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"Gheorghe Asachi" Technical University of Iasi, Romania

ANALYSIS OF APPLYING CHLORINE DIOXIDE FOR TREATMENT OF THE DNIPRO RIVER WATER IN UKRAINE IN MODERN CONDITIONS

Yevhenii Mavrykin[1], Olesia Zorina[2*], Mykhailo Yatsyuk[1], Mykola Nikolov[3], Yevhen Matselyuk[1], Oleksandr Polishchuk[4]

[1]Institute of Water Problems and Land Reclamation of NAAS, 37, Vasylkivska str., Kyiv, 03022, Ukraine
[2]SI "Institute of Public Health named after O.M. Marzeev of NAMSU", 50, Hetmana Pavla Polubotka str., Kyiv, 02094, Ukraine
[3]NTUU "Kyiv Polytechnic Institute named after Igor Sikorsky", 37, Peremohy Avenue, Kyiv, 03056, Ukraine
[4]Military Institute of Taras Shevchenko National University of Kyiv, 81, Yuliii Zdanovskoi str., Kyiv, 03680, Ukraine

Abstract

The purpose of the study is to investigate the features and consequences of using chlorine dioxide for surface water treatment at a water supply station with a traditional complex of treatment facilities in order to increase the efficiency of managing the technological process of drinking water production, as well as to improve its quality in order to protect human health. The data obtained on the water quality at the drinking water intake point of the Dnipro water supply station in Kyiv before and after the outbreak of hostilities in Ukraine indicate changes in the hydrological state of the river. This affected the technological process of drinking water treatment at the water supply station. We investigated the dynamics of chlorites content in the water supply station water. The peculiarities of the technological process of water purification in the case of using chlorine dioxide with iron chloride instead of chlorination with preliminary ammonization were studied. After the introduction of the technology of using chlorine dioxide with ferric chloride, the water supply station stopped the use of reagents that are dangerous (chlorine, ammonia, ozone), increased the efficiency of drinking water purification from organic substances and improved its quality in a number of indicators.

Key words: chlorites, drinking water, water disinfection, water quality

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[*] Author to whom all correspondence should be addressed: e-mail: wateramnu@ukr.net, Phone: +380509323650