

Review Form 3

Journal Name:	Asian Journal of Research in Biochemistry
Manuscript Number:	Ms_AJRB_126531
Title of the Manuscript:	Effect Of Biodigester Effluent On Carbohydrate Metabolizing Enzymes, Glutathione And Glutathione-Related Enzyme In The African Catfish (Clarias Gariepinus)
Type of the Article	

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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.		
Is the title of the article suitable? (If not please suggest an alternative title)		
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.		
Are subsections and structure of the manuscript appropriate?		
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.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. -		

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<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>		
<p>Optional/General comments</p>	<p>Review Comments</p> <p>Abstract</p> <ol style="list-style-type: none"> 1. Rephrase the study's aim to make it more concise and direct. For instance, "This study investigates the effects of pig dung biodigester effluent (PDBE) on key metabolic enzymes and antioxidant markers in <i>Clarias gariepinus</i>." 2. Include specific statistical data from the results, such as precise percentage increases in enzyme activity or reductions in glutathione levels (e.g., percentage changes in enzyme levels to add precision). 3. Strengthen the concluding sentence to reflect practical implications more precisely. For instance, "These findings support the use of diluted PDBE as a safe, cost-effective feed supplement in catfish aquaculture." 4. Revise grammatical errors (e.g., "where purchased" should be "were purchased"). 5. Ensure consistent use of past tense, as the study has been completed. <p>Introduction</p> <ol style="list-style-type: none"> 4. Provide a short, informative statement on biodigester effluent composition and why it could be a viable feed alternative. 5. Articulate the gap in literature more precisely. For instance, "Limited studies have evaluated the metabolic impact of biodigester effluents on aquaculture species, particularly concerning toxicity markers." 6. Including more recent studies to strengthen rationale. Research from the last 5 years on effluent use in aquaculture would bolster the introduction's relevance. 7. In the second paragraph last sentence "but with <i>E. coli</i> presence which was removed upon treatment" introduce the full meaning of <i>E. coli</i>. <p>Materials and Methods</p> <ol style="list-style-type: none"> 7. Expand sampling specifics, such as the total volume of effluent used, and clarify why a 24-hour exposure period was chosen. 8. Explicitly state adherence to any specific ethical or international animal research guidelines (if not already mentioned). 9. Clearly explain why freshwater was chosen as the control and discuss any other control setups considered. 10. Provide data on the effluent's pH, temperature, and biochemical composition to ensure repeatability for other researchers. 11. Justify the choice of a 1:10 dilution ratio by referencing existing standards or relevant studies. <p>Results</p> <ol style="list-style-type: none"> 12. Clearly report all statistical comparisons, including p-values for each observed change, to enhance transparency. 13. Consider adding more figures or graphs, especially for enzyme activity data, as this will make trends in the data clearer. 14. Use specific subheadings for each biomarker analyzed (e.g., "Glutathione Peroxidase Activity"). 15. Ensure all units are presented consistently and verify that all values, such as "IU/L/min" for enzyme activity, adhere to accepted standards. 16. Where possible, indicate the range of raw data values (min, max) for each measurement, as this adds context to standard errors. <p>Discussion</p> <ol style="list-style-type: none"> 17. Strengthen the discussion of each enzyme's role, explaining how variations in their levels relate to effluent toxicity or safety. 18. Emphasize contributions of the study. For example, if previous studies have not examined the metabolic impact of PDBE on <i>Clarias gariepinus</i>, stress this 	

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	<p>uniqueness.</p> <p>19. Address the limitations associated with a small sample size (15 fish) directly. I can acknowledge that while the findings are indicative, larger samples might offer more generalizable insights.</p> <p>20. Where possible, compare the observed results to other species of fish exposed to similar effluents to contextualize findings.</p> <p>Conclusion</p> <p>21. Summarize the most critical findings succinctly, focusing on the practical value of dilution in PDBE application.</p> <p>22. Emphasize the study's contributions to regulatory guidelines for safe effluent use in aquaculture.</p> <p>23. Suggest specific future research, such as testing PDBE on other economically important fish species or evaluating long-term exposure effects.</p> <p>Generally</p> <p>24. Conduct a thorough review for grammatical and typographical errors to improve readability.</p> <p>25. Ensure all citations and references adhere to a consistent format, checking for recent updates in cited literature.</p>	
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PART 2:

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

Reviewer Details:

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