



## Removal of methylene blue onto mineral matrices

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### ABSTRACT

The textile industry generates huge volumes of dye-contaminated wastewater. Discharging these effluents into the environment causes many diseases that can be detrimental to human health. Therefore, adsorption of these types of dyes such as methylene blue onto mineral matrices offers an efficient method for pollution remediation. The present investigation is undertaken to test the use of Tunisian clay in raw and sodium form to remove methylene blue from aqueous solution. The experimental data were analysed using the Langmuir, Freundlich, Temkin and Dubinin–Radushkevich isotherms. The equilibrium data fit well to the Langmuir model, and the monolayer adsorption capacity for methylene blue dye is 312.5 and 208.33 mg/g, respectively with sodium clay (MS002-1) and raw clay (MS001-2).

*Keywords:* Adsorption; Clay; Dye; Adsorption isotherm

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