

Pistelok, F., Ficek, A., Stuczynski, T., Wiera, B. ATP Test in Quality Assessment of Drinking Water in the Example of Small Water Supply Systems. *Ochrona Srodowiska* 2014, Vol. 36, No. 2, pp. 29–35.

Abstract: Cellular ATP (cATP) content allows estimation of total number of microorganisms present in water. The information thus obtained enables determination of influence of water treatment processes and biofilm growing on the pipe walls on microbial contamination of pipeline water. Three small water supply systems located in North-Western Poland (efficiency ranging from 80 to 500 m³/d) were selected for research. Physicochemical and microbiological water quality indicator values, the latter obtained with culture methods, complied with current standards. However, results of cATP content determination in water samples did not lead to such unambiguous conclusions. According to water purity classification by the ATP test manufacturer, none of the water samples from the three water supply systems tested complied with 'good' water quality standards; part of the samples was classified as poor quality water. cATP content analysis demonstrated that filtration process in the water stations tested should be verified and special care should be taken at primary filtrate discharge to sewage system. Most likely, these are decisive factors contributing to the biofilm formation on the pipe walls and secondary water contamination.

Keywords: Water safety plans, adenosine triphosphate, biofilm, water treatment, microorganisms.