## **LIST OF SYMBOLS**

 $D_1$ Oxygen in incubated sample.  $D_2$ Oxygen in initial sample. P Decimal fraction of sample used. d Inter-planner spacing. Wavelength of X-ray. λ Integer. n Amount of ferrous ammonium sulphate required for the blank. A Amount of ferrous ammonium sulphate required for the sample. В Normality. N V Volume. D Particle size. β Full width at half maxima. θ Diffraction angle at maximum peak. K Scherrer constant.  $F(R_{\alpha})$ Kubelka-Munk function.  $R_{\alpha}$ Reflectance coefficient of the sample. Absorbance of the corresponding samples. A Bandgap energy. Eghυ Photon energy. Initial concentration of dye.  $C_0$  $C_{\rm f}$ Final concentration of dye. Concentration change due to adsorption.  $C_{ad}$  $C_{\rm b}$ Loss of dye in blank solution. C Concentration of the dye solution.  $C_{o}$ Initial concentration of the dye solution.

t

 $K_{app}$ 

Time.

Apparent first-order rate constant.