

"conditioned lethal" is semilethal with these factors, which are being analyzed as to whether they are simple or complex, and whether they are chromosomal or cytoplasmic.

#### TECHNICAL NOTES

Anders, Georges, and Schmitter, Marco A method of mass investigations in *Drosophila* eggs.

Eggs are collected, dechorionated with sodium hypochlorite, and washed in distilled water, after which they are placed in rows on a glass slide and allowed to adhere by drying. Then they are treated in the

following way:

1. Prick each egg gently with a steel needle and let the exuding content dry.
2. Submerge the slide for several minutes in a dish containing ca. 0.5% collodion in a mixture of equal parts of ether and absolute alcohol.
3. Allow to dry for several seconds and put in 70% alcohol for 5 minutes.
4. Let remain for 10 minutes in distilled water.
5. Transfer the slide to 1 N HCl at 60° for 6 minutes.
6. Wash for several minutes in distilled water.
7. Stain in Feulgen dye for 2 to 3 hours.
8. Wash for 1 hour in running tap water.
9. Run up through alcohols to Euparal.

In order to avoid plasmal reaction the slide may be treated before hydrolysis with 96% alcohol in the usual way. Moreover, after dying, the eggs may be washed with SO<sub>2</sub>-water to prevent staining of cytoplasm. Both treatments we found to be unnecessary for current work. The method is useful for testing fertilization in young eggs and for determination of the stage at which embryos belonging to a lethal genotype die.

Clancy, C. W. "Seeding" cultures with Fleischmann's New Dry Yeast.

I find a saltcellar (shaker) very convenient for distributing the few granules of this material required to properly inoculate a vial or bottle with live yeast.

Green, M. M. Rapid preparation of cornmeal-agar medium.

usual cornmeal-agar medium. A measured amount of water (according to the volume of medium to be prepared) is brought to a boil in the uncovered cooker. The other ingredients--agar, soaked cornmeal, molasses, brewers' yeast, etc.--are added, the cooker is covered, and the material autoclaved for 10 minutes. The resultant medium is ready for pouring. Since the water loss by this procedure is small as compared to the loss during the usual methods of preparing media, the amount of water used is decreased by 10%.

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Herskowitz, Irwin H. Grid-smear technique for electron microscopy of salivary-gland chromosomes.

Several techniques have been described for the preparation of *Drosophila* salivary-gland chromosomes for electron microscopy, employing replicas (casts), stained sections, and stained smears. This note describes a new and very simple technique for such preparations. Full-grown larvae of *D. melanogaster* are placed in 60 per cent acetic acid, and the salivary glands removed. After 10 minutes in this solution the glands are transferred to a 200-mesh nickel grid previously coated with a water-floated

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film of parlodion. Another coated grid is put on top of this, the grids placed between two slides and the glands crushed by thumb pressure. After the squashing, the two grids are separated with a needle and permitted to dry in air for a few minutes. The tissue is then ready for microscopy and remains in excellent condition for months. The grid-smear method is time-saving, permits microscopy of unstained tissues, and eliminates the necessity of subjecting the material to various chemical and physical agents, which might cause distortion in addition to the original fixation.

Herskowitz, Irwin H. and Burdette, Walter J. Preparation of permanent aceto-orcein smears.

Permanent aceto-orcein smears of *Drosophila* salivary-gland chromosomes may be prepared routinely by means of the following technique. Salivary glands are removed from larvae during the third instar after they have been placed in 60% acetic acid. After 10 minutes in this solution the glands are crushed in the usual manner between a slide and a coverslip previously covered lightly with albumen. The coverslip is floated off with the stain, consisting of 2% orcein in 60% acetic acid. Most of the tissue adheres to the coverslip, and contact with the stain is necessary for only a few seconds. The coverslip is then mounted on a clean slide bearing a small drop of light Karo corn syrup. Excess Karo is removed by pressure and the preparation permitted to harden. By covering the margins of the coverslip with Clarite or a similar mounting medium, such preparations are made waterproof.

There are several advantages of this method besides simplicity. The acetic acid induces sharp definition of the bands and, since it is used alone, permits excellent chromosome spreads. The Karo washes away excess stain and leaves the background of the chromosomes clean. Moreover, with simple modifications, this method permits one to retain ordinary preparations for an extended period. Salivary chromosomes are particularly well seen using a 1.25-mm dark M phase objective.

Mittler, Sidney Medium for rearing yeasts that do not require amino acids or vitamins.

was employed:

Agar .....	15 gm	NaCl.....	0.5 gm
C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> .....	30 gm	MnSO <sub>4</sub> .....	0.5 gm
KH <sub>2</sub> PO <sub>4</sub> .....	1 gm	MgSO <sub>4</sub> .....	0.5 gm
NaKC <sub>4</sub> H <sub>4</sub> O <sub>6</sub> .....	8 gm	FeSO <sub>4</sub> .....	0.5 gm
(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> .....	2 gm	H <sub>2</sub> O .....	1000 cc
CaCl <sub>2</sub> .....	0.5 gm		

In attempt to control the nutrition of *D. melanogaster*, yeasts were selected that could grow on a vitamin-amino acid-free medium. The following medium

When this medium is inoculated with a yeast that can live in the absence of vitamins or amino acids, practically all the nutrition obtained by the flies is from the yeast. If one uses a yeast like *Hansenula anomala* NRRL<sup>365</sup> with the above minimal medium at a temperature of 24°C, one has a set of conditions that can be reproduced. With the cornmeal-molasses medium there are probably as many variations possible as there are research workers. In the study of penetrance and expressivity it is of utmost importance to have nutrition as well as temperature under control.

Rosin, S. The position of the wings of killed drosophilae.

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