

Sawiniak, W., Kotlarczyk, B., Matusiak, M. Efficiency of Organic Matter Removal through a Contact Filter with an Active Carbon Layer. *Ochrona Srodowiska* 2009, Vol. 31, No. 3, pp. 29–31.

Abstract: Model investigations were performed to analyze the possibility of upgrading the efficiency of organic matter removal from surface water treated by coagulation (involving an alum or a PAX XL19F coagulant), which was conducted in the bed of a contact filter. The objective of incorporating an active carbon layer into the contact filter was to reduce the content of THM precursors in the water being treated, and thus limit the formation of THM in the water distribution system. The results of model investigations have revealed that some part of the sand bed in the technical contact filter can be replaced with a granular active carbon layer. This may raise the efficiency of THM precursor removal to such a degree that the average concentration of the sum of THM in the water upon chlorine disinfection will not exceed 10 mg/m^3 . It has also been demonstrated that the addition of the active carbon layer did not inhibit the operation of the filter either during water treatment or during backwash. What is more, when the model filter was backwashed with air and water, this permitted a substantial extension of the filter cycle time, without deteriorating the quality of the treated water.

Keywords: Surface water, water treatment, coagulation, contact filters, granular active carbon, THM.