ACTIVATED CARBONS FROM VEGETAL RAW MATERIALS TO SOLVE ENVIRONMENTAL PROBLEMS

Viktor Mukhin^{a*}, Tudor Lupascu^b, Nadejda Voropaeva^c, Yuriy Spiridonov^d, Nicolay Bogdanovich^e, Vasiliy Gur'janov^a

^aENPO "Neorganika", 4, K. Marks str., Electrostal 144001, Russian Federation
^bInstitute of Chemistry, Academy of Sciences of Moldova, 3, Academiei str., Chisinau, MD 2028, Republic of Moldova
^cSRI of rapeseed RAAS, 26, Boevoi proezd, Lipetsk, 398037, Russian Federation
^dSRI of phytopathology of RAAS, Bolshie Vyazemy, 143050, Odintsovo district, Moscow Region, Russian Federation
^eNorth Arctic Federal University, 17, North Dvina Quay, Arhangelsk, 163002, Russian Federation
*e-mail: neorg.el@mail.ru

Abstract. Technologies for active carbons obtaining from vegetable byproducts such as straw, nut shells, fruit stones, sawdust, hydrolysis products of corn cobs and sunflower husks have been developed. The physico-chemical characteristics, structural parameters and sorption characteristics of obtained active carbons were determined. The ability of carbonaceous adsorbents for detoxification of soil against pesticides, purification of surface waters and for removal of organic pollutants from wastewaters has been evaluated. The obtained results reveal the effectiveness of their use in a number of environmental technologies.

Keywords: active carbon, vegetal raw byproducts, structural parameters, soil detoxification, water purification.