

the block, it provides a dry barrier which keeps the larvae on the block where they can easily be retrieved. Those few which do cross the barrier can usually be retrieved from the medium in the petri dish. The newly hatched larvae usually do not burrow for the first half hour after hatching and if they do, they can easily be seen in the semi transparent medium. All larvae are removed during each observation period and empty egg cases are also counted and removed to insure that all newly hatched larvae have been accounted for. It is possible by this method to watch several hundred eggs continuously and collect the larvae as they hatch. If a small interval between observations is permissible, many more blocks of eggs can be observed. The black tape cannot be replaced by cardboard or paper since these materials will curl when they come in contact with the moist agar. (Work supported by Public Health Service Research Grant GM11084, from the National Institute of General Medical Sciences.)

Corwin, H. O. and P. D. DeMarco. University of Pittsburgh, Pittsburgh, Pennsylvania. Technique for feeding chemical mutagens to adult *Drosophila*.

Adult male *Drosophila* do not survive multiple injections of chemical mutagens. In experiments where more than one mutagen is to be introduced into the adult fly at separate time intervals, feeding is necessary. The agent to be introduced

must be dissolved in a medium that will stimulate fly feeding but will not induce chemical or physical alterations in the agent. The quantity and type of filter paper placed at the bottom of the shell vial, which acts as a reservoir for the mutagen solution, is also important. It must be sufficiently absorbent to remain moist, but it must not retain an excessive amount of solution or else the flies will drown. An additional problem was encountered during feeding experiments. Plugs had to be removed and replaced in the feeding vials every time new solution was added. Flies were often lost or squashed between the cotton plug and the side of the vial during the above process. The following method, adapted from the feeding technique introduced by Pelecanos and Alderson (DIS 37:116, 1963), is designed to solve the above problems.

Different concentrations of chemical mutagens were fed to Canton-S wild type males. The adult males had been aged 12-24 hours. The various concentrations of mutagens were dissolved in a 5% glucose solution. Groups of ten male flies were treated in 20 dram shell vials. The bottom of each vial was lined with three thicknesses of Whatman filter paper #3 cut to the diameter of the vials. A pasteur pipette, inserted through the cotton plug until it touched the filter paper, served as a permanent delivery tube for the different treatment solutions. This arrangement allowed for the addition of fresh solutions without the removal of the cotton plug. After the initial saturation of the filter paper, only five drops of solution every ten to twelve hours were required to keep the filter paper moist. A single agent was administered over a 48 hour period. When two agents were administered, the simple glucose medium sustained the male flies over the total 96 hour feeding period and no decrease in progeny production per male was noted following this treatment. The treated males were then tested for specific visible mutations induced at the dumpy locus. All agents fed by means of this above technique demonstrated mutation frequencies equal to or exceeding those frequencies obtained when these same agents were introduced by means of the injection technique.

Mittler, S. Northern Illinois University, DeKalb, Illinois. A rapid method for removing and discarding adult *Drosophila*.

For several years we have used with much success a small portable tank vacuum cleaner to remove and discard flies from bottles prior to collecting virgins. The open end of the bottle is tapped at a 45° angle on to a rubber mat about an inch

from the end of the vacuum tube. The tube is not inserted into the bottle because air rushing in along the sides will cause some *Drosophila* to stick to the food. The cleaning attachment on the end of the flexible tube is not used, and of course, the opening is plugged after use.