

Review Form 3

Journal Name:	European Journal of Medicinal Plants
Manuscript Number:	Ms_EJMP_130513
Title of the Manuscript:	Antimicrobial Efficacy and Impact on denture Properties of prepared herbal denture cleansers -An Invitro study
Type of the Article	Original Research Article

PART 1: 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>
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 offers valuable insights into the potential of herbal denture cleansers as an alternative to traditional chemical options, addressing both antimicrobial efficacy and the preservation of denture material properties. By evaluating natural extracts such as Ocimum sanctum and Aloe barbadensis miller, this study contributes to the growing body of research on eco-friendly and biocompatible oral hygiene solutions. The findings are significant for both clinical and public health applications, as they highlight safer and sustainable options for denture care, which could reduce health risks associated with chemical cleansers. This research paves the way for further exploration of herbal-based products in the field of dental care, offering promising alternatives for enhancing oral hygiene and overall health.	
Is the title of the article suitable? (If not please suggest an alternative title)	No I suggest the following title "Prepared Herbal Denture Cleansers: Antimicrobial Effectiveness and Physical Property Assessment"	

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<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 quite comprehensive, providing a clear overview of the study's background, objectives, methodology, results, and conclusion. However, there are a few points that could be adjusted or expanded for greater clarity and completeness:</p> <p>Background: The background mentions microbial colonization and the need for herbal alternatives, which is well-presented. It could be beneficial to briefly highlight why existing chemical cleansers are a concern (e.g., prevalence of allergic reactions or resistance issues). This would strengthen the rationale for the study.</p> <p>Suggested addition: "Chemical denture cleansers, commonly used for hygiene, are associated with adverse effects such as tissue irritation, allergic reactions, and the potential for antimicrobial resistance, prompting the need for more biocompatible alternatives."</p> <p>Materials and Methods: The method section provides a solid description of how the study was conducted, but it could benefit from more detail on how the physical properties of the denture materials were evaluated (e.g., specific methods for assessing surface roughness, hardness, etc.). This would help the reader understand the precision of the evaluation process.</p> <p>Suggested addition: "Surface roughness, hardness, and flexural strength were assessed using standard techniques such as profilometry, microhardness testing, and a three-point bending test, respectively."</p> <p>Results: The results are well-explained, but including information about the statistical significance or effect size for the antimicrobial activity compared to the standard drugs would give a clearer idea of the efficacy of the herbal cleansers. Mentioning the range of concentrations tested would also add clarity.</p> <p>Suggested addition: "The antimicrobial activity was statistically significant at concentrations ranging from X to Y ($p < 0.05$), although the inhibition zones were smaller than those achieved by standard drugs."</p> <p>Conclusion: The conclusion is concise but could benefit from a slight expansion on the broader implications of the findings, particularly regarding potential future research directions or real-world applications (e.g., clinical trials, market acceptance).</p> <p>Suggested addition: "These findings suggest that herbal denture cleansers could be a promising alternative for individuals seeking eco-friendly oral hygiene products. Further clinical trials and long-term studies are recommended to assess their real-world efficacy and user acceptance."</p>	
<p>Is the manuscript scientifically, correct? Please write here.</p>	<p>The manuscript appears to be scientifically grounded, with detailed methods and clear results. However, there are some points to consider in terms of clarity, accuracy, and potential improvements. Below are some notes and suggestions:</p> <p>Introduction The introduction is well-structured, explaining the issue of microbial colonization on dentures and the potential for natural alternatives. However, some refinement could be made for clarity: "Plants such as Ocimum sanctum (Tulsi), Aloe barbadensis miller (Aloe vera), Coffea arabica (Green coffee), Elettaria cardamomum (Cardamom), and Salvadora persica (Miswak) have been reported for their uses in oral hygiene and as they have demonstrated significant antimicrobial activities against common pathogens in addition to having a refreshing properties on the oral cavity": The phrase "demonstrated significant antimicrobial activities" should be revised for better clarity. You could simplify it to, "demonstrated antimicrobial properties against common oral pathogens, along with refreshing effects in the oral cavity."</p> <p>Materials and Methods Sample size: You mentioned using G power software for the sample size calculation. It might be</p>	

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	<p>helpful to briefly specify the effect size or assumptions used (e.g., alpha level, power) to provide more context for readers who may want to replicate the study.</p> <p>Plant extraction process: The method of preparing herbal methanolic extracts seems solid. However, the concentration of herbal extracts is mentioned as a percentage (e.g., 25%) which could be clarified: is it weight/volume (mg/mL) or another measure?</p> <p>Herbal extract concentrations: The concentrations used in the preparation of the herbal denture cleansers appear logical, but it would be helpful to mention if these were based on previous studies, or if preliminary trials informed the choice of concentrations.</p> <p>Results Statistical Analysis: The statistical methods used are appropriate. The use of ANOVA and post hoc Tukey's test is standard for multiple comparisons. However, make sure that the assumptions of ANOVA (normality, homogeneity of variance) were tested and reported in the manuscript. Results Presentation: The results are well-organized, and the statistical terminology is clear and consistent. Discussion Findings and Comparisons: The discussion is thorough, with appropriate comparisons to other studies. It would be beneficial if you might explore the practical implications of using herbal cleansers on dentures, such as cost, availability, and patient preference, as it adds relevance to the broader context.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>The references provided are generally well-chosen and cover a broad range of relevant topics for your study on herbal denture cleansers. However, there are a few points to considered :</p> <p>Several of the references (e.g., Gendreau and Loewy, 2011; Sardi et al., 2013) are a bit older. While they are still relevant, including more recent studies would strengthen the foundation of your research. For instance, recent work on the antimicrobial efficacy of herbal agents in dental hygiene (e.g., studies from 2020 or 2021) would be valuable to show that this area is evolving.</p> <p>Many references are highly relevant to your study's focus on the antimicrobial effects of herbal cleansers and their impact on denture materials. However, there is a small gap in references specifically covering the direct comparison of herbal cleansers with standard chemical cleansers in terms of efficacy and denture property changes, which could be bolstered by more recent literature or systematic reviews.</p>	
<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>Yes but here is Suggestions for clarity/improvement: Ensure consistency in the naming of plant species (e.g., Aloe vera vs. Aloe barbadensis miller). Choose one and stick with it. In the introduction, the phrase "a milder, natural and a compatible denture cleansers" should be corrected to "milder, natural, and compatible denture cleansers."</p>	
<p>Optional/General comments</p>	<p>This manuscript is scientifically sound, well-organized, and presents promising findings. With some minor improvements in the writing, clarity, and explanation of the results, it could be strengthened further for publication.</p>	

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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
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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