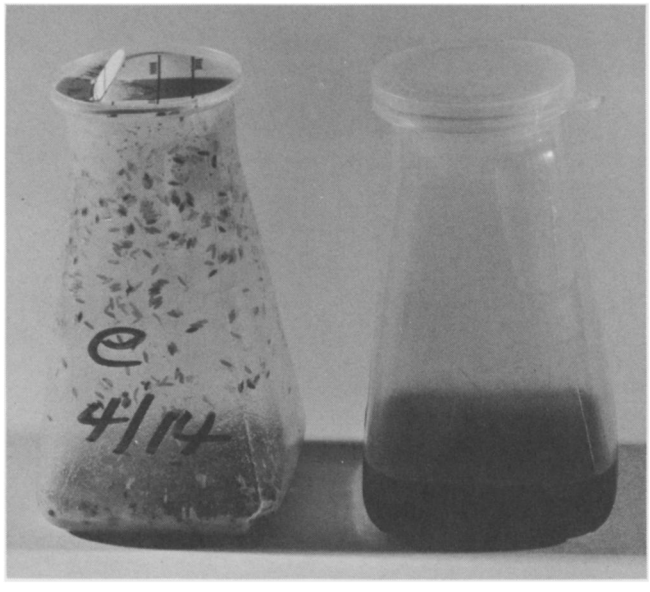
Disposable Bottles for Fruit-Fly Cultures

The once-familiar half-pint milk bottle has through the years served another function, that of a container for cultures of fruit flies, *Drosophila* sp. Recently the use of other kinds of containers for milk has made it difficult to find commercial supplies of glass bottles. We have found an adequate substitute; and it has a few advantages of its own.

The bottle we have used is a disposable urine-specimen bottle sold under the name "diSPo bottle" by Scientific Products, Evanston, Ill. In the accompanying figure the bottle on the left is in use for raising *Drosophila* and the one on the right is in use as a morgue for disposal of flies. The bottle, of polyethylene, has a round top, square bottom, and tapered sides. Two lids are available: a cardboard one, which we use in raising flies, and a plastic one, which we use on the morgue. Capacity is slightly less than that of the traditional glass bottle—6 oz. as against 8 oz.—but adequate for most purposes. A commonly used plastic etherizer, with a maximum outer diameter of the funnel of 42 mm, fits snugly onto the top of the disposable bottle.

The cost and the nature of the bottle is such that it can be incinerated after use. One disadvantage is that the flies cannot be seen as clearly as through glass; however, the larvae, pupae, and adults are distinguishable, so the poorer visibility has been found to be less of a disadvantage than was anticipated.

The disposable urine bottle has several other advantages. One is that sterilization is not required. This may be especially important in the laboratories of high schools and small colleges that do not have an autoclave, space to keep a large inventory, or labor to clean bottles. Another advantage is that if cultures become contaminated with mold or other organisms the flies and bottles can be safely disposed of without recourse to an autoclave.



Disposable urine-specimen bottles as **Drosophila** containers.

We have also found these bottles useful in rapid "gearing up" for a single experiment in a large introductory-biology course and in cleaning up afterwards.

Other, minor advantages are that the bottles do not break if they must be banged on soapstone desks to shake down the flies, and that the tapered walls of the bottle assist in retention of the media when flies are being shaken into an etherizer. Students can also take the bottles home, if desired—a policy not possible with the irreplaceable glass bottles.

Disposable plastic vials have advantages similar to those of the disposable bottles, except for possible higher price and smaller size. The disposable bottles are less easily tipped over, and if this happens they will not roll. Readers might also wish to consider the more ingenious system described by L. L. Arnold II ("Breeding *Drosophila* in Disposable Paper Containers," *American Biology Teacher* 19 [8]: 248–251). This would have particular advantages for raising large cultures and for observing flies microscopically without removing them from the culture. However, the paper containers might not work as well with instant media, and this would be a disadvantage in small laboratories that do not wish to stock ingredients for cornmeal-containing media.

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Preparing Herps Skeletons

In carrying out comparative osteologic and paleontologic work with reptiles and some amphibians one is frequently faced with the need to prepare skeletons from old formalin-preserved specimens that have either been stored in formalin or alcohol solutions.

To prepare ligamentous skeletons the specimens are first placed in hot detergent solution for three to four hours or in a warm enzyme laundry presoak, such at Biz, for several hours. The muscles are then removed, using forceps, and the skeletal materials are placed in weak Clorox solutions until the articulating materials at the joints are almost dissolved. The process can be speeded by alternately drying and submerging in Clorox. The skeleton is then washed in fresh water, pinned out, and dried.

If a disarticulated skeleton is desired the initial softening soak may be extended for several days and ammonia water may also be used as the softening agent; or the Clorox may be allowed to act for longer time-periods.

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