BATTERY-POWERED MOSQUITO AND SAND FLY ASPIRATOR

MODEL 419

Instructions

Background

The Battery-Powered Mosquito and San Fly Aspirator Model 419 can be used to move mosquitoes and sand flies between cages in the laboratory; it can be used in field collections and to conduct human landing rate counts in the field. Suction is provided by two cooling fans which operate at 5-6 VDC. Three 7-dram vials fitted with fine mesh stainless steel cloth for air flow and snap-on lids are included with the aspirator. The polycarbonate intake tube is 8 inches long with an ID of 0.375 inches (see Fig. 1). The aspirator comes with a waterproof battery case and will require four alkaline AA batteries (see Fig 2). The aspirator also includes (see Fig. 3) a set of alligator leads so the unit can be powered using any size or

Figure 1. Aspirator and vials with intake tube.

Figure 2. Waterproof battery box and connecting power cord.

type of 6-volt battery, e.g., our 6 VDC 12 Amp Hr gel cell (PN: 2.30) or our waterproof 4 D-Cell Battery Holder (PN: 1.50). Also included is an extension cord and a universal power supply (wall adaptor) that can operate on 100-240 VAC and 50/60 Hz mains. All connectors are either male or female 5.5/2.1 mm barrel connectors.

The intake velocity of the aspirator is ca. 4.8 and 6.2 m/sec., respectively for one or both fans running.

Figure 3. The items are from top to bottom: a. insulated alligator clips to permit the use of any six-volt battery, b. 100-240 AVC/ 50-60 Hz adapter, and c. an extension cord that can be used to extend the distance betsween battery and/or adapter and the aspirator. All concections are barrel connectors, 5.1 by 2.1*mm*.

Operation

Using the aspirator is as simple as connecting a power source and inserting a screened vial with a snap-on lid and probe into the aspirator housing. You can put the ca. 2-m long extension cord to give you more latitude in the placement of the power supply. Using the 3-way toggle switch on the side of the aspirator, turn the aspirator on for either one or both fans and begin aspirating adult mosquitoes; The toggle switch positions are **ON** (1 fan)—**OFF—ON** (2 fans). When the vial contains the number of adults desired, leave the fan running while you remove the snap-on lid with the probe and snap onto the vial still mounted in the running aspirator. Once the cap is in place you turn off the aspirator and remove the vial. The power adapter is an alternate source of aspirator power; the input voltage can range between 100 and 240 VAC, 50/60 Hz and 0.6 A. Output is 5.9 VDC at a rate of 1.8 A.