

LIST OF SYMBOLS AND ABBREVIATIONS

Symbols

-	Approximately
t	Contact time
°C	Celsius
K	Kelvin
min	Minutes
h	Hour
Conc	Concentration
g	Gram
Kg	Kilogram
µg	Microgram
mg	Miligram
L	Litre
cm	Centimetre
ha	Hectare
µS	Micro Siemens
C_o	Initial metal ion concentration (mg/L)
C_t	Concentration of metal ion at time 't' (mg/L)
C_e	Concentration of metal ion at equilibrium (mg/L)
q_t	Amount of metal ion adsorbed at time 't' (mg/g)
q_e	Amount of metal ion adsorbed at equilibrium (mg/g)
q_m	Maximum adsorption capacity (mg/g)

K_L	Langmuir adsorption capacity (mg/g)
R_L	Langmuir Equilibrium parameter
Q_o	Langmuir adsorption capacity (mg/g)
b	Langmuir constant (energy of adsorption in L/mg)
K_F	Freundlich adsorption capacity (mg/g)
n	Freundlich constant of adsorption intensity
B_{DR}	Dubinin–Radushkevich isotherm constant
ε	Polanyi potential (J/mmol) (Dubinin–Radushkevich)
E	Mean free energy (kJ/mol)
k₁	Pseudo-first-order rate constant
k₂	Pseudo-second-order rate constant
k_i	Intraparticle diffusion rate constant (mg/g·min ^{0.5})
R²	correlation coefficient
ΔS°	Entropy of reaction (J/mol·K)
ΔH°	Enthalpy of reaction (kJ/mol)
ΔG°	Gibbs free energy change (kJ/mol)

Abbreviations

ASTM	American Society for Testing of Materials
APHA	Analytical Public Health Association
BIS	Bureau of Indian standards
CHC	Community Health Centre
PHC	Public Health Centre
TISP	<i>Tamarindus indica</i> Seed Powder

WHO	World health organization
BCF	Bio-Concentration Factor
CEC	Cation exchange Capacity
EDI	Estimated Daily Intake
TA	Total Alkalinity
TDS	Total dissolved Solids
TH	Total Hardness
WASMO	Water and Sanitation Management Organization
FTIR	Fourier Transform Infrared spectroscopy
XRD	X-ray Diffraction