



**SDI Review Form 1.6**

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| Journal Name:            | <a href="#">International Research Journal of Pure and Applied Chemistry</a>                          |
| Manuscript Number:       | 2012 IRJPAC 2713                                                                                      |
| Title of the Manuscript: | ARSENIC REMOVAL FROM REAL-LIFE GROUNDWATER BY ADSORPTION ON NEEMBARK<br>( <i>Azadirachta indica</i> ) |
| Type of the Article      |                                                                                                       |

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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**PART 1: Review Comments**

|                                            | <b>Reviewer's comment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
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| <b><u>Compulsory</u></b> REVISION comments |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                      |
| <b><u>Minor</u></b> REVISION comments      | <p>The manuscript is well prepared but it does not provide sufficient support on</p> <p>several important aspects, which may be significantly</p> <p>more interesting to the readers.</p> <p><b>1. Title:</b></p> <p>The authors may think to revise the title to something like “Arsenic (III) or Arsenite removal from contaminated water by adsorption on neem bark (Azadirachta indica).”</p> <p><b>2. Abstract:</b></p> <p>Page 1, Line 21:</p> <p>The word “As” should be replaced with “arsenic” in the sentence “initial As concentration”.</p> <p>Page 1, Line 23:</p> <p>The word “HCL” should be replaced with “HCl” in the sentence “The</p> | <p>1 to 7. All corrections have been corrected and marked in the text, as suggested.</p>                                                                                             |



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|  | <p>desorption efficiencies with 1M of HCL”.</p> <p><b>3. Introduction:</b></p> <p>Page 2, Line 55:</p> <p>There should be difference between the word “As” and As (Arsenic (III) or Arsenite) the authors should have written the word “Arsenic (III) or Arsenite” after the word ‘prevent’ in the sentence “As such, to prevent As pollution of water courses”.</p> <p><b>4. Arsenic chemistry:</b></p> <p>Page 2, Line 79:</p> <p>The word “respectively” should be added after “As (V)” in the sentence “arsenite (AsO<sub>3</sub>-3) and arsenate (AsO<sub>4</sub>-3), referred to as As (II) and As (V)...”</p> <p>Page 2, Line 79:</p> <p>The word “whilst” should be replaced with “while” in the sentence “whilst As (V) is more often present in surface waters and oxidizing groundwater...”</p> <p>Page 2, Line 86:</p> <p>The authors should delete one “with” from the sentence “along with with the associated pKas values”.</p> <p>Page 2, Line 99:</p> <p>The word “pKas” should be replaced with “pKa” in the sentence “along with the associated pKas values”.</p> <p><b>5. Materials and methods:</b></p> |  |
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|  | <p>Page 2, Line 150:</p> <p>The word “kark” should be replaced with “bark” in the sentence “correspond to 5 g of neem kark.”</p> <p><b>6. Results and discussions:</b></p> <p>Page 4, Line 176:</p> <p>The word “absorption” should be replaced with “adsorption” in the sentence “Although the absorption capacity of news paper was highest...”</p> <p>Page 4, Line 182:</p> <p>The word “through” should be replaced with “throughout” in the sentence “through the country.”</p> <p><b>7. Application of the developed treatment system:</b></p> <p>Page 8, Line 328:</p> <p>The word “HCL” should be replaced with “HCl” in the sentence “with 100 mL of 1 M HCLwas 89.63%.”</p> <p>Page 8, Table 2</p> <p>The authors should clearly write As (III) conc. or Arsenite conc. in the table.</p> <p>Page 8, Table 336:</p> <p>Reference to the use of amount of neembark, 5 g and 10 g.</p> | <p>7. Application of the developed treatment system:</p> <p>Page 8, Table 336 Reference to the use of amount of neembark, 5 g and 10 g.</p> |
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|  | <p>The authors have mentioned the optimized conditions in the abstract, which are initial As concentration, 100 µg/L; neem bark amount, 5 g; average particle size, 0.595 mm; treatment flow rate, 1.67 mL/min; and pH, 6.9 respectively.</p> <p>While on Page-8, the authors have mentioned the use of 10g of neem bark for maximum removal of arsenite, the authors should justify this difference clearly.</p> <p><b>8. Other comments:</b></p> <p>i) SEM, TEM, CHNS and FTIR analysis of adsorbent before and after the adsorption could be included if possible..</p> <p>ii) The authors could increase the removal efficiency by decreasing the particle size of adsorbent.</p> | <p># The authors have mentioned the optimized conditions in the abstract is 5 g, while on Page-8, the authors have mentioned the use of 10 g of neem bark for maximum removal of arsenite because here 2 step (5 g + 5 g =10 g) removal were applied due to high concentrations in the real arsenic contaminated water samples.</p> <p># Our laboratory has no these facilities at this moment.</p> <p># Yes, mechanical device is not available to decrease more the particle size of the adsorbent at the present time.</p> |
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|                                                    | <p>iii) No literature study on other Arsenic removal methods has been made. To attract a broad readership, the authors are advised to read and address/cite the following work: V. Chandra, J. Park, Y. Chun, J. W. Lee, I.-C. Hwang, K. S. Kim, Water Dispersible Magnetite-Reduced Graphene Oxide Composites for Arsenic Removal, ACS Nano 4, 3979 (2010). The authors are also advised to address some hazardous material removal efforts from water: for example, see references in Chem. 112, 6156 (2012).</p> | <p># Literatures on arsenic removal method have been inserted, as suggested.</p> |
| <p><b><u>Optional/General</u></b><br/>comments</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |