

Kaplan, Martin L. Queens College of C.U.N.Y., Flushing, New York. A simple method for collecting and surface-sterilizing eggs from *D. melanogaster*.

The collection and subsequent surface-sterilization of *D. mel.* eggs were facilitated by using black filter paper (S & S #551) and 0.007 inch mesh monel-metal wire cloth (obtained from G. A. Williams & Son Inc., 17 Murray St., N. Y. C.) res-

pectively.

Sterilized, rectangular strips of filter paper (2-1/2" x 5/8") with parallel lines scored at 1/16" intervals along the length of the strip, were moistened with sterile distilled water and placed on the surface of yeasted food media prepared previously in aluminum foil dishes. Eggs were laid along the length of the furrows in the paper thereby permitting rapid counting and collection of relatively yeast-free eggs.

Cleansing and surface-sterilization of eggs was accomplished by placing the harvest into baskets (1/2 in. x 1/2 in. x 1/8 in.) fashioned from monel-metal wire cloth with 0.007 inch spacings. The mesh spaces were small enough to prevent the passage of eggs but large enough to permit newly-hatched larvae to escape onto the substratum. The egg-filled baskets were then transferred through 2 washes of sterile, distilled water, 2 washes of 70% ethanol and finally placed into 70% ethanol for 40 minutes. The baskets were rinsed briefly in sterile distilled water, placed on the surface of petri dishes containing 2% Agar, and incubated for 24 hours at 25 ± 0.5°C.

After incubation the transparent agar plates were examined against a black background using a dissecting scope at 11x and newly-hatched larvae selected for further treatment. The use of agar plates facilitated counts of egg mortality since unhatched eggs in the baskets were clearly visible against the black background. Agar plates showing evidence of contamination were discarded.

In this laboratory, monel-metal baskets also have been used successfully to transport fixed larvae through a dehydration sequence of alcohols as well as paraplast infiltration.

Lewis, E. B. and F. Bacher. California Institute of Technology, Pasadena, California. Method of feeding ethyl methane sulfonate (EMS) to *Drosophila* males.

The alkylating agent, EMS, is remarkably mutagenic when fed to adult *Drosophila* males as first shown by T. Alderson (Nature 207: 164-169). A simple and effective feeding method is described below. In view of the potential hazard of EMS to human beings a description

is also given of special precautions which we take in handling this chemical.

Adult males (collected 0 to 48 hours after emergence) are fed on Kleenex saturated with an 0.025 M solution of EMS in sterile 1% sucrose solution. To prepare 100 ml of this solution, 0.24 ml of EMS (Eastman Organic Chemical; or K and K Laboratories) is taken up in an 0.5 cc hypodermic syringe and injected into 100 ml of a sterile 1% solution of sucrose in distilled water. In order to achieve complete miscibility of EMS in the sucrose solution, the mixture is agitated by aspirating with a 10 cc disposable hypodermic syringe. A single Kleenex is crumpled and pressed to the bottom of a 1/2 pint culture bottle. Nine or ten ml of the 0.025 M EMS solution is taken up in the 10 cc syringe and injected directly onto the Kleenex until the paper is just saturated. Adult males (usually 50 to 100) are then added and the bottle is tightly stoppered with a large wad of cotton. It is important that the males have had time to recover completely from etherization (at least one hour). Males are fed on the EMS solution, usually for 24 hours at 25°C, after which they are shaken into a fresh culture bottle containing the standard food medium. They are then mated to females of suitable tester strains.

The above operations are carried out in a chemical hood. Hands are protected with disposable plastic gloves. Bottles and glassware contaminated with EMS are decontaminated by rinsing with a solution ("MA") containing 0.5% mercaptoacetic acid in 1 M NaOH or KOH. Cotton stoppers, Kleenex, syringes and gloves after decontamination with the MA solution, are discarded. (In these decontamination procedures the amount of the MA solution added should always be sufficient to give a higher concentration of mercaptoacetic acid than that of EMS.)