When preparing for shipment, the vials should preferably be laid on their sides in the shipping container and should be wrapped and padded with newspaper.

White blotting paper can be substituted for the chromatography paper but in our experience residual impurities in the paper, apparently localized to limited areas, cause a small percentage of the vials to become poisonous to the flies due to the release of the noxious materials as a result of the autoclaving.

[1]Visiting Colleague, University of Hawaii, July to December, 1964; Guest Investigator, University of Texas, December, 1964 to June, 1965.

[2]Supported in part by grants GB-711 (NSF) and GM 10640-03 (NIH).

Wrathall, C. Richard and E. W. Hanly. University of Utah. Another plug for culture vials.

We have found in this laboratory that large rayon balls, purchased from Kendall Co., Fiber Products Division, Walpole, Massachusetts, 02081 (No. 6898, size 580) make very successful plugs for the commercially available 8 dram shell vials. Their cost is low (5.00/2000), they fit perfectly into the vial (time saving) and retain their color and resiliency after many autoclavings.

Mellett, J. S. Iona College. Plastic beakers for culturing Drosophila.

Any workers (particularly those dealing with undergraduates in genetics laboratory courses) dissatisfied with the traditional glass bottle method of culturing Drosophila might be interested in the disposable "Multi-pour" beakers currently being marketed by Clay-Adams Inc., 141 E. 25th St., New York, N. Y., 10010. They are available in four sizes (50, 100, 250, and 400 ml), each with a tight fitting cardboard cap, on which a mass of information can be recorded. While probably all are suitable for Drosophila genetics work, I have found the 100 ml size the best for student experiments. (Fig. 1).

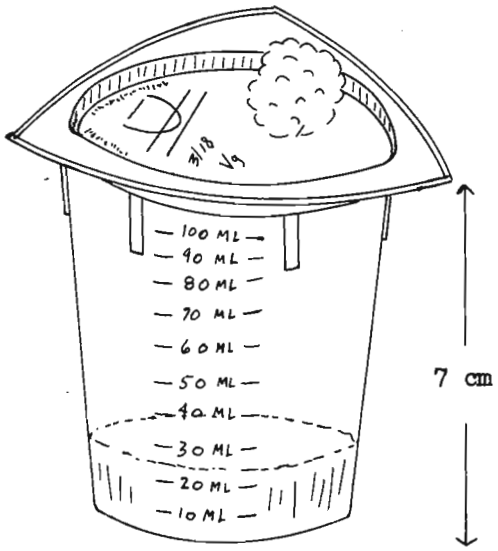

Fig. 1 Clay-Adams 100 ml "Multi-pour" beaker

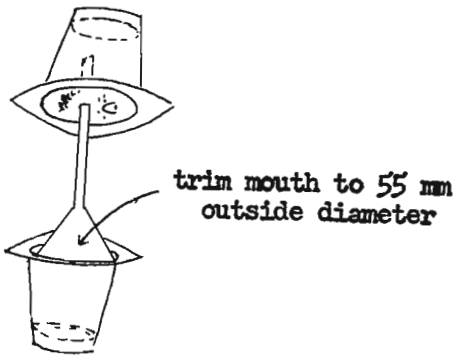

Fig. 2 Transfer method using polyethylene funnel

The beakers are composed of resistant, unbreakable polypropylene plastic, are graduated and can be subjected to repeated autoclaving without risk of melting. (Unless you actually prefer to discard them after one using).

While the narrow necked glass bottles are difficult to clean thoroughly even with a brush, the plastic beakers can be easily wiped out with a sponge. Because the beakers taper from top to bottom, when not in use they can be nested, one inside the other and stored in a very small area; six nested beakers take up slightly more volume than a single half-pint cream bottle.

Drosophila flies thrive on 20-25 ml of culture medium, which means that 2-3 plastic beakers can be filled with the same amount of food usually required for one glass bottle. Each beaker can be expected to produce anywhere from 200-400 flies, which is a respectable sample.

One note of caution must be made with regard to the cardboard caps--they are lined with a thin layer of plastic and cannot be used as is, since diffusion will not occur through them. The problem can be eliminated however by making a 1/4 inch hole in the cap (using an ordinary paper punch or pencil point) and stuffing it with a small tuft of cotton. Cultures of flies can be maintained in the beakers for well over a month if necessary once this modification is made. The hole in the cap also allows one to make transfers of flies from one beaker to another by using plastic funnels with mouths trimmed to fit the inside of the beakers. (Fig. 2).

I have found the standard glass bottles still useful in the laboratory for stock cultures of Drosophila strains; they are easily identified as such and are less likely to be misplaced or labeled incorrectly by students or personnel unfamiliar with laboratory procedures. By some coincidence, the mouth of the half-pint cream bottle fits perfectly just inside the opening of the 100 ml beaker, making reciprocal transfers of flies a trouble free procedure

One minor disadvantage of the beakers is that they are not as clear as glass, although they are certainly transparent enough to enable one to sex flies and recognize the common mutants at a glance.

The beakers are sold in boxes of 100 (catalog no. A 3600) and cost about eight cents apiece. Caps are packaged 500 per box (catalog no. A 3608 B) and cost about a penny each.

Anderson, R., Maureen Hancock, and Walter J. Burdette. University of Utah College of Medicine. A simple method for ligating and injecting Drosophila larvae.

A hole is made with the tip of a dissecting needle in the center of a one inch square of rubber cut from (discarded) surgical gloves. The larva is inserted at the desired segment through this small hole. The rubber is stretched enough to make the hole large enough and the larva is inserted with the tip of a brush. The tension on the rubber is then released and the ligature is complete. This is easily done under a dissecting microscope.

For injections, a 30 guage needle with a standard hub on a 0.25 ml. disposable plastic syringe with polystyrene plunger is used (B-D Hypack, Discardit). This type of plunger is preferred because it eliminates backwash of materials. If available needles are too long, they may be cut so they are one quarter of an inch long and then resharpened. This assembly is attached to a microburet (model SB 2 Micrometric Instrument Co., Cleveland, Ohio). The caudal tip of the ligated abdomen may be left intact or snipped off with scissors, using the open end of the skin as a guide. The larva is then placed on the needle so that the needle passes through the ligature. A precalibrated dose is injected and the larvae is removed by sliding the rubber with the larva off the needle. The rubber hole will close as it is removed from the needle, preventing any backwash of material. The larva is then placed cutside down on a damp piece of filter paper in a large Petri dish. If the larva has been injured it will turn black at the point of injury. With experience, they are seldom injured and third-instar larvae will pupate.