Félix, R. Programa de Genética y Radiobiología. Comisión Nacional de Energía Nuclear. Mexico City, Mexico. Control of bacterial contamination in Drosophila food medium.

Some of the stock cultures at the laboratory became infected with a bacterial growth which gradually spread to vials and mass experimental bottles causing loss of valuable biological material, in spite of sterilization of glassware and other precautions that were followed in order to avoid the spreading of contamination. The food medium became reddish-brown and a slime exudate was produced on its surface, restraining larval development and killing the adults.

Test cultures were made at the Bacteriology Laboratory in the Faculty of Medicine where the microorganism was identified as a coliform gram-negative bacillus, whose genus was not determined. The antibiogram showed some selective toxicity of tetraclicine and vulcaciclin and the light inhibitory effect of furadantin, furoxona, altafur and chloromycetin against the bacterial growth, while dihydrostretomycin and penicillin showed no effect. Pembritin (ampicillin) and enzimatic melisin were found to have high toxicity against the contamination.

A test was done adding pembritin to the food medium regularly employed at the laboratory. A concentration gradient was assayed in order to determine the minimum requirement of this antibiotic to check the growing of the bacillus. Pembritin was added together with propionic acid and tegosept to the medium when the temperature of it was below 43° C.

The concentration of pembritin (Beecham) 0.065 mg/ml of food has lethal action on the bacteria, while no toxic effect on viability or productivity of Drosophila was detected. After one generation the offspring from the decontaminated flies grown in this medium may be transferred to bottles with regular food without any further problem of contamination. The following allpurpose enriched food formula is recommended to obtain a medium that will not shake out when cool and will not liquefy in old bottles and vial cultures: a liter of distilled water is put to a boil with 15 gr agar, 65 gr sucrose and 25 gr dextrose. After the agar is dissolved, 30 gr brewer's yeast is stirred in and the mixture is boiled for 15 minutes. When the temperature of the medium is below 43° C, 5 ml propionic acid and 5 ml tegosept are added to the mixture. At this stage the medium is quite fluid, and can be poured easily into the sterilized bottles.

Trout, W. E., III. City of Hope Medical Center, Duarte, California. A fly cooler.

To avoid the possible effects of anesthetizing agents on behavior mutants, a simple device was constructed for immobilizing flies by cooling them with ice water and keeping them cool on a plate.

A grocery-store plastic box (with the bottom cut off) about 5x3-1/2x2", a plastic lid 7x5x1/2", and an aluminum plate 5x3-1/2" were assembled as shown, in the shape of a boot, and cemented watertight. In operation, the container is half filled with water and ice. Flies are either pre-cooled for a short time in a freezer, or knocked to the bottom of an empty vial held in the ice-water, until immobilized. After wiping the water off the outside of the vial the flies are poured onto the plate, where they remain quiet for handling, yet quickly recover when returned to room temperature.