Zimoch, I. Modeling of Trihalomethane Concentrations in Tap Water. *Ochrona Srodowiska* 2011, Vol. 33, No. 3, pp. 35–42.

Abstract: In this work use is made of a model that describes the kinetics of THM formation in tap water. For this model presented is the method of determining the reaction coefficients in both bulk flow and wall area. Based on many years' studies of the operating conditions and water quality in the water supply system for the city of Wroclaw, and aided by the computer software EPANET, the principles to the construction of a real model for the simulation of the changes in the THM content of the transported water are presented. Analysis of the deviation of the simulated values from those of the real THM content measured in the water-pipe network allows the assumption that the quality model proposed is sufficiently validated for the assessment of water quality variations under different operating conditions in the water supply system. Most of the differences (76%) between measured and simulated THM content are within the range of the measuring error for the analytical method. Moreover, none of the simulated results exceeds the real value by 100%, *i.e.* the value corresponding to the commonly accepted criterion for the assessment of quality models.

Keywords: Water-pipe network, quality model, first-order reactions, second-order reactions, kinetics, dynamic model, calibration, trihalomethanes.