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Khan, A. H. University of Cambridge, England. Tests for hydroxylamine mutagenesis in Drosophila.

The mutagenic effect of hydroxylamine has been tested on mature spermatozoa of Drosophila using an adult feeding method. Treatment was in one-pint bottles, the bottoms of which were covered with a double thickness of filter paper. The filter paper was kept lightly soaked with the hydroxylamine solution (containing 5% glucose) during the period of treatment. Fifty newly-hatched Oregon-K males, were starved for 12 hours, and placed in the treatment bottles for 24 hours during which time the treatment solution was their only source of nourishment.

Treated males were examined by the Muller-5 (Basc) method for the frequency of sex-linked lethal mutations. A single three-day brood was examined by individually mating one treated male to two Muller-5 virgin females.

The chemical was highly toxic, killing all males at a 0.4% treatment. The survival at 0.3, 0.2 and 0.1% concentrations of hydroxylamine was 65.0, 82.5 and 97.5% respectively. The sex-linked lethal results listed in Table 1 show that hydroxylamine is not mutagenic in Drosophila under these conditions.

Table 1.--Sex-linked recessive lethal frequencies in Drosophila males after adult feeding treatments with hydroxylamine.

Concentration of hydroxylamine (%)	0.1	0.2	0.3
Duration of treatment (Hrs)	24	24	24
Survival (%)	97	82	65
No. males examined	45	33	28
Average no. chromosomes examined/male	9	10	13
No. chromosomes examined	411	345	364
No. lethals	0	1	0
Lethals (%)	0.0	0.28	0.0

Lee, P. Y. and V. A. Strangio. University of Melbourne. Brood sensitivity to the induction of polygene mutations.

Males from a highly-inbred wild type D. melanogaster stock were irradiated with 500r X-rays and then mated individually to three virgin females from the same stock. Four broods were established from successive matings, each three days in duration. Sternopleural bristles were counted in F_1 females only (see Mukai et al., 1963). Although pooled data from all four broods indicate a significantly increased variance of the bristle number distributions in females from the irradiated series, the preliminary results have so far failed to reveal a detectable sensitivity pattern.