# **MATERIAL AND METHODOLOGY**

# **APPLICATION FOR THE REMOVAL OF METHYLENE DYE USING BATCH METHOD**

## **Preparation of Stock Solution**

Methylene blue dye stock solution was prepared by dissolving 0.1g of the solid dye of 1.0L of distilled water to get a concentration of 100ppm(mg/L) of the stock solution and the required concentration were obtained by dilution.

## **Determination of the Effect of initial dye concentration**

20ml of Methylene blue solution of concentrations 5ppm, 10ppm, 15ppm, 20ppm, 25ppm and 50ppm adjusted to pH 9 was prepared and taken into 100ml beakers. 0.04g of the adsorbent was added to each beaker and the mixture was stirred using a magnetic stirrer for 10min at a constant speed. It was filtered after few minutes of equilibration and the percentage absorbance was determined using a UV-Vis spectrophotometer at 664nm.

## **Determination of effect of contact time**

A solution of methylene blue having concentration of 10ppm, adjusted to pH 9 was taken into 100ml beakers and 0.04g of the adsorbent was added. The contact time for each of the experiment were taken at 1hr, 4hr, 7hr, 9hr, 11hr. at the end of the contact time for each of the experiment, the mixture was filtered and the percentage absorbance of the filtrates were analyzed using UV-Vis spectrophotometer at λ = 664nm.