

doi: [10.21307/ACEE-2022-009](https://doi.org/10.21307/ACEE-2022-009)

ANALYSIS OF THE EFFECTS OF USING CLASSICAL AND MODIFIED POOL WATER TREATMENT TECHNOLOGIES

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Received: 10.12.2021; Revised: 25.01.2022; Accepted: 25.01.2022

Abstract

Contemporary requirements on the quality of swimming pool water necessitate the improvement of the classical technology of its treatment. It is associated with the need to modernize installations or implement a new technology. The purpose of the analysis is to compare the effects of using classical and modified technologies for the treatment of swimming pool water in sports and recreational pools with similar characteristics. The research was carried out for ten pools, which were divided into two groups – pools with a classical water treatment system and a modified one. The conducted tests showed significant differences in water quality in terms of: pH, redox, permanganate index (COD_{Mn}), total organic carbon (TOC), free chlorine, combined chlorine, chloroform and trihalomethanes (THMs), and no differences in terms of: temperature, turbidity, nitrates and ammonium ion. It was found that the modified swimming pool water treatment technologies made it possible to obtain water of better quality with regard to physical, chemical and bacteriological properties.

Keywords: Pool water; Classical treatment technology; Modified treatment technology.