

Kabsch-Korbutowicz, M. Application of Ion Exchange to Natural Organic Matter Removal from Water. *Ochrona Srodowiska* 2013, Vol. 35, No. 1, pp. 11–18.

Abstract: Application of ion exchange process to removal of natural organic matter (NOM) from water was discussed. The majority of natural organic particles show properties of macroions and therefore they may be removed using anion exchange resins. Also, the fraction of organic compounds lacking electric charge may be removed from water using ion exchange adsorption. It was proved that efficiency of NOM removal depends, among others, on the physicochemical properties of water being purified, type and properties of the resin used as well as on the ion exchange method. The advantages of ion exchange process application to NOM separation from water include, apart from very high efficiency, minimum secondary water contamination and low amount of wastes to be disposed. Additionally, an increasing popularity of ion exchange in drinking water treatment results from investment and operating costs being comparable to costs of equally effective water treatment processes like nanofiltration or activated carbon adsorption.

Keywords: Humic substances, anion exchange resin, MIEX[®].