 that it also has properties like astringent, stomachic, refrigerant, and antiscorbutic. Some of the researchers now are having kamias as wine but in this research study, I want to test the properties of the kamias fruit together with the chili. Chapter Three: Methodology In our experiment, we have conducted several steps.