

**EFFECTS OF NON-LETHAL CONCENTRATION OF LEAD ON
THE PHENOTYPIC RATIO OF EYE COLOR OF
Drosophila melanogaster (FRUIT FLY)**

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ABSTRACT

The main purpose of the study is to determine the possible mutagenic effect of non-lethal concentration of lead on the phenotypic ratio of eye color of fruit fly. Non-lethal concentration of lead was determined using the range finding test. The maximum non-lethal concentration of lead is 6 grams per 100 grams of banana was administered to the fruit flies during crossbreeding to test lead's mutagenicity. The crossbreeding experiment was divided into 2 parallel groups. Results of crossbreeding were determined by counting the offsprings of the F1 and F2 generations. The numerical data from the F2 generation were computed by means of Chi-square analysis. The results showed that lead is mutagenic in that the phenotypic ratio produced did not fit the classic Mendelian ratio of 2:2 for a cross between a heterozygous and mutant fruit fly. Chi-square values for the 2 crosses conducted were 14.52 and 12.00 respectively which means that the computed Chi-square value is greater than the tabulated value of 3.84. It indicates that there is a significant difference between the observed and expected results.



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