

Jez-Walkowiak, J. Studies on Manganese Dioxide Assisted Autoactivation of Filtration Materials with Chalcedonite Sand as an Example. *Ochrona Srodowiska* 2013, Vol. 35, No. 3, pp. 23–26.

Abstract: A study algorithm of filtration materials susceptibility to autoactivation with manganese dioxide was presented, in the example of chalcedonite sand. This algorithm may serve as a basis for preliminary research plan development for groundwater treatment plant purposes. The proposed methodology was verified in studies on iron and manganese removal from groundwaters by filtration using chalcedonite as well as, for comparative purposes, quartz and anthracite-quartz sands. Technological characteristics of chalcedonite, quartz and anthracite-quartz deposits were received under the same research conditions and in line with the methodology developed. This allowed the manganese dioxide assisted autoactivation processes to be compared and a definite prevalence of chalcedonite over quartz and anthracite-quartz sands in the process of iron and manganese removal from water was demonstrated.

Keywords: Filtration, groundwater, chalcedonite, iron removal, manganese removal.