

Human health risk assessment related to blue-green algae mass development in the Kuibyshev Reservoir

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Abstract

© 2015 IWA Publishing. Health risk assessment related to water quality and microcystin contamination of water in the Kuibyshev Reservoir was conducted in August 2012 during the period of algal bloom. The health risk during recreational activity was estimated for potential exposure to extracellular microcystins. Microcystin content in water measured by the indirect competitive ELISA method was in the range from 0.21 to 26.96 $\mu\text{g L}^{-1}$. The results of the present study show that the health risk can reach a dangerous level even at 1 h of exposure due to the high concentration of extracellular microcystins in the water.

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Keywords

Cyanotoxins, Harmful algal bloom, Health risk assessment, Microcystins