

عنوان مقاله:

Influence of microalgae on the fatty acid composition of Artemia cysts in the conditions of lakes of Northern Kazakhstan

محل انتشار:

مجله علوم زیستی خاورمیانه، دوره 22، شماره 3 (سال: 1403)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Zhanara Mazhibaeva - Laboratory of Hydrobiology, Fisheries Research and Production Center, Almaty, Kazakhstan

Saltanat Orazova - Laboratory of Biochemistry, Al-Farabi Kazakh National University, Almaty, Kazakhstan

Tynysbek Barakbayev - Laboratory of Hydrobiology, Aral branch Fisheries Research and Production Center, Kyzylorda, Kazakhstan

Moldir Aubakirova - Laboratory of Hydrobiology, Fisheries Research and Production Center, Almaty, Kazakhstan

Kuanysh Isbekov - Laboratory of Hydrobiology, Fisheries Research and Production Center, Almaty, Kazakhstan

Moldrakhman Aidana - Laboratory of Hydrobiology, Fisheries Research and Production Center, Almaty, Kazakhstan

خلاصه مقاله:

Artemia is widely used in aquaculture as a live feed. The presence of highly unsaturated fatty acids is a key determinant of nutritional value. The purpose of this study was to study the fatty acid composition of total lipids of Artemia cysts (*Artemia* sp.), taken from two lakes in the North Kazakhstan region in different seasons of the year, and the influence of phytoplankton composition on the fatty acid profile. Phytoplankton sampling was carried out by the sedimentation method, and a camera analysis of the sample was carried out using a microscope. Extraction of total lipids was carried out by a binary mixture of organic solvents chloroform-ethanol (2:1). Gas chromatographic separation of fatty acids was carried out after methanolysis of lipids to obtain methyl esters of fatty acids. The seasonal dynamics in the content of both the main groups of fatty acids and individual fractions are shown, which is associated with abiotic and biotic conditions for the growth of natural populations. The values of the unsaturation coefficient were twice as high in the spring samples of Artemia cysts as compared to the autumn samples for the populations of Lake Stanovoye. In the composition of polyunsaturated acids, such acids as 18:3n3 linolenic acid were found (from 4.13% to 23.37%); 20:5n3 eicosapentaenoic acid (from 8.24% to 16.27%); and 18:2n6t linoleic acid (from 3.84% to 13.53%).

کلمات کلیدی:

Cysts, Artemia sp, fatty acid, Seasonal dynamics, phytoplankton, Algoflora

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/2047409>

