

Review Form 3

Journal Name:	Journal of Advances in Biology & Biotechnology
Manuscript Number:	Ms_JABB_121234
Title of the Manuscript:	"Silkworm Exuviae: A Rich Source of Chitosan with Unique Properties"
Type of the Article	Original Research Article

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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)
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.	There is potential in this manuscript. However, my concern is that it needs additional evidence and discussion to be provided by the authors to back the claim that the chitosan extracted from the silkworm exuviae has unique properties over chitosan extracted from other biological sources. There is a lack of comparative studies and literature to connect the source of the chitosan which are exuviae and larval cuticle in this case, the physicochemical properties and their unique advantages in potential applications. Additionally, as mentioned in one of the proceeding sections, analytical assays or identity tests need to be included pertaining to the successful extraction of chitin and chitosan from the cuticle and exuviae. The % yields are detailed for each in the manuscript but the details regarding the assays used for the same are missing.	
Is the title of the article suitable? (If not please suggest an alternative title)	<p>The current title "Silkworm Exuviae: A Rich Source of Chitosan with Unique Properties" suggests that the chitosan from the silkworm exuviae has unique properties, but the manuscript fails to provide definitive advantages of the chitosan extracted from the larval cuticle and exuviae and moult exuviae over the chitosan extracted from other sources. The manuscript needs to provide concrete comparative studies and/ or additional discussion depicting why the physicochemical properties analysed and the results observed make the chitin extracted from the silkworm exuviae in these specific growth stages, unique, over the chitosan extracted say from silkworm chrysalides or shrimps and other crustaceans. There are no comparative studies conducted to back the claim of uniqueness of the chitosan from the silkworm exuviae.</p> <p>For example, the manuscript states that the results observed from the moisture content determination align with Suresh <i>et al.</i> (2012), who found moisture content of 7.09% and 8.57% in chitosan from mulberry silkworm pupae and eri silkworm pupae, respectively. Then what makes the Chitosan from the larval cuticle unique?</p> <p>For the title to read that silkworm exuviae is a 'rich source' of Chitosan, please add detailed comparative evidence as to why the observed % chitosan yields are boast worthy. If the title reads as is then additional evidence and/ or discussion is necessary. Therefore, the current title should be revised. Suggested title could read: "Silkworm Exuviae: A Rich Source of Chitosan".</p>	
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.	The abstract states that 'The chitosan percentage varied significantly among different stages, with the highest content observed in bivoltine hybrid larval exuviae (19.37%)' which is Chitosan (%) produced over dry wt. of larval cuticle/exuviae. The abstract further states that 'the chitosan content was highest in the 5th day fifth instar bivoltine hybrid larval cuticle (75.95%)' which is Chitosan (%) produced over dry wt. of chitin. This is ambiguous. There should be clarity regarding the highest calculated Chitosan %.	
Are subsections and structure of the manuscript appropriate?	The references need to be numbered to make the article sections more lucid to the reader. Also, I would suggest separating the result and discussion sections to differentiate the purpose of those sections and for improved structural flow.	
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.	<ol style="list-style-type: none"> 1. The manuscript is missing analytical assays to conclude that chitin and chitosan were extracted successfully from the exuviae and cuticle with high purity. Please add those study details regarding the efficiency of chitin and chitosan extraction, to make the manuscript acceptable. 2. The material section is missing the source from where the commercial chitosan was procured. 3. Please include a statistical analysis subsection in the method section with detailed statistical parameters. 	

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Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references need to be numbered and in order, for them to be easy to connect to the main text. The references seem sufficient and recent.	
Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	<ol style="list-style-type: none">1. Please correct the author's name for this reference: Chitin is a natural polymer, chemically composed of linear chain of acetylglucosamine group [Synowieski et al 2003].2. A lot of places have grammatical errors including spelling errors. Please rectify them.	
Optional/General comments	Figures and tables are missing figure legends for detailed description.	

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>	

Reviewer Details:

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