



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	Advances in Research
Manuscript Number:	Ms_AIR_23224
Title of the Manuscript:	Equilibrium Isotherm Study for Removal of Mn (II) from Aqueous Solutions by Using Novel Bioadsorbent Tinospora cordifolia
Type of the Article	Original Research Articles

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
<p>Line 77: After that, the biomass was stay for 30 minutes with HCl (0.1M) solution. After that, the biomass stayed inside HCL(0.1M) solution for 30 minutes.</p> <p>Let the author remove was</p> <p>Line 125, 134, 141, 143 and 144: You repeatedly represented the unit of mass of biosorbents as mg/l. Apply this on the formula for obtaining adsorbent capacity and use dimensional analysis to crosscheck if u will get mg/g as the unit.</p> <p>My analysis shows that you will get L as unit of uptake capacity instead of mg/g or g/g as the case may be as reported previously.</p> <p>I am not comfortable with unit of uptake capacity or adsorption capacity as adopted by the author going by his unit of mass of biosorbent which he measured in mg/l. The adsorption capacity or metal uptake rate is calculated using the following mass balance equation:</p> $q_t = (C_0 - C_t) \frac{V}{M} \tag{1}$ <p>where q_t (mg/g or g/g or mg/mg); is the adsorption capacity or metal uptake rate or uptake capacity at time t C_0 (mg/l), and C_t (mg/l), are the initial metal ion concentration and metal ion concentrations at time t in the solution respectively; $V(l)$ is the solution volume and M (g) is the mass of biosorbent</p> <p>So, if unit of mass as he said is mg/l, unit of concentration becomes mg/l and the unit of volume becomes l then from equation 1 above, the unit of uptake capacity =</p> $q_t = \left(\frac{mg}{l} \right) \times \frac{l}{\frac{mg}{l}} = l$ <p>Let the author check the dimensional analysis as shown above come up with something more convincing.</p> <p>Outside these I think he has done a good work.</p>	<p>Sir/Madam, I am correcting all the lines.</p> <p>Sir/Madam, In this formula $q_t = (C_0 - C_t) \frac{V}{M}$</p> <p>Where C_0 (mg/l), and C_t (mg/l), are the initial metal ion concentration and metal ion concentrations at time t in the solution respectively; $V(l)$ is the solution volume and M (g) is the mass of biosorbent.</p> <p>I am converting the unit of volume V (l) to $V(g)$</p> <p>Such as - $q_t = (200 - 17.8) \frac{50/1000}{1}$</p> <p>$q_t = 9.11 \text{mg/g}$</p> <p>That's why I am using the unit mg/g, and my calculation according to Langmuir adsorption isotherm 20.69 mg/g</p> <p>Thank you for your valuable remarks</p>