Day	No. new flies added*	Total flies in cage#	No. specks (4-hour Exposure)**	No. specks (17-hour exposure)##
1	674	674	21	32
2	688	1362	24	53
3	1140	2502	48	185
4	1496	3998	37	142
5	2213	6211	48	270
6	1858	8069	102	407
7	1526	9595	106	386

* Obtained each day from a series of culture bottles.
\# Assuming, erroneously, that no deaths occurred.
** Sampler exposed from 12:30 p.m. to 4:30 p. m.
Sampler exposed from 4:40 p.m. to 9:40 a. m.

The slope and error of the slope of the regression of specks on flies during the four-hour interval was .0095 ± .0005 (error = 5.3% of the slope). For the 17-hour interval the corresponding figures were .0421 ± .0054 (error = 12.8% of the slope). The ratio of the slopes, .0421/ .0095, was 4.43; and the ratio of the lengths of exposure, 17/4, was 4.25.

These data indicate that this is a technique that can be used for determining the relative number of flies in a population at frequent intervals without disturbing the population unduly. Whether it can be used to compare one population with another or to estimate actual numbers of flies under various conditions is not known.

Wilson, L. Deterioration of brewers' yeast as a factor in comparative growth studies on Drosophila.

A supply of dry brewers' yeast kept in a dark bottle under ordinary laboratory conditions eventually failed to support growth in Drosophila. The yeast was purchased in October, 1949, and used for routine sterile growth studies at a concentration of 4% until August, 1950. Suddenly at that time larvae in all experiments died before the first moult. Increasing the concentration of yeast did not prevent the deaths, but a high proportion lived in 0.75% yeast. These results suggested a vitamin deficiency which was not great enough to prevent development of the slow-growing, inadequately fed flies. To test this hypothesis the yeast was supplemented with different brands of B-complex vitamins in a concentration sufficient to supply 200 micrograms of thiamin per 100 milliliters of medium. Perfectly normal growth resulted. No growth occurred if the vitamins were autoclaved in distilled water before being added to the sulture medium. It has been possible to test the rate of deterioration of strains of yeast by periodically checking the rate of growth of the larvae and the time of occlusion of the adults. A strain of yeast purchased in February, 1951, and kept continuously in the refrigerator began to show deterioration in September, 1951. It is obvious that in comparative growth studies where yeast is used in media, great care must be exercised to insure a yeast of constant nutritional value.