

VITAMIN C CONCENTRATION AND CATALASE ACTIVITY IN THE BOTTOM SEDIMENT OF THE
KUYALNIK LIMAN

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The Kuyalnik liman's sulfide-silt deposits are used in medical practice for a long time. Until now their medical properties frequently relate with humic acids and different classes of bitumens. There are not paid enough attention on the vitamins concentration and enzymatic activity questions of the liman silt. It is known that there is a direct relation of peloid biological activity with their antioxidant properties (Jabarova, 2001) and for determination of peloid balneological value along with enzymatic activity vitamin complex can be used (Jabarova, 1999).



So the purpose of our work was to research concentration of vitamin C and catalase activity in the samples of the Kuyalnik liman bottom sediment. In these researches used traditional methods for analysis in bio objects.

The samples of the bottom sediment, sampled in the aquatorium of the Kuyalnik liman at the 17 stations of supervisions, served as research objects. The samples of the silt were black, darkly-grey and grey colors. Their humidity changed in a wide range from 19% to 51%, the content of organic matter varied in the interval from 3,6 to 16,6 %. The values of pH ranged from 7,5 to 8,0 units, the oxidant-reducing potential changed in a range from - 83 to -93 MV. It is determined by researches, that level of ascorbic acid changed more than on 50 % and ranged from 234,5 to 535,9 mcg/g, the catalase activity varied in the interval of 0,68-7,28 units in the superficial layer of the bottom sediment through the liman area. There was founded the reverse correlation between level of vitamin C and catalase activity. Researches of vitamin C dynamic of changes of concentration in a vertical profile with thickness up to 115 cm with 10 - 15 cm step showed, that maximal values are typical for superficial layer and deep layers from 45-50 cm and below. Catalase activity practically does not tested deeply than 45 cm. Thus, obtained results show us substantial biochemical distinctions of horizontal and vertical types, which could be related with different hydrological modes of different zones of the liman and different conditions of formation of silt. It is planned to extend the range of used indexes with purpose to get more complete information about biochemical status of the bottom sediments of the Kuyalnik ecosystem.

ВМІСТ ВІТАМІНА С ТА АКТИВНІСТЬ КАТАЛАЗИ В ДОННИХ ВІДКЛАДЕННЯХ КУЯЛЬНИЦЬКОГО ЛИМАНУ
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Вивчали вміст вітаміна С та активність каталази в донних відкладеннях Куяльницького лиману. Виявлені горизонтальні та вертикальні коливання значень досліджених показників.