

# **HETEROGENOUS FETON LIKE DECOLORIZATION OF METHYLENE BLUE OVER GREEN CLAY FROM VELAY**

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Pure clay mineral fractions (<500 nm) was obtained from of Velay Green clay by decarbonation and subsequent size fractionation using centrifugation with the aim of understanding the intrinsic properties of these extracts from rich volcanic earth containing iron. It was found confirmed that the Velay Green clay was mainly composed of illite and kaolinite clay minerals which wereand contained iron rich. Mossbauer studies revealed the presence of Fe (III) in the lattice sites of both the clay minerals. Therefore, electrochemical characterization was performed in the presence of methylene blue and methyl viologen redox mediators in order to understand evidence the accessibility of iron in the clay structure. Further, Fenton-like reaction on degradation of methylene blue was observed performed in the presence of the clay fraction and H<sub>2</sub>O<sub>2</sub> evidencing that effectively confirmed that the iron in the clay fraction exhibits catalytic activity. The influence of the initial pH, temperature, H<sub>2</sub>O<sub>2</sub> concentration, time of reaction and clay amount was investigated.

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