

By analyzing changes in the functional activity of the polytene chromosomes of the chironomids the reaction of genetic material under the action of the extract of *Sedum telephium* L. and dioxydine was investigated. It is established that dioxydine in the acute phase improves the functional activity of polytene chromosomes stronger than the extract of *Sedum*: the values of the coefficient ring of Balbiani (has also increased in control – 1.87, under the action of dioxydine – 2.15, under the action of extracts of *Sedum telephium* L. – 1.99); the index of compactness of chromosomes under (has increased in the control of 6.1, the action of the extract of *Sedum telephium* L.– 6.5, under the influence of dioxydine – 7.2); average number of activity nucleolar organizer in: – 1.78 under the influence of *Sedum telephium* L. – 2.91, under the action of dioxydine – to 2.89.