



situation a large value acquires search and development of new highly sensitive test objects for biomonitoring contamination of marine waters. Black Sea mussels are often enough used as kinds of bioindicators, that is determined by their mass distribution and stability to the toxic substance. In spite of the fact that *Mytilus galloprovincialis* has high stability to influence of negative factors, biochemical mechanisms which provide this stability are not studied enough. And in this respect role of vitamins of group B is poorly studied too. That is why the aim of this work was to estimate effect of zinc and copper salts in concentrations, multiple their PDK, on some indices of vitamins in the organs of Black Sea mussels *Mytilus galloprovincialis*.

Black sea mussels of 3-4 cm size were collected in February-March, 2007 in off-shore part of aquatorium of the Odessa bay. They were placed in aquariums fin amount 1 mussel per 1 dm<sup>3</sup> of salt water, adjusted to artificial aeration during 2 days. Animals were divided into three groups: first group - control, where mussels were in salt water in aquariums, second - mussels were in salt water, which contains the ions of copper or zinc (as sulfates) in concentration 10 PDK, third, - in salt water with maintenance of the indicated salts, to even 100 PDK. Time of self-control of mussels in presence salts - two and seven days (after acclimatization to the laboratory terms). Upon termination term mussel incubation they were used for biochemical researches. In homogenates of their organs content maintenances of vitamin of B2 (Yudenfreund, 1969), and forms of ascorbic acid (general ascorbic acid - GAA, exactly ascorbic acid - AA, diketogulonic acid - DKGA) were determined (Sokolovskaya, Lebedeva, Lielup, 1974).

It was observed, that, at large concentrations of toxic substances (100 PDK) concentration of GAA decreased, as well as the coefficient of AA/GAA in the organs of mussels. Thus influence of copper on the level of ascorbic metabolites was more substantial, than Zinc.

As to the forms of B2 vitamin (forms FAD, FMN and riboflavin), on the whole similar conformities to the law were observed, but they were less expressed than for ascorbic acid. Possibly it is related to small intensity of power processes in mussels and, to according to by its small content in tissues of mussels, possibly substantial effects would be obtained after longer period of researches.

**CONCENTRATIONS OF C AND B2 VITAMINS IN ORGANS OF BLACK SEA MUSSELS *MYTILUS GALLOPROVINCIALIS* AFTER ACTION OF COPPER AND ZINC IONS**

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Industrial flows and domestic wastes resulted in considerable contamination of off-shore waters of the Black Sea. In connection with an unfavorable ecological