



## **CDC GRAVID TRAP — MODEL 1712**

### *Instructions*

The CDC Gravid Trap was designed by Dr. Paul Reiter of the Centers for Disease Control, Division of Vector-Borne Disease for the selective capture of gravid *Culex* mosquitoes. By limiting captures to this class of females, problems associated with calculation of minimum virus infection rates were reduced. The trap attracts females by means of an oviposition medium contained in a pan below the trap. The trap operates by creating an upward current of air from within the confines of the pan, so that the mosquitoes are blown into the collection bag during their pre-oviposition examination of the oviposition medium.

#### **Operational Details**

##### *Trap set up*

The unit consisting of the aluminum supports and plastic tube containing the suction motor is placed on the rim of the pan with the shorter tube without the large holes in the sides protruding downward (see figure). Next, slip the collection bag over the upright tube and slide the sleeve downwards towards the aluminum supports until the "bottom" of the bag is resting on the top end of the trap as shown. The final step, after adding the oviposition medium described below, is to connect the trap to a 6 volt DC source, being careful to observe correct polarity (see below).

##### *The oviposition attractant and site selection*

The hay infusion is made by adding 1 lb (0.5 kg) of hay to 30 gal (114 liters) of tap water, and allowing the infusion to incubate for 5 days. The trap is placed at the desired collection site at least 1 hr before sunset and the pan is filled with 1 gal (4 liters) of infusion solution. Captured mosquitoes are removed early the following morning to ensure maximum survival of the insects and any virus that may be present. New medium is used each night.



**Figure 1. The CDC Gravid Trap with a 6 Volt, 10 AmpHr battery.**

## ***Electrical Requirements***

### *Voltage, current, batteries, and run times*

The CDC Gravid Trap—Model 1712 requires ca. 0.125 Amp per hour to operate at 6.0 – 6.3 VDC. Four D size flashlight batteries (preferably alkaline) in series will provide power for several nights' of operation (optionally available: External 4D-Cell Battery Holder - Part No. 1.50). A better source of power is a sealed gel-cell battery; they do not leak and do not require the care in charging that nicad batteries do. Our AB Battery (6 VDC 10 AmpHr) will operate the trap for about 72 hours without recharging. You can estimate the maximum run time for a fully charged and new battery by dividing the amp hr rating of the battery by the consumption (ca. 0.125 Amps/Hr of the trap; older batteries, even though fully charged, will provide substantially less time.

### *Battery polarity*

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 our sealed, rechargeable gel-cell batteries.

## **Useful References**

- Reiter, Paul. 1983. A portable, battery powered trap for collecting gravid Culex mosquitoes. Mosquito News 43:496-498.
- Service, M. W. 1977. Mosquito Ecology Field Sampling Methods. John Wiley and Sons. New York.