

Bird, Myrtle J. Chemical mutagenesis.

Compounds shown in the table have been tested for mutagenic action in D. melanogaster. All were dissolved in 0.4%

saline and injected into the abdomen of 1-2-day-old males. The determining factor for the selection of the concentration administered is the solubility of the compound. In all cases fully saturated solutions were used. In some experiments different concentrations were also tested for purposes of comparison. After treatment the males were tested for sex-linked recessive lethals by the Muller-5 technique.

Compound	Concentration used	No. chromosomes tested	No. lethals	% lethals
1:3-dimethanesulphoxypropane	0.2	976	30	3.1
	1.1	956	99	10.4
	2.2	624	60	9.6
1:4-dimethanesulphoxybutane	0.04	407	2	0.5
1:4-dimethanesulphoxybut-2-yne	0.1	547	30	5.5
	<0.1*	1082	47	4.3
<u>cis</u> -1:4-dimethanesulphoxybut-2-ene	0.06	1365	3	0.2
	0.2	507	4	0.8
	0.25	475	5	1.1
<u>trans</u> -1:4-dimethanesulphoxybut-2-ene	0.06	1374	17	1.2
n-butylmethanesulphonate	0.2	707	6	0.8
Controls (combined data)	-	2449	3	0.1

* A little of compound out of solution at time of injection.

Detailed cytogenetic analysis of lethals induced by the various chemical mutagens investigated is being undertaken by Dr. Onsy G. Fahmy and will be published elsewhere.

Brunetto, Anna, and Frumento, Luigia. Salivary chromosomes of D. ambigua.

The salivary chromosomes of D. ambigua (obscura group) show in wild populations several heterozygous inversions. As a preliminary for physiological and population genetics researches, we have studied the salivary chromosomes of

laboratory stocks, giving a map of the homozygous and heterozygous condition. The map will be published shortly in Scientia Genetica. The chromosome complement of ambigua (A. Buzzati, 1942) is formed of two big and two small mediocentric and one point chromosomes. According to that, 8 major elements can be found in the salivary cells. The chromocenter is large and well differentiated. When broken by pressure, the limbs of the individual chromosomes tend to keep together, joined by the centromere. The sex chromosome, which in the mitotic nuclei is one of the larger V-shaped ones, does not show in the salivaries very long arms, but they are connected by most of the chromocenter.