MODIFICATION OF CARBONACEOUS ADSORBENTS WITH MANGANESE COMPOUNDS

Irina Ginsari^a, Larisa Postolachi^a, Vasile Rusu^a, Oleg Petuhov^a, Tatiana Goreacioc^{a,b}, Tudor Lupascu^a, Raisa Nastas^{a*}

^aInstitute of Chemistry of Academy of Sciences of Moldova, 3, Academiei str., Chisinau MD-2028, Republic of Moldova ^bInstitute of Ecology and Geography of Academy of Sciences of Moldova, 1, Academiei str., Chisinau MD-2028, Republic of Moldova ^{*}e-mail: nastasraisa@yahoo.com

Abstract. Four series of samples containing manganese supported carbonaceous adsorbents were prepared. Samples of series AC-B, synthesised from the carbonaceous support with basic surface, were obtained with a yield of 50-60%, while manganese was loaded in amount of 1.44-1.65 % depending on applied method. The samples of series AC-A, synthesised from the carbonaceous support with acidic surface, were obtained with a higher yield (92-98%), but with small quantities of loaded manganese. Obtained results reveal the importance of surface chemistry of carbonaceous adsorbents on the manganese loading.

Keywords: active carbon, modification, manganese, surface chemistry, thermal treatment.

Received: October 2015/ Revised final: October 2015/ Accepted: November 2015