

Investigatory project



Investigatory Project III-6 “ Orange Peels as Mosquito Repellant “ Submitted by : Mrs. Teresita Duran Leader : Evangelista, Jose Alejandro Asst. Leader : Villena, Mark Daniel Members : Chavez, Robert Conrad Roxas, Jerome Rexal Soria, Clemrendon Background of the Study : Mosquitoes are a nuisance to the society especially in our health . Is a common insect in the family culicidae (from latin culex meaning midge organ) . There are about 3, 500 species of mosquitoes found throughout the world . In some species of mosquito , the females feed on humans , and are vectors for a number of infectious diseases affecting millions of people per year . Some scientists believe that eradicating mosquitoes would have serious consequences for any ecosystem. The researches and experiments evolve to investigate the effectiveness of Orange Peel as a mosquito repellant . There were similar researches about this ; they used lemon peel to create a repellant . In this study we would like to prove the effectiveness of Orange Peel as mosquito repellant . The other researches proved the different uses of citrus fruits in preventing diseases . As of now , many people are suffering from different diseases caused by mosquito bites . The numbers affected people rapidly increasing . This is now causing a problem to the government because many of the affected people are dying . This gives researches and experiments to think of applicable solutions to prevent these cases and an Orange Peel as mosquito repellant is one of this researches Background of the Study : 1. Will the Orange Peel extract be able to repel mosquitoes ? 2. Will the Orange Peel can help the people to prevent diseases caused by mosquitoes ? Significance of the Study : Using Orange Peels extract to repel mosquitoes would be a benefit to everybody because it is cheap to make and made from recycling the peels of the oranges that you eat . Nowadays ,

disease , sickness that are caused by mosquitoes are getting more and more each day . Through this , we can help a lot of people would be able to lessen the risks of the mosquitoes in their lives that are surrounding them . Scope and Limitation : This study focuses on how to lessen the risks that are caused by the mosquitoes especially dengue fever that had been a threat to the people for quite some time now . We also focus on how we can let people be able to reach their needs in life , that's why we used cheap materials to create a repellent that would lessen the risks to their health .

Review of Related Literature (RRL) Orange is a delicious fruit . Not only in the inner part of orange (fruit) but also the outer part (peel) is useful in many many ways . Here are some unique uses for Orange Peels . 1. As a Bathing Powder — dry some orange peels and make them as a powder . 2. Mosquito Repellent — apply orange peels over your exposed skin on nights to repel the mosquitoes . 3. Get rid of ants. 4. As a scent — boil orange peels on the stove with a few cloves to make your home filled with scent . 5. Keeps brown sugar soft. 6. As Bath oil — dried orange peels can be used as home made bath oils . 7. Household Cleaner. 8. Kindling in Winter — dried orange peels can be used as kindling at fire places . The flammable oils found inside the peels enable them to burn much longer than paper . 9. Protects leaves if household plants from cats and 10. Make delicious oil — you can make delicious homemade oil with Orange Peels. Orange Peels can help us lower environmental pollution . Scientist are researching to make plastic from Orange Peel (Orange Peels have a carbon compound umonene) which is eco-friendly. Methodology : * Materials * Orange Peels * Spray Container * Mosquitoes * Extractor *

Procedure First , three set-ups were prepared ; set-up one(1) was made up of the extract from 3 Orange Peels from different oranges and 20% of water ;

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set-up two(2) was made up of the extract from 3 Orange Peels from different oranges and 40% of water ; set-up three(3) is the same with set-ups 1 and 2 but 60% of water . Second , peeled the peel of the oranges and put it in a container , and grate it to turn into smaller pieces . Third , add a little bit of water and pound and squeeze th grated ornage peels in a container .

Fourth , spray it to the 3 set-up with mosquito on each container. Finally , wait for two minutes to see the results . Data and Results Trial 1 | Set A | Set B | Set C | Mosquito 1 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | Mosquito 2 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | Mosquito 3 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | Trial 2 | Set A | Set B | Set C | Mosquito 1 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | Mosquito 2 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | Mosquito 3 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | Trial 3 | Set A | Set B | Set C | Mosquito 1 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | Mosquito 2 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | Mosquito 3 | The mosquito died | The mosquito showed dizziness | The mosquito showed nothing different | *

Analysis of Data Table 1 shows the effect of orange peel extract on the mosquito During 3 trials . As the table shows the more concentrated the solution is , the more grave is it effect on the mosquito . Conclusions Based from the given data gathered , the researches conclude That the mixture of orange peel and 25% water was the most effective among the solutions/set-

ups of orange peel and water. Furthermore , it was also concluded that the more concentrated the solution the more it is to repel or kill mosquitoes .

Recommendations : 1. Conduct more reliable test using varied level of water. 2. Use other fruits in testing the efficiency of the given product. 3. To test more mosquitoes to see the range of the product when used.

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Bibliography : * <http://www.livingawareness.com/pdf/HealthArticles/OrangePeels.pdf> * http://www.Wikipedia.org/wiki/Insect_Repellant * <http://en.wikipedia.org/wiki/mosquito> * [http://en.wikipedia.org/wiki/orange_\(fruit\)](http://en.wikipedia.org/wiki/orange_(fruit)) * <http://mandarinfruit.com> THE END!