

### Review Form 3

Journal Name:	<a href="#">Journal of Engineering Research and Reports</a>
Manuscript Number:	Ms_JERR_123987
Title of the Manuscript:	Development of Composite Adsorptive Biosorbent from H3PO4-NaOH-BaCl2 Activated Almond Shell: Experimental and Statistical Approach
Type of the Article	Original Research Article

#### **General guidelines for the Peer Review process:**

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. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

<https://r1.reviewerhub.org/general-editorial-policy/>

#### **Important Policies Regarding Peer Review**

Peer review Comments Approval Policy: <https://r1.reviewerhub.org/peer-review-comments-approval-policy/>

Benefits for Reviewers: <https://r1.reviewerhub.org/benefits-for-reviewers>

## Review Form 3

### PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</b></p>	<p>There has been a lot of research conducted using almond shell as a biosorbent material for dye and metal ion removal. However, in this study, surface modification is done using H<sub>3</sub>PO<sub>4</sub>, NaOH, and BaCl<sub>2</sub> (acid, base, and salt) agents to prepare new composites for the removal of methylene blue dye. The statistical approach increases the value of this manuscript.</p> <p><b>SEE ATTACHMENT</b></p>	
<p><b>Is the title of the article suitable? (If not please suggest an alternative title)</b></p>	<p>I think it is necessary to use "modified" instead of "activated".</p> <p>Development of Composite Adsorptive Biosorbent from H<sub>3</sub>PO<sub>4</sub>-NaOH-BaCl<sub>2</sub> Modified Almond Shell: Experimental and Statistical Approach</p>	
<p><b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b></p>	<p>Yes</p>	
<p><b>Are subsections and structure of the manuscript appropriate?</b></p>	<p>Yes</p>	
<p><b>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</b></p>	<p>Please draw the chemical structure of Methylene Blue using appropriate software like ChemDraw.</p> <p>The accuracy of the measurements is not provided.</p> <p>The particle size selection range is too large; why was this range chosen? Why were H<sub>3</sub>PO<sub>4</sub>, NaOH, and BaCl<sub>2</sub> selected as treatment agents for the modification of almond shells?</p> <p>In the experimental design, why were 20% and 60% chosen as the lower and upper limits, respectively?</p> <p>Clearly state the null and alternative hypotheses for the ANOVA test.</p> <p>Additionally, many chemical formulas are written incorrectly.</p> <p>Using the R<sup>2</sup> value alone, you cannot claim that the linear model is the best fit for this study. Instead, you should state that the linear model is the best fit based on the lowest error value.</p> <p>The mixing ratio of the modified biosorbent does not significantly affect the adsorption capacity; please explain.</p> <p>There is no control sample; please conduct an experiment with a control sample.</p>	
<p><b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b></p>	<p>The reference style is not correct. Please correct the references according to the journal guidelines.</p>	

### Review Form 3

Minor REVISION comments  <b>Is the language/English quality of the article suitable for scholarly communications?</b>	Need to develop writing skills.	
<b>Optional/General</b> comments	<ul style="list-style-type: none"><li>The Experimental section is insufficient. Please conduct more experiments for characterization of modified biosorbent and optimization of parameters. For example, include Scanning Electron Microscopic (SEM) images for the treated and untreated samples to check their surface morphology, Fourier Transform Infrared (FTIR) spectroscopy, optimization of particle size, pH of methylene blue, biosorbent dosage, etc.</li><li>How do you determine that the surface of the almond shell is activated? Provide a mechanism for the surface activation process.</li></ul>	

### **PART 2:**

	<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)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

### **Reviewer Details:**

Name:	<b>A.P.G.M.V. Samaraweera</b>
Department, University & Country	<b>University of Peradeniya, Sri Lanka</b>