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| Journal Name: | [**Asian Journal of Research in Biochemistry**](https://journalajrb.com/index.php/AJRB) |
| Manuscript Number: | **Ms\_AJRB\_136968** |
| Title of the Manuscript: | **Determination of Antioxidant Capacity in aqueous extracts of Corymbia citriodora Using DPPH, ABTS, FRAP, TPC, and Hydrogen Peroxide Assays** |
| Type of the Article | **Original Research Article** |

**PART 1: Comments**

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|  | **Reviewer's comment**   |  |  | | --- | --- | | **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer** | | | **review.** |  | | **Author’ s Feedback** (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. A minimum of 3-4 sentences may be required for this part.** | This manuscript contributes significantly to the scientific community by providing comprehensive insights into the antioxidant properties of *Corymbia citriodora*. The use of multiple assays (DPPH, ABTS, FRAP, TPC, and Hydrogen Peroxide) enhances the reliability of the findings. Understanding the antioxidant capacity of this plant can lead to potential applications in food preservation and health supplements. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes, the title accurately reflects the content and focus of the research. An alternative title could be: "Evaluating the Antioxidant Potential of *Corymbia citriodora* Extracts through Multiple Assays". |  |
| **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 is generally comprehensive but could benefit from a brief mention of the key findings and implications of the study. Including specific results from the assays would enhance clarity. |  |
| **Is the manuscript scientifically, correct? Please write here.** | The manuscript appears to be scientifically correct, with appropriate methodologies employed for the antioxidant assays. However, a more detailed explanation of the statistical analyses used would strengthen the scientific rigor. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | The references are mostly sufficient and relevant; however, including more recent studies (from the last 3- years) on antioxidant assays and their applications could provide a broader context.  Some suggested references:   1. F. S. N. Bin-Asal, A.A.M. Saeed, AR. A. Bin Yahia (2025). "*Ceropegia variegata*: Phytochemical profiling, antioxidant prowess, and antimicrobial potential." Clinical Traditional Medicine and Pharmacology, 6, 200194. This article discusses the phytochemical composition and evaluates the antioxidant and antimicrobial activities of *Ceropegia variegata*, providing insights into its potential health benefits. 2. A. Kiss, V. A. Papp, Anna Pál, J. Prokisch, S. Mirani, B. E. Toth, & T. Alshaal (2025). "Comparative Study on Antioxidant Capacity of Diverse Food Matrices: Applicability, Suitability, and Inter-Correlation of Multiple Assays to Assess Polyphenol and Antioxidant Status." Antioxidants, 14(3), 317. This study investigates the antioxidant capacity of various food matrices using multiple assays, focusing on the correlation between polyphenol content and antioxidant activity, and highlights the effectiveness of assays like FRAP, TEAC, and DPPH for profiling polyphenol-rich plants. 3. S.Z. Sayyed, P.N. Nagane, & A.A. Kulkarni (2023). "Antioxidant Activity of Medicinal Plants: A Review." Biological Forum – An International Journal, 15(5a), 234-241. This review examines the antioxidant potential of various medicinal plants, highlighting their role in reducing oxidative stress and treating diseases such as cardiovascular disorders, diabetes, atherosclerosis, and cancer; it discusses the therapeutic properties of plant parts like stems, roots, bark, leaves, fruits, and seeds, compares them to synthetic antioxidants like BHT and BHA, and provides updated insights into how these plants help manage oxidative stress levels. |  |
| **Is the language/English quality of the article suitable for scholarly communications?** | The language of the manuscript is generally clear and appropriate for scholarly communication; however, minor grammatical corrections and improvements in sentence structure are recommended for enhanced readability. Below are some specific suggestions for improvement:     1. Consistency in Terminology: Ensure consistent use of terms throughout the manuscript. For example, "*Corymbia citriodora*" should always be italicized.      1. Clarity and Conciseness: Some sentences could be simplified for clarity. For instance:   "Natural antioxidants derived from plants have gained considerable attention due to their safety, efficacy, and potential health benefits compared to synthetic antioxidants, which have been associated with toxicity and adverse effects."  Consider breaking this into two sentences for better readability.     1. Verb Tense Consistency: Maintain a consistent verb tense. In the results section, phrases like "the results indicate" should remain in the present tense when discussing ongoing findings.      1. Punctuation: Ensure proper use of commas for clarity. For example:   "The DPPH and ABTS assays revealed strong radical scavenging properties, while the FRAP assay demonstrated a high reduction potential."  Consider rephrasing for conciseness: "The DPPH and ABTS assays revealed strong radical scavenging properties, whereas the FRAP assay demonstrated high reduction potential."     1. Redundant Phrasing: Avoid redundancy. For example, in "the extract possesses significant antioxidant activity, with variations across different methods," the phrase "across different methods" can be omitted if the methods are already defined.      1. Statistical Terms: Clarify statistical terminology. Instead of simply stating "analyzed statistically using ANOVA," specify what is being compared or which hypothesis is being tested.      1. Use of Abbreviations: When first introducing abbreviations like TPC, be sure to define them clearly before using the acronym.      1. Typographical Errors: Check for typos or formatting issues, including inconsistent spacing or font sizes in tables.      1. Reference Formatting: Ensure that all citations are formatted consistently according to the chosen style guide (e.g., APA, MLA).      1. Concluding Remarks: Strengthen the conclusion to emphasize the significance of the findings and future research directions.     By addressing these points, the manuscript can achieve greater clarity, coherence, and professionalism. |  |
| **Optional/General** comments | The manuscript is well-structured and presents valuable data. Considerations for future research directions could be included to enhance the discussion section. |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |

**Reviewer Details:**

**Adel A. M. Saeed, University of Aden, Yemen**