

Review Form 3

Journal Name:	Journal of Advances in Biology & Biotechnology
Manuscript Number:	Ms_JABB_127188
Title of the Manuscript:	Extraction of High-Quality Genomic DNA Using Species Tailored Protocol for <i>Prosopis cineraria</i> (L.) Druce (Khejri)
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)
<p>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.</p>	<p>This manuscript is significant for the scientific community as it provides a species-specific, optimized protocol for extracting high-quality genomic DNA from <i>Prosopis cineraria</i>, a crucial species in arid ecosystems. The modifications to the conventional CTAB method address challenges posed by polysaccharides and polyphenols in plant tissues, ensuring higher DNA purity and yield. These improvements make the protocol practical for large-scale genetic studies, vital for conserving the genetic diversity of this keystone species.</p> <p>I appreciate this manuscript for its methodological rigor and the potential applicability of its findings in ecological conservation and genetic research. It bridges a critical gap in DNA extraction protocols for arid-region plants, presenting a cost-effective and reproducible solution.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The current title, "Extraction of High-Quality Genomic DNA Using Species Tailored Protocol for <i>Prosopis cineraria</i> (L.) Druce (Khejri)", is descriptive and communicates the main objective and significance of the study.</p>	
<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.</p>	<p>The abstract is informative and provides a clear overview of the study, covering the objectives, methodology, results, and conclusion. However, there is room for improvement in its structure and content to enhance its comprehensiveness and appeal.</p> <p>Suggestions for Improvement:</p> <ol style="list-style-type: none"> 1. Include a brief mention of why genomic DNA extraction is crucial for the conservation and genetic study of <i>Prosopis cineraria</i> in the context of its ecological and socio-economic significance. 2. Emphasize the novelty of the modifications made to the CTAB method, such as the use of antioxidants and adjustments to incubation and precipitation steps. 3. Include specific data from the study, such as the average yield, purity metrics (A260/280 and A260/230 ratios), and their significance in demonstrating minimal contamination. 4. Mention potential applications of the protocol in large-scale genetic studies, conservation biology, or breeding programs. 5. Avoid redundant phrases like "high-quality genomic DNA" being repeated multiple times. 	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The manuscript's structure and subsections are generally appropriate for a scientific research article, as it includes the key sections typically required: Abstract, Introduction, Materials and Methods, Results, Discussion, and Conclusion. However, there are areas where improvements can be made for clarity, consistency, and reader engagement.</p> <p>Suggestions for Improvement in Structure and Subsections:</p> <ol style="list-style-type: none"> 1. Abstract: The abstract is in place and effectively summarizes the study. Minor refinements (as suggested earlier) can enhance its impact. 2. Introduction: The introduction sets the context and outlines the importance of <i>Prosopis cineraria</i>. However, a brief mention of the challenges in existing DNA extraction methods for arid species could strengthen the rationale. 3. Materials and Methods: This section is detailed and well-organized. 4. Results: The results are presented clearly, with tables and figures aiding in data visualization. 5. Discussion: The discussion effectively explains the relevance of the findings but could include comparisons with previous protocols (e.g., Doyle & Doyle, 1990). 6. Conclusion: The conclusion is concise and summarizes the key outcomes. No changes are necessary unless new data or insights are added to the manuscript. 7. Figures and Tables: Ensure all figures and tables are numbered sequentially and referenced appropriately in the text. Legends should be concise but descriptive. 	
<p>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.</p>	<p>This manuscript demonstrates scientific correctness by employing well-established methodologies, such as the CTAB protocol, and introducing logical, species-specific modifications to address challenges in DNA extraction from <i>Prosopis cineraria</i>. The use of additional reagents like L-ascorbic acid and PVP, combined with optimized incubation times and ethanol precipitation, reflects a technically sound approach tailored to the biochemical complexity of the species.</p>	

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	The results are robust, as evidenced by consistent DNA yields with high purity ratios (A260/280: 1.6–2.3) across multiple genotypes, indicating minimal contamination and reproducibility of the method. Furthermore, the manuscript effectively bridges methodological advancements with practical applications, making it scientifically rigorous and highly relevant for conservation genetics and biodiversity research.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :	The manuscript references foundational studies on DNA extraction methods, such as Doyle and Doyle (1990), which are pivotal in the field. However, the inclusion of more recent literature would enhance the manuscript's relevance and depth. Incorporating studies that discuss advancements in plant DNA extraction techniques, especially those addressing challenges with polysaccharides and polyphenols, would provide a comprehensive perspective. Suggested Additional References: 1. Tamari, F., & Hinkley, C. S. (2016). Extraction of DNA from Plant Tissue: Review and Protocols. In <i>Plant Genotyping</i> (pp. 235-246). Springer. 2. Healey, A., Furtado, A., Cooper, T., & Henry, R. J. (2014). Protocol: a simple method for extracting next-generation sequencing quality genomic DNA from recalcitrant plant species. <i>Plant Methods</i> , 10, 21.	
<u>Minor</u> REVISION comments Is the language/English quality of the article suitable for scholarly communications?	While the article is comprehensible and suitable for scholarly communication, minor refinements in grammar, syntax, and language style will enhance its professionalism and impact.	
<u>Optional/General</u> comments	--	

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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