VERSION 2

FEB 27, 2023

OPEN ACCESS

DOI:
dx.doi.org/10.17504/protocols.io.b5m7q49n

External link:
https://doi.org/https://doi.org/10.5281/zenodo.6525408

Collection Citation: Erika Santamaria, Paola Muñoz, Catalina Marceló 2023. Indoor active search for adult Aedes sp. and Culex sp. mosquitoes. **protocols.io** https://dx.doi.org/10.17504/protocols.io.b5m7q49nVersion created by CATALINA MARCELO DIAZ

MANUSCRIPT CITATION:
Marceló-Díaz C, Morales CA, Lesmes MC, Fuya P, Mendez SA, Cadena H, Ávila-Díaz A, Santamaria E,
Arbovirus vectors in municipalities with a high risk of dengue in Cauca, Southwestern Colombia. GigaByte doi: https://doi.org/10.5281/zenodo.6525408

Indoor active search for adult Aedes sp. and Culex sp. mosquitoes V.2

Erika Santamaria[1], Paola Muñoz[1], Catalina Marceló[1]

[1]Instituto Nacional de Salud (Bogotá, Colombia)

C CATALINA MARCELO DIAZ

ABSTRACT

This protocol details the indoor active search carried out in the research project: "Spatial stratification of dengue based on the identification of risk factors: a pilot trial in Cauca, Colombia"

Previous studies have reported that, indoors, adult *Aedes aegypti* mosquitoes rest on surfaces such as walls and furniture and generally at a height of less than 1.5 m (Dzul-Manzanilla et al., 2016 & Chadee, 2013). The use of electromechanical aspirators such as the Prokopack aspirator has also been reported (Vazquez-Prokopec *et al.*, 2009) which allows for a relatively easy collection of resting mosquitoes.

STEPS:

1) Mosquito collection: Adult mosquitoes will be captured with the Prokopack aspirator at potential resting places inside the dwellings (walls, curtains, behind furniture, behind pictures, behind TV sets, under beds), between 08:00:00 AM and 05:00:00 PM. Collection shall be carried out for 10-15 minutes inside the household (bedrooms and living rooms).

As information of interest for the sampling, most of the houses in the urban areas of Piamonte, Patía and Miranda, Cauca are one-storey houses, but there are also houses with two or even three floors. The walls are generally made of brick plus plaster (a mixture to cover a wall), the roof is made of clay tiles and the floors are made of cement; however, there are more precarious dwellings built with wood walls and roofs (Alcaldía de Patía, 2016).

2) In each household, an e-form designed using ArcGIS 10.8 will be completed with data on the location of the household, predominant construction materials and the results of entomological sampling for adults.

Protocol status: Working

Created: Feb 25, 2022

Last Modified: Feb 27, 2023

COLLECTION integer ID: 58783

Keywords: Cauca, Aedes, Culex

3) Storage of mosquitoes: Collected mosquitoes can be immobilised with chloroform vapour (by placing them Prokopack collection bottle in a plastic bag with cotton wool soaked in chloroform).

4) Mosquitoes should be stored carefully and kept cold at 4 °C until identification. The vials shall be labelled with the main data such as locality code, house code and date of collection.

4) Pooling: Collected females identified as *Ae. aegypti* will be pooled in pools of a maximum of 10 adult female mosquitoes per 0.2 mL vial with buffer RNA Later® (Dos-reis et al., 2019). The cold chain will be maintained until reaching the INS Entomology Laboratory for subsequent RNA extraction (Pérez-Castro *et al.*¸2016 & Pham *et al.*, 2017).

IMAGE ATTRIBUTION

Grupo de Entomología, Dirección Redes en Salud Pública - Instituto Nacional de Salud

MATERIALS

- Prokopack® entomological aspirator
- Small Ziploc® bags
- Masking tape
- Stereoscope
- Fine-tipped permanent marker
- Parafilm
- Entomological tweezers
- Pasteur pipettes
- Solution: RNA Later® RNA
- Vials 5 ml
- Vials 1.5 ml
- Vials 0.2 ml

FILES