

SOP for Preparation of Sugar Soaked Cotton Wool

Experimental hut trials

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Purpose: Preparation of “sugar soaked cotton wool” for feeding adult mosquitoes in holding cages or during transportation.

Appendix: FORM AVECNET EH 003.01

Definitions

HFCS High Fructose Corn Syrup
PI Principal investigator
WHO World Health Organization

Scope

This document is applicable to all staff whose duties include preparation and use of “sugar soaked cotton wool” for feeding to adult mosquitoes.

Responsibilities

1. It is the responsibility of the individuals preparing “sugar soaked cotton wool” to follow this SOP AVECNET EH 003.01.
2. It is the responsibility of the PI to ensure that the correct version of this SOP is in place at the study site and correct training has been given to all personnel that use this SOP.
3. It is the responsibility of all scientific staff to ensure that this SOP is correctly followed.

Instructions

1. Safety and precautions

- 1.1. Inspect the sprayer tank for damage and make sure sprayer hoses, regulator, lance and nozzle are clean and functioning properly.
- 1.2. Never point the spray lance in the direction of people or animals.

2. Equipment

- 2.1. Clean glass or plastic bottle (e.g. 1 litre, screw top)
- 2.2. “Sugar” source for feeding to mosquitoes. High Fructose Corn Syrup, (HFCS) is recommended, but granulated sugar or honey may also be used.
- 2.3. Measuring cylinder (approx. 200 ml) or balance and weighing dish (depending upon whether using liquid “sugar” source or crystalline sugar).
- 2.4. Clean paper towel
- 2.5. Distilled water
- 2.6. Cotton wool (natural cotton, new cotton wool balls are preferred)
- 2.7. Laboratory grade disposable gloves (e.g. latex, NDex or equivalent)
- 2.8. Marker pen

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2.9. Data record sheets (FORM AVECNET EH 003.01)

3. Procedure

3.1. Preparation

For 1 litre, 10% sugar solution

- 3.1.1. Measure/weigh either 100 g or 100 ml of sugar source (10%). Using either the measuring cylinder or balance.
- 3.1.2. Transfer the sugar source to the clean bottle.
- 3.1.3. Make up to 1 litre using distilled water. (It may be necessary to use some of the clean distilled water to remove the entire sugar source from the measuring cylinder/weighing dish.)
- 3.1.4. Screw the lid onto the bottle and shake so as to ensure the sugar source is completely diluted/mixed into the solution.
- 3.1.5. Label and date the bottle as appropriate.
- 3.1.6. Store in a standard laboratory refrigerator.
- 3.1.7. Prior to use, remove from the refrigerator and allow standing at room temperature for 10-15 minutes.

3.2. Method

- 3.2.1. Put on a new pair of laboratory gloves.
- 3.2.2. Take a handful of cotton wool balls (or rough square of cotton wool approx. 3 cm x 3 cm) and hold them palm upwards in one hand over a sink.
- 3.2.3. Pour the 10% sugar solution over the cotton wool balls until they are all soaked with the solution.
- 3.2.4. Squeeze the soaked cotton wool balls to remove all excess liquid.
- 3.2.5. Place the cotton wool balls onto a sheet of paper towel.
- 3.2.6. Roll up the paper towel so that the cotton wool balls are held within it.
- 3.2.7. Squeeze the paper towel with the cotton wool balls to remove further liquid.
- 3.2.8. Un-roll the paper towel.
- 3.2.9. The cotton wool balls should be damp with sugar solution.
- 3.2.10. Wrap these cotton wool balls in a fresh piece of paper towel prior to use.

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