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**Table 5.5** Toxicity assessment of residual MB solution after 129 photodegradation on *Vigna radiata* seeds in control, treated and untreated sample

## LIST OF ABBREVIATIONS

COD	Chemical Oxygen Demand
DDW	Double Distilled Water
DRS	Diffuse Reflectance Spectroscopy
FE-SEM	Field Emission Scanning Electron Microscopy
FTIR	Fourier Transform Infrared
GIN	Germination index
IDT	Iodine-doped TiO <sub>2</sub>
IR	Infrared
LICT	Lanthanum (La) and Iodine (I) co-doped TiO <sub>2</sub>
MB	Methylene Blue
PIN	Phytotoxicity index
QT	Quartz Tube
RG	Relative root growth
SAED	Selected Area Electron Diffraction
SCS	Solution Combustion Synthesis
SG	Relative seed germination
TEM	Transmission Electron Microscopy
UV	Ultraviolet
UV-Vis	Ultraviolet-Visible
UV-PCR	Ultra-Violet Photochemical Reactor
XPS	X-Ray Photoelectron Spectroscopy

## LIST OF SYMBOLS

$C_1$	Initial concentration of dye.
$C_2$	Final concentration of dye.
$C_3$	Loss of dye in blank solution.
$C_4$	Concentration change due to adsorption.
$C_0$	Initial concentration of the dye solution.
$D$	Particle size.
$d$	Inter-planner spacing.
$E_b$	Electron Binding Energy
$E_k$	The kinetic energy
$E_g$	Bandgap energy.
$F(R\alpha)$	Kubelka-Munk function.
$h\nu$	Photon energy.
$K$	Scherrer constant.
$K_p$	Apparent first-order rate constant.
$n$	Integer.
$R\alpha$	Reflectance coefficient of the sample.
$t$	Time.
$V$	Volume.
$\beta$	Full width at half maxima.
$\theta$	Diffraction angle at maximum peak.
$\lambda$	Wavelength of X-ray.