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Simplified Protocol for Efficacy Trials for Altosid XR Briquets in Catch Basins

The purpose of this protocol is to provide a simplified way in which to meet the requirements set by Rutgers University in the 2005 recommendations, which carry the force of law. The recommendations allow for the use of Altosid XR, but with the caveat that a protocol be followed to evaluate the effectiveness (efficacy) of the application throughout the season. The application and evaluation process is as follows:

APPLICATION METHOD

1. Wear appropriate PPE. Unlined rubber gloves are recommended for general pesticide handling.
2. Apply briquets to basins, especially those of the design that habitually hold water. These are generally (but not always) found in older neighborhoods and parks where the basin design includes a sump that collects water and debris. The application rate is one briquet per basin (up to 100 sq. ft., 0-2 ft. deep). If possible, avoid breaking or crushing the briquet during the application.
3. Record the location of at least some of the treated basins on a map. At a minimum, record the locations by street intersection of at least 30 treated basins so that they can be re-visited for periodic sampling. A dab of spray paint in the grate of treated basins will also make it easier to locate them.

EVALUATION METHOD

1. After pupae appear, collect and count 25-100 pupae from a minimum of 10 treated basins, and record the number of pupae collected. Try to exclude larvae, but make sure to include an adequate amount of water from the source for transfer into emergence cages. Samples should be kept cool until returned to the lab for processing. Samples must be taken a minimum of once every three weeks.
2. Place the pupae and water from each plot into a BioQuip "Breeding Cage" or similar funnel-shaped emergence-type cage. Observe cages daily to note the progress of mosquito emergence.
3. When adult mosquito emergence is complete, count and record the number of dead pupae (DP), dead adults (DA) on the water surface, and live adults (AA) in each container.
4. Calculate % of Emergence Inhibition (% E.I. = % Control) for each container (plot) using the formula:

$$\% \text{ E.I.} = \frac{(\text{DP} + \text{DA})}{(\text{DP} + \text{DA} + \text{AA})} \times 100$$

5. Continue monitoring plots until control falls below acceptable levels, e.g., <60%.