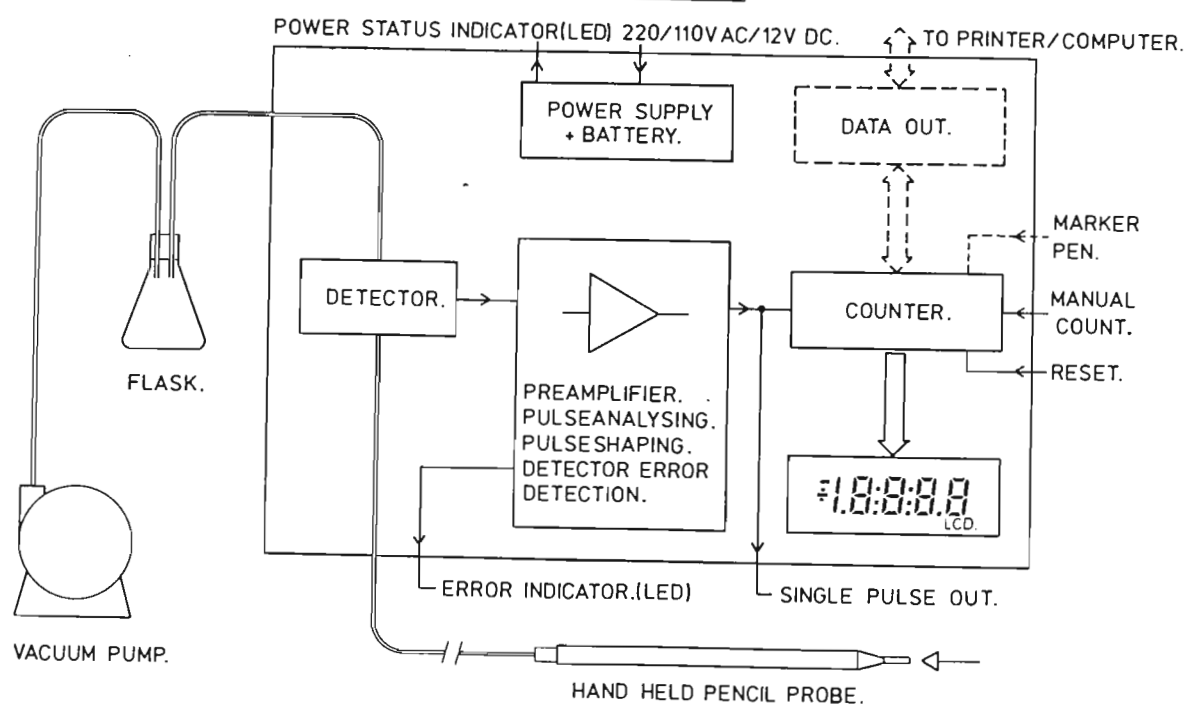


THE "DROSOPHILA COUNTER". (PROTOTYPE.) PRINCIPLES OF OPERATION.



C Barr Institute of Genetics Copenhagen

The counter is most conveniently operated while sorting the flies on a large piece of cardboard (A4 size). During the genotyping or sexing of the flies they are separated with a scalpel or a fine artist's brush so that the distance between the flies is at least 2 mm. The flies are alive and undamaged after they have been counted. Operated this way the counter makes the counting and sorting very effortless and more importantly the operator can concentrate on the pertinent part of the experiment, i.e., the genotyping or sexing of flies. In a population cage experiment in our lab one person has easily sorted and counted egg samples containing about 20,000 flies in less than a day. Accuracy: $-1.3\% \pm 10.9\%$ counts.

A control light on the front panel indicates if the detector is contaminated or the light source is worn out. This has not yet happened, but when it does, it can easily be fixed by a person without technical background.

The counter is now under preparation for commercial production and will soon be available. Request information from C. Barr, (see also announcements section of this issue): Inst. of Genetics, Univ. of Copenhagen, Øster Farimagsgade 2A, DK-1353 Copenhagen K, Denmark.

Bourgin-Rosenberg, M. and S. Paumard.
 University of Paris VII, France.
 The "double subculturing method."

For different reasons, it could be often useful to reduce the subculturing frequency of *Drosophila* stock cultures.

We have developed a "double subculturing" method which can at any wanted temperature, increase twice the period required between two subculturings.

For the first subculturing, 5 ml of standard medium is poured into scintillation counter vials (Figure 1), inclined, to have the maximum of surface for egg-laying. These vials have two advantages: first they can be capped full of medium and stored at -20°C as long as wished; secondly, they are cheap enough to be discarded after utilization.

Twenty pairs of flies of the desired strain are introduced into these vials (screw-caps are replaced by foam plugs) where the females are allowed to lay eggs for three days at 25°C .



FIGURE 1.

The parents are then removed and each vial is introduced into a bottle containing standard medium: the bottom of the alcohol cleaned vial is lightly sunk into the agar medium. The whole is allowed to develop in an incubator at the desired temperature.

This procedure has the advantage that eggs, larvae and even pupae stay into the vials or on its walls (Figure 2). Therefore, when the flies of the first generation emerge, the medium in the bottle is nearly intact: it is not tilled. Although no subculture has been made, the females of the first generation will lay their eggs on a fresh medium where later larvae will develop, giving rise to the second generation of flies.



FIGURE 2.

Brooks, L.D. Harvard University, Cambridge, Massachusetts. A new multiply marked third chromosome of *Drosophila melanogaster*.

I created a third chromosome that has a more even distribution of eight recessive markers than rucuca does. The markers and Lindsley & Grell (1968) map positions on chromosome three are:

ve	h	th	cu	sr	e ^s	ro	ca
0.2	26.5	43.2	50.0	62.0	70.7	91.1	100.7

This chromosome arose as a double recombinant between ve h th cu e^s ro ca (kindly supplied by Dr. R.Grell) and ru h th st cu sr e^s ca (rucuca from Bowling Green, Ohio). It was extracted, starting with one male and crossing with TM3, Sb Ser/Ly st (from Davis, California) females for 5 generations, to establish a stock that is homozygous for the marked third chromosome and has other chromosomes from the TM3 stock. The stock has good viability and fertility. It may be obtained from the Bowling Green stock center.

Reference: Lindsley, D.L. & E.H.Grell 1968, Carn.Inst.Wash.Publ. 627, Genetic Variations of *D.melanogaster*.