## "natural mosquito repellent"



" NATURAL MOSQUITO REPELLENT" I. INTRODUCTION Mosquitoes can be unwelcome guest these rainy days and it is a major insect problem of people. Commercial repellents are harsh, have poisons that are not suitable for children and not always effective in repelling these pesky bugs. We don't know what are the side effects of these repellents are. Some leaves, unripe fruit, and their seeds contain vermicidal and insectidal properties. It is an inexpensive alternative in avoiding mosquito that causes diseases like dengue and malaria. These insects can also cause economic losses in cattle and other livestock through blood loss, disease transmission and irritation. We arrived at this kind of problem because we want to prevent ourselves from mosquitoes that cause diseases like dengue, malaria as well as painful or uncomfortable insect bites. And we want to avoid slapping and whirring hands when it's stricken to us and to come up with an effective and safe mosquito repellent product. We don't need poisons to deal with insects. II. REVIEW OF RELATED LITERATURE TITLE; Shoo, Fly: Natural Insect Repellent By: Laurel Vukovic From: Natural Health July/August, 1994 Making human flesh unappetizing to mosquitoes, ticks, flies, and fleas is an age-old preoccupation. The earliest insect repellents included smoke, mud, and various plant substances. Our contemporary contribution is DEET (N, Ndiethyl-meta-toluamide), a powerful insecticide found in over 400 repellents. DEET can peel paint, damage rayon and spandex, and melt plastic. Up to 56 percent of DEET applied to the skin enters the bloodstream, and reactions to it include skin rashes, lethargy, muscle spasms, nausea, and irritability. An extreme reaction can cause seizures and even death. So it's hardly worth using DEET to deter insects unless you're someplace with high rates of insect-borne disease or you experience severe allergic reactions to bites and

stings. There are natural alternatives to DEET, made primarily from plant essential oils that can protect you in less threatening circumstances. Although " there is no natural repellent as effective as DEET," says Eve McClure, executive vice-president of protection against ticks." Ticks, the carriers of Lyme disease, are among the most worrisome pests. If you are traveling in an area known for Lyme disease (according to the Centers for Disease Control, this includes the Atlantic states and Northern California), contact the American Lyme Disease Foundation at (800) 876-5963 for preventive advice Quantum, a natural repellent manufacturer in Eugene, Oregon, " natural repellents do help ward off mosquitoes, black flies, gnats, and fleas, and they may provide some. Reactions: From Mild to Fatal Although most people experience only temporary pain and swelling after a bee or wasp sting, some individuals are hypersensitive and can experience a potentially fatal anaphylactic reaction. The symptoms of anaphylaxis include hives, agitation, difficulty in breathing, nausea, dizziness, and a swollen tongue or face. Without prompt medical treatment, this can be fatal. Although anyone can have an anaphylactic reaction, the people most at risk are those with a history of allergic reactions to stings -- hives, wheezing, or a previous episode of anaphylactic shock. People who know they are at risk should carry an emergency kit with injectable epinephrine, which is available by prescription. Home care can include drinking slightly salty water (1/2 tsp. per quart, at 4 oz. per hour), Vitamin B-5 at large doses briefly (2 grams 3X a day, for 3-4 days), Licorice capsules or tea at 1-2 cps. /1 cup tea, 2 or 3 X a day. Extensive Measures You don't have to be in the tropics or in an area at high risk for insect-borne disease to take the following steps. Hordes of insects your own backyard can lead you to seek

extra protection. Debra Nuzzi-St. Claire, an herbalist in Boulder, Colorado, has these suggestions (see " Making Your Own Natural Insect Repellent." below, for essential oil combination): \* Spray clothing and bedding (including the mosquito netting of your tent, if you're camping) with an alcohol-base repellent. \* Pour several drops of the combined pure essential oils onto a candle. \* Place a few drops on cloth or paper strips and hang them around the room, especially by doors and windows. \* Add the base oil to shampoos and liquid soaps. Most natural insect repellents are made with an essential oil distilled from citronella, a tall, aromatic grass indigenous to Southern Asia. Its pungent, lemony fragrance is pleasant to most people but objectionable to mosquitoes. Other aromatic essential oils commonly found in natural insect repellents include cedarwood, lemongrass, eucalyptus, peppermint, pennyroyal, lavender, and bergamot. These are safe when applied to the skin, but should not be taken internally without the advice of a professional. Pennyroyal, in particular, is highly toxic if ingested. Essential oil repellents are available in spray or oil form. According to Eve McClure, restrictions by the Environmental Protection Agency (EPA) have made it difficult for consumers to identify natural repellents by packaging alone. Since the EPA classifies all repellents as insecticides, it requires expensive testing, which includes experiments on live animals. Because most natural repellent manufacturers are unwilling -- or financially unable -- to comply with EPA guidelines, they cannot promote their products as natural insect repellents. " We had to remove the bug from our label and change our name from 'Buzz Away' to 'Zzz Away,' " says McClure (see " Making Your Own Natural Insect Repellent"). After the Bite If mosquitoes, flies, and fleas feast on you in spite of your efforts, Nuzzi-St. Claire recommends applying

undiluted tea tree oil to the bites. Tea tree oil has antiseptic and antiinflammatory properties and is usually non-irritating. Test a small area of skin before applying the oil liberally. If the essential oil irritates your skin, wash it off with soap and water and dilute the tea tree oil in five parts of jojoba or almond oil before reapplying. Testing for sensitivity is a good practice when applying any essential oil for the first time. Sharol Tilgner, a naturopathic physician and natural first-aid expert in Portland, Oregon, recommends applying a drop of peppermint essential oil to insect bites. Anything with menthol will increase the circulation in the area and dissipate the anticoagulant that the mosquito has injected into you," she says. Other topical treatments for reducing itching and inflammation include cold compresses, lavender essential oil, and calamine lotion. Dr. Thomas S. Lee, an Arizona naturopathic physician, likes pure lavender oil rubbed into the bite ASAP. "The Chinese patent medicine White Flower Oil is a clean mentholated formula that works well, too." Well-equipped and well-informed, you can take those restorative strolls and hikes with greater confidence. Carl Mitchell of the Centers for Disease Control in Fort Collins, Colorado says, "People definitely shouldn't avoid outdoor activities for fear of bug bites and stings. Just take a few precautions." Stings: The Finer Points To make an insect repellent oil that can be used on your body, add 16 ounces of jojoba or almond oil to the base oil mixture and blend thoroughly. For an insect repellent spray, add 16 ounces of vodka to the base oil mixture, pour into a spray bottle, and shake before using. Although bees, wasps, hornets, and yellow jackets generally won't go out of their way to attack, they can be extremely aggressive if you disturb their nests or bother them while they're feeding. They're attracted by perfumes and scented body care products, as

well as by sweet foods such as ice cream, fruit juices, and watermelon. Bright-colored clothing can also make you a target. If you do get stung, the following tips can help minimize the problems: Bumblebees, wasps, yellow jackets, and hornets can attack repeatedly, so if you get stung, get out of the area immediately. If you're stung by a yellow jacket, avoid swatting at it. Crushing the venom sac releases a chemical that incites its nest-mates to attack. Honeybees can sting only once, but the stinger and venom sac they leave in your skin pump venom for two to three minutes. Remove them immediately, being careful not to squeeze the venom sac. The safest way to do this is to scrape them out with a credit card or the dull edge of a knife. If the stinger remains behind after you've scraped away the venom sac, remove it gently with tweezers. Making Your Own Natural Insect Repellent Herbalist Debra Nuzzi-St. Claire suggests combining the following essential oils to make a natural insect repellent: 1/2 ounce citronella oil 1/4 ounce lavender oil 1/8 ounce pennyroyal oil 1/8 ounce tea tree oil 1/8 ounce jojoba oil Do not use this blend undiluted on your skin. Follow these instructions for diluting: To make an insect repellent oil that can be used on your body, add 16 ounces of jojoba or almond oil to the base oil mixture and blend thoroughly. For an insect repellent spray, add 16 ounces of vodka to the base oil mixture, pour into a spray bottle, and shake before using. III. PROCEDURE 1. Place ½ organic apple vinegar into a large mixing bowl 2. Mix into the organic apple vinegar  $\frac{1}{2}$  cup of vodka. 3. Place 2 table teaspoons of citronella oil into the above stated mixture. 4. Mix thoroughly. 5. Using a funnel transfer contents of mixing bowl into a small spray bottle. 6. Apply literally for best effect. IV. MATERIALS \* ½ cup vodka \* ½ cup of organic apple vinegar \* 2 teaspoons of citronella oil \* Small spray bottle \* Funnel \*

Bowl V. RESULTS & DISCUSSION TRIAL 1 | TRIAL 2 | TRIAL 3 | \* In our 1st trial, we use  $\frac{1}{4}$  vodka and not totally fermented apple vinegar. And when we use it, the product is not successful. | \* In our 2nd trial, we use  $\frac{1}{2}$  vodka, 1 teaspoon of citronella oil and fermented apple vinegar. When we apply it, there are still bites of mosquito. It's not successful again. | \* In our last trial, we read the procedure carefully and followed it. We use the exact amount of vodka that should be  $\frac{1}{2}$  cup,  $\frac{1}{2}$  cup of totally fermented apple vinegar and 2 teaspoons of citronella oil and when we apply it. The product is successful. VI. CONCLUSION: After the investigation is done, therefore we conclude that natural mosquito repellent is more safe and effective. And we can also make our own mosquito repellent than buying it. We'll not be too aware of mosquito bites anymore because our product is natural and has safe side effects. And we also conclude that making this product is not costly. In fact, you'll save more money and the more natural, the more effective it is. VII. RECOMMENDATION: After we made the product successful, we're offering recommendations for possible further study and more successful product. It is recommended giving more priority of our health is the most important. According to World Health Organization 1948, "Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. " People should also give attention to our nature, because there are hidden treasures to make our health healthy. If you want to experiment, 1st thing you should do is to observe. Then you follow carefully the steps to become successful in the experiment. Next, think for the materials that are not expensive. Always prioritize to save money as much as possible. Then last, create a product that will help the people and the mother earth. Like our product, "NATURAL MOSQUITO REPELLENT".