

**Review Form 3**

6

Journal Name:	<b>Asian Journal of Biotechnology and Genetic Engineering</b>
Manuscript Number:	<b>Ms_AJBGE_122278</b>
Title of the Manuscript:	<b>Some activators of peroxidase from peel of watermelon in the oxidation of guaiacol</b>
Type of the Article	<b>Original Research Article</b>

### Review Form 3

#### **PART 1: Review Comments**

<b>Compulsory</b> 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>
<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>	Minerals are an essential element for normal plant growth and metabolism plays a significant role in a number of physiological processes. However, when absorbed in excess quantities, these are highly toxic to plant growth potentially leading to physiological disorders via the generation of reactive oxygen species (ROS) and free radicals. Oxidative stress by formation of ROS and oxidation of biomolecules such as lipids, proteins, nucleic acids, carbohydrates, and almost every other organic constituent of the living cell is an important aspect of metal toxicity. Plant cells can be protected from ROS by enzymatic defense mechanisms like superoxide dismutase (SOD), catalase (CAT), and peroxidase (POD) and nonenzymatic defense mechanisms like free amino acids especially proline, ascorbate, and glutathione and phenolic compounds. Less is known about the effects of transport and uptake on Cu Fe, Mn, Mg, and other mineral element assimilation. Therefore, the current research topic is very attractive for the scientific community.	
<b>Is the title of the article suitable? (If not please suggest an alternative title)</b>	Although the title of the article seems good however if the word 'metal' will be added as below: <b>"Some metal activators of peroxidase from peel of watermelon in the oxidation of guaiacol"</b> then now I think it has become more effective and well-suited.	

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<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><b>Abstract:</b> The abstract of this article is not good. A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the experimental design, the principal results, and major conclusions. I have suggested addition and deletion in the abstract in reviewed manuscript (refer to the attached reviewed manuscript). The Abstract also has grammatical mistakes (refer to the attached reviewed manuscript). I have deleted "Methodology" in the abstract as it was in too much details which is not suitable for "Abstract" because a detailed methodology is only required in "Materials and Methods" section. Therefore it should be summarized to 4 to 5 lines in abstract writing. Only optimal and significant results are required here in abstract writing. In "conclusion" rather than general discussion, one should describe what has been concluded from this research, it includes why the results are significant and advance in the field (refer to the attached reviewed manuscript).</p> <p><b>Introduction:</b> The introduction section lacks sufficient details to help the reader understand the background of the research problem. It should describe the objectives of the work and provide an <b>adequate background</b>, avoiding a detailed literature survey or a summary of the results.</p> <p><b>Material and Methods:</b> The methods described in this section lack citations or references. The methods and materials used should be stated clearly and in sufficient detail to permit the work to be repeated by others if desired. Only new techniques need to be described in detail; known methods must have adequate references. The generic name is always written in italics. There is great controversy in the description of wavelengths used. Here 780 nm is mentioned but in 'Abstract' and 2.2.2 heading it is mentioned as 470 nm. 780 nm is not the UV range of the electromagnetic spectrum, then why author has mentioned it here as UV? Units of wavelength are missing. please add it. Italicise the scientific name of the fruit. The ionic strength of the buffer is too low. For enzymes' studies 0.5 M or 50 mM is recommended. Why 0.1 M buffer is used for crude enzyme extraction. What is the optimum pH of the enzyme? Enzyme preparation was done at pH 7.0 while initial reaction rate of the enzyme was determined at pH 5.4. It creates discrepancies in the results. Both procedures should be performed at same pH value that must be optimum value of the enzyme. Guaiacol has used as a substrate of the enzyme. How the author determined 0.2 mL of 0.02 mM is the enough amount to saturate the active sites of the enzyme? Please correct the formula of hydrogen peroxide. How long the reaction was carried out and at which temperature? Please correct the formula of hydrogen peroxide. Please add citation to this method. Add full stop. Define this symbol <math>\Delta</math>, please. Correct the unit description. Write it in correct way. Please add citation for this method. Please describe in details how means value were calculated. A separate Heading 2.2.3.4. add here as «Statistical analysis» and describe in details how the results were analyzed statistically? Which software was used? also mention version of the software. Describe statistical analysis in details (refer to the attached reviewed manuscript).</p> <p><b>Results and Discussion:</b> The Results section should describe the outcome of the study and it should be in sufficient details. The Discussion should be an interpretation of the results and their significance with reference to publications of other laboratories. In the current discussion there is the scarcity of comparison with results of other laboratories and if there it exist is an irrelevant comparison. How can we compare peroxidase enzyme from plant source with those from animal source? Give some examples from plant sources (refer to the attached reviewed manuscript too).</p> <p><b>Conclusions:</b> This section also does not suitable write-up. Only general discussion exists in it. It also has to be revised by adding what has been concluded from the current research (refer to the attached reviewed manuscript too).</p>	
<p><b>Are subsections and structure of the manuscript appropriate?</b></p>	<p>The structure of the manuscript is appropriate however, I have added one more heading as "Statistical Analysis" (refer to the attached reviewed manuscript too).</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>As pointed out in above comments the scientific methods used in this manuscript have not been described with citations. So without reference how a method seems to be authentic. This lack of citation has raised the questions about its scientific correctness. Further in any enzyme study where we have to investigate the effect of metals on rate of reaction we must have to equilibrate the enzyme for sufficient time at its optimum temperature and pH without substrate prior to set the reaction. This equilibration step is missing in this manuscript which again pointed out the scientific incorrectness of the research.</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>References are not sufficient. The manuscript needs major revision and addition of references in each section as described in above comments. Reviewer cannot suggest at this stage because its authors' work and they should improve their article by searching for suitable and relevant references.</p>	

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Minor REVISION comments <b>Is the language/English quality of the article suitable for scholarly communications?</b>	English quality of the article is not suitable for scholarly communications. There are too much grammatical and spelling mistakes. Some I have indicated and corrected in the revised manuscript. Please seek help from native English language speaker (refer to the attached reviewed manuscript too).	
<b>General</b> comments	A major revision is must for the improvement of the manuscript.	

### **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:**

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