

Review Form 1.7

Journal Name:	Asian Journal of Research in Zoology
Manuscript Number:	Ms_AJRIZ_96993
Title of the Manuscript:	Effects of Methanolic Leaves Extracts of Botanicals on the Toxicity and Enzymatic Parameters of <i>Callosobruchus maculatus</i> Fab. Larvae (Coleoptera: Bruchidae)
Type of the Article	Original Research Article

General guideline for 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 guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (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)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> Is the manuscript important for scientific community? (Please write few sentences on this manuscript) Is the title of the article suitable? (If not please suggest an alternative title) Is the abstract of the article comprehensive? Are subsections and structure of the manuscript appropriate? Do you think the manuscript is scientifically correct? Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<ol style="list-style-type: none"> The work is interesting for presenting a natural and ecologically correct alternative for pest control in bean stock. In addition to being important from a socioeconomic point of view. Suggested title: Toxic effects of methanolic extracts of plant leaves on enzymatic parameters of <i>Callosobruchus maculatus</i> Fab. Larvae (Coleoptera: Bruchidae). Yes. Yes. I don't think so, because the methods and results are not clear. It is not possible to find the article of reference 39, because the citation is incorrect. Suggested references: - Kalpna, Hajam YA, Kumar R. Management of stored grain pest with special reference to <i>Callosobruchus maculatus</i>, a major pest of cowpea: A review. <i>Heliyon</i>. 2022 Jan 1;8(1):e08703. doi: 10.1016/j.heliyon.2021.e08703. eCollection 2022 Jan. - Sanon A, Zakaria I, Clémentine L DB, Niango BM, Honora NRC. Potential of Botanicals to Control <i>Callosobruchus maculatus</i> (Col.: Chrysomelidae, Bruchinae), a Major Pest of Stored Cowpeas in Burkina Faso: A review. <i>Int J Insect Sci</i>. 2018 Jul 25;10:1179543318790260. doi: 10.1177/1179543318790260. eCollection 2018. - War AR, Murugesan S, Boddepalli VN, Srinivasan R, Nair RM. Mechanism of Resistance in Mungbean [<i>Vigna radiata</i> (L.) R. Wilczek var. <i>radiata</i>] to bruchids, <i>Callosobruchus</i> spp. (Coleoptera: Bruchidae). <p>Other comments In 2.5. Determnation of LC50 of the methodology, the reference 20 - Adjoudji Ousman , M.B. Ngassoum , J.J. Essia-Ngang , L.S.T. Ngamo and R. Ndjouenkeu , 2007. <i>Insecticidal Activity of Spicy Plant Oils Against <i>Sitophilus zeamais</i> in Stored Maize in Cameroon. <i>Agricultural Journal</i>, 2: 192-196</i> - cannot be used because the authors worked with different botanical species, with an oil extract different from this work, which used an extract with methanol, and evaluated the LD50 response and not the LC50. There is inconsistency between the description of the toxicity experiment and the results, as in the first it is said that mortality was recorded after 24, 48 and 72 hours after treatment, while in the results it is said that it was after 96 hours of application of the formulations. In line 5 of the paragraph below table 1, there is also inconsistency, it says "Significantly higher mortality was recorded under binary formulations compared to single formulations at both treatment levels.", but in the end "There was no significant difference in mortality in unitary and binary formulations." Initially, the work has been referring to beans, but in the title of Table 2, it refers to maize seeds. Figure 1 does not show a difference between the concentrations, but it is not clear whether there is a difference between the studied extracts and the standard, apparently there is a difference between the standard and <i>L. africana</i>. The title also refers to maize seeds, but the work initially referred to beans. In results, subitem Transaminase enzymes activities, the statments "The average values of AST activity in <i>Sitophilus zeamais</i> were 3.0±0.25, 3.1±0.14 and 2.9±0.34 when compared to the control of 5.4±0.39. There was a significant difference between the treated and untreated larvae. Therefore, it is clear that the observed reduction in the enzymatic activities of AST was higher than that of ALT." do not refer to this study, as they are using larvae of an insect that is a pest of maize seeds while this manuscript used adults insects of <i>Callosobruchus maculatus</i>. In the Phosphatase enzymes subitem, apparently the results of the <i>U. chamae</i> extract do not differ from the control when the ACP activity is evaluated.</p>	
<p>Minor REVISION comments</p> <ol style="list-style-type: none"> Is language/English quality of the article suitable for scholarly communications? 	<p>This manuscript needs very minor corrections, but is completely understandable.</p>	

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Optional/General comments	In results In line 3 of the paragraph below table 1 there is a typo: "Significant difference (p<0.5) in mortality..." I believe it is $p<0.05$. In Table 2, I suggest placing the p values for each letter and/or number superscripted in the note. In the subitem Digestive Enzymes refer to the table and put the p value for each enzyme. In the subitem Transaminase enzymes activities refers the p value for each enzyme. In this item they are referring to larvae, but in the study methodology it was said that adult insects would be used. In the subitem Phosphatase enzymes, they continue to refer as if the work were done with larvae. In table 3, the meaning of the asterisks was missing, if it is a significant p value, say what the value is.	
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PART 2:

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

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