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Burkard - Knockdown Chamber



Standard equipment

- Double door chamber assembly including spray port plugs
- Inlet shutter
- Atomizers with tubing
- Atomizer reservoirs
- Insect cages

Descriptions:-

For evaluating fly sprays based on the technique described in Soap and Sanitary Chemicals (Feb 1943) Vol 19; p101-104, 128, with certain modifications.

The dosage for mortality test is 0.2ml per sprayer (total 0.4ml). The percentage mortality obtained with the official test insecticide at a dosage of 0.4ml should be between 30 percent and 55 percent. Under different conditions of fly breeding and testing it might be necessary to vary the dosage in order to obtain kills within this range.

A suitable atomizer position will be determined during test spraying once the chamber has been set up and calibrated to deliver 1ml in 4.5 +/- 0.2sec with an air pressure of 12.5psi (pounds per square inch). Each sprayer has been factory calibrated and should not need attention. The atomizers are connected to the common air supply using the silicon rubber tubing and 'T' connector. The glass cylinder is 12 inches (approx. 25cms) in diameter and 24inches (approx. 50cms) in length with Aluminium end plates hinged to open. The atomizers are made of brass with adjustable liquid and air jets. These are easier to calibrate and clean than glass atomizers and are less liable to breakage.

The atomizer spray head can be easily disassembled for cleaning but care should be taken when removing particles from the jet plate. Do not clear obstructions from the jet using wire or any implement that could distort or change the size of the hole. Each jet plate is located by 2 screws and positioned with dowel pins to ensure correct relocation. Obstructions can be removed by immersing the atomizer in a solvent and removing the chemical pick-up tube and air inlet tube. By removing the small screw at the coned end and the jet plate all passages can be cleared with compressed air. The atomizers are controlled by a solenoid valve and programmable timer unit. Selectable spray periods give reproducible effects once the chamber has been set up and calibrated.

Insects for test are transferred into the sample net which is assembled to the loading position on the chamber door. Prior to spraying the insects are released in to the chamber via the rise and fall aperture. Satisfactory operation of the Knockdown Chamber requires the use of an air compressor capable of delivering low pressures up to 15psi with an output control valve to maintain a constant 12.5psi. Apart from an external light source the chamber is complete and ready for immediate use.