

Sunflower extract and orange juice as mosquito attractant essay sample



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INTRODUCTION

Many diseases and viruses are caught because of mosquitoes. Because of these diseases and viruses, many people are dying. Even children catch these sicknesses and die at an early age. This is why mosquitoes need to be studied to be able to make anti - viruses and other cures. This is where this study comes in. This study can also be used if students need mosquitoes in their projects or other school activities involving mosquitoes. Other people may also use this study if they want to lure mosquitoes away from their homes to avoid getting bitten.

At first, the researcher thought that this study would be worthless and would not be able to help the daily lives of people. But when the researcher thought of other researchers who didn't want any hassle in luring mosquitoes for their study, the students who needed mosquitoes for school activities, and those who are bitten everyday by mosquitoes, it made the researcher continue the study.

This study will help people through helping researchers lure mosquitoes for studies for new anti - viruses and cures or other studies. It can also help students who need mosquitoes for school projects and other affairs. It can also help people who want to lure mosquitoes away from their homes.

STATEMENT OF THE PROBLEM

The researcher aims to answer the following questions:

- Is the mixture of sunflower (*Helianthus annuus*) oil and pure, fresh orange (*Citrus sinensis*) juice effective in attracting mosquitoes?
- Is sunflower

(*Helianthus annuus*) oil a convenient ingredient in this study? • Is pure, fresh orange (*Citrus sinensis*) juice a convenient ingredient in this study?

HYPOTHESIS

There is no significant difference in using sunflower (*Helianthus annuus*) oil and pure, fresh orange (*Citrus sinensis*) juice as an attractant of mosquitoes.

SIGNIFICANCE OF THE STUDY

ingredient in this study?

SCOPE AND LIMITATIONS

The study conducted is to test whether the mixture of sunflower (*Helianthus annuus*) oil and pure, fresh orange (*Citrus sinensis*) juice will be able to attract mosquitoes. It will be conducted at Pia Angelica Solon Cinco's house with a duration of 3 - 4 days.

DEFINITION OF TERMS

REVIEW OF RELATED LITERATURE

Sunflower (*Helianthus annuus*) oil is the non - volatile oil compressed from sunflower seeds. It is mainly a triglyceride. It consists of 4 - 9 % Palmitic acid, 1 - 7 % Stearic acid, 14 - 40 % Oleic acid, and 48 - 74 % Linoleic acid. It is liquid at room temperature. The refined oil is clear and slightly amber - colored with a slightly fatty odor. Its refined smoke point is 232 degrees Celsius or 450 degrees Fahrenheit while its unrefined smoke point is 107 degrees Celsius or 225 degrees Fahrenheit. Its density is 918. 8 kg/m³ and its unrefined viscosity is 0. 04914 kg/ (M*S).

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Mosquitoes are parasites. They suck blood from mammals because they are attracted to them. What attracts them is CO₂. But that alone is not enough to attract them. Lactic acid also attracts them. Sometimes, it is used in mosquito traps. Octenol is an attractant and is a type of alcohol which is released along with CO₂ while respiration occurs. It is a remarkable lure for mosquitoes because they can smell this chemical about 100 feet away. Body heat is another option and is radiated by humans and animals when blood circulates. Moisture can attract mosquitoes too. During breathing, people exhale water vapor and perspiration is produced through active movement. Very small amounts of water can attract many mosquitoes because it is a possible source of blood or possible breeding site. Movement is not an exception. Mosquitoes can see their victims from within 30 feet by locating the changes in light waves, caused by moving objects. Color will also attract them. They are attracted to dark colors.

Orange juice is a common beverage to people. Fresh juice that amounts to 248 grams or 8 ounces, contains 124 mg of Vitamin C. It also contains 20.8 grams of sugars and 112 calories. It supplies Potassium, Thiamine, and Folate. It contains flavonoids and antioxidant hesperidin. It has a typical pH of 3.5.

METHODOLOGY

A. Research Design

This study will use Randomized Block Design.

B. Materials and Apparatus

- Any black cup that could contain liquid
 - Any kind of sunflower (*Helianthus annuus*) oil
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- Pure, fresh orange (*Citrus sinensis*) juice
- Any heating apparatus
- Heatable container
- Any open space within a 50 - foot range from any mosquito breeding site

C. Procedure

First, the researcher pours the sunflower (*Helianthus annuus*) oil and the orange (*Citrus sinensis*) juice in the heatable container. Then, the researcher heats it using the heating apparatus until it reaches 37 degrees Celsius. Then, the researcher takes the container from the heating apparatus and pours the contents into the black cup. Then, the researcher takes the black cup to any open space within a 50 - foot range from any mosquito breeding site. Then, the researcher waits for three days. In that span of time, the researcher makes sure to reheat the liquids at 5: 00 am and 5: 00 pm everyday.

D. Schematic Diagram

E. Data Gathering

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