



CDC WILTON TRAP-- MODEL 1912

Instructions

Description

The **CDC Wilton Trap, Model 1912** is a daytime trap which is quite specific for *Aedes aegypti*, *Aedes albopictus*, and *Culex quinquefasciatus* adults of both sexes; it will capture gravid and nulliparous females. In his report describing this trap, Dr. Wilton said his *black cylinder suction trap* was especially useful for the capture of males. The trap was designed and field tested by Dr. Wilton while at the U. S. Public Health Service. The design is based on the attraction of a glossy black surface; the catch can be enhanced by using dry ice.¹ The black cylinder contains a collection cup with a stainless steel screen bottom. The collection cup is upstream of the fan and as a result, the specimen are never damaged by passage through the fan blades.

Operational Details

Trap Location

Trap location is critical with the **CDC Wilton Trap**. As *Ae. aegypti* and *Ae. albopictus* are not powerful fliers, probably not moving more than a few hundred feet per day, traps must be located in the proximity of suspected breeding areas. Because *Ae. aegypti* is a semi-domestic mosquito, breeding almost exclusively in artificial containers in and around human habitation, when collecting this species, traps should be placed to the rear or between buildings where collections of such containers are likely to be found. Areas protected from the wind are to be preferred and placing the trap about 3 feet (1 m) above the ground is ideal. When collecting around tire piles, locations near vegetation are preferred over locations out in the open and in full sunlight.

¹ We make an inexpensive and very serviceable **Insulated Dry Ice Container** (PN 1.10). The CDC Wilton Trap is suspended below the dry ice container with hardware supplied with the container.

Operational Details, cont'd.

Electrical

1. **Model 1912** requires ca. 0.185 Amps (185 mAmps) per hour to operate at 6.0 - 6.3 volts DC. Four D-size flashlight batteries (preferably alkaline) in series will provide power for a minimum of 1 day of operation.² A better source of power are sealed gel-cell batteries as they do not leak and do not require the care in charging that NiCad batteries do. The trap can be operated at any voltage between 6 and 9 VDC. A 50 Ω /10-wt resistor (available from us at no charge) in series with the motor will reduce the output of a 12 volt battery to approximately 6 volts. You can estimate the maximum run time for a fully-charged and new battery by dividing the amp-hr rating by the consumption (ca. 0.185 amps/hr); older batteries, even though fully charged will provide substantially less time. A battery capacity of 4 to 6 amp-hrs is a minimum size for this trap.²

2. As DC motors reverse their direction of rotation with voltage polarity changes, the battery leads are coded: the red or copper lead goes to the (+) and the black or tinned lead goes to the (-) terminals on the battery. The battery clips are removable on most versions to allow connection to the spade terminals found on many sealed, rechargeable batteries.

Useful References

Fay, Richard W. and William H. Prince. 1970. A modified visual trap for *Aedes aegypti*. Mosquito News 30: 20-23.

Service, M. W. 1977. Mosquito Ecology- Field Sampling Methods. John Wiley and Sons. New York, New York.

Wilton, D. P. 1985. Preliminary evaluation of a black cylinder suction trap for *Aedes aegypti* and *Culex quinquefasciatus* (Diptera: Culicidae). J. Med. Entomol. 22: 113-114.

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² A weather-resistant D-cell battery holder is available for this trap (*4-D Cell Battery Holder*, PN 1.50). Suggested gel-cell battery and chargers for this trap is the *Battery AB 6 V-10 AmpHr* (PN 2.30) and *Charger 2.90-6V-110* (automatic charger for one 6 Volt battery, input voltage of 110 AC) or *Charger 2.88-6V-110* (automatic charger for two 6 Volt batteries, input voltage of 110 AC). See web for 220VAC.