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Effect of surface morphology of macro-scale perlite particles on adsorption process of Malachite Green dye

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ABSTRACT

Perlite is a mineral compound. It is a mixture of SiO_2, Al_2O_3, Na_2O, K_2O, Fe_2O_3 and so on. Its high porosity and low density cause that it is being used as an adsorbent to remove organic and inorganic pollutants from wastewater in many researches. But its capacity depends on its structure as an adsorbent. In this research, the effect of macro-scale size of perlite particles has been investigated on adsorption capacity and procedure. The results show that the difference is in perlite macro-scale size of surface morphology and there is no significant difference in micro-scale size.

Keywords: Adsorption; Perlite; Wastewater treatment; Malachite Green (MG) dye; Macro-scale size

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