Removal of Methylene Blue Dye from Wastewater Resulting from Plant and Mineral Waste Incineration after Alkaline and Salt Activation

T. A. Vasilenko, I. V. Chernysh

Belgorod State Technological University named after V. G. Shukhov, Belgorod, Russia

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Abstract: The paper presents the results on the use of sorption material, which is a waste obtained from the co-combustion of waste bleaching clay containing vegetable oils (15–80 %), waste from the mechanical cleaning of oil seeds and sunflower husks for cleaning from the methylene blue (MB) dye. The physicochemical properties of ash were studied. It was shown that MG is adsorbed in a polymolecular form on the materials under study and the isotherms are S-shaped. The MB desorption from the obtained samples was studied. During desorption, the physical nature of sorption was established (MB dye is washed out from the surface of sorption materials up to 19.4 %).