

Review Form 1.7

Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_107637
Title of the Manuscript:	Nickel content of Pineapple (Ananas comosus) .L and Banana (Musa sapientum) .L. sold in Gwagwalada Area Council , Abuja -Nigeria .
Type of the Article	Original Research Article

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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"> 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</p>	<ol style="list-style-type: none"> 1. Yes 2. Yes 3. Yes, but some changes can add value to the current one as given below. 4. Yes 5. Yes 6. Yes. <p>The comments are given below in the general section.</p>	
<p>Minor REVISION comments</p> <ol style="list-style-type: none"> 1. Is language/English quality of the article suitable for scholarly communications? 	<p>Yes</p>	
<p>Optional/General comments</p>	<p>I- Abstract Sections:</p> <p>Weak Points:</p> <ol style="list-style-type: none"> 1. Sample Source and Size: The abstract doesn't specify the exact number of samples collected for analysis or elaborate on the representativeness of the samples. It would be beneficial to know if these samples are considered a random or comprehensive representation of the population. 2. Potential Confounding Factors: The abstract does not address potential confounding factors that might influence nickel concentrations in these fruits. Factors like soil type, agricultural practices, and environmental contamination could affect the results. 3. Limited Discussion of Environmental Factors: While the abstract touches on factors that may contribute to elevated nickel levels (bioavailability of Ni, farming practices, environmental contamination), a more in-depth discussion or analysis of these factors would enhance the study. 4. Absence of Mitigation Strategies: The abstract doesn't propose any potential strategies for mitigating nickel accumulation in these fruits. This could be a valuable addition, especially for stakeholders concerned with food safety. 5. Conclusion: While the abstract provides a thorough overview of the study's findings, a concise conclusion summarizing the main implications and potential next steps could strengthen the abstract's impact. <p>II- Introduction:</p> <ol style="list-style-type: none"> 1. Specific Research Objectives: The introduction could benefit from explicitly stating the 	

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	<p>specific research objectives or questions that the study aims to address. This would provide clear direction to the reader about what the study intends to achieve.</p> <ol style="list-style-type: none">2. Environmental Contamination Sources: While it briefly mentions anthropogenic activities as a source of nickel contamination, it could be more detailed. Providing specific examples or discussing common industries or practices associated with nickel contamination would give the reader a clearer understanding.3. Health Risks and Implications: The section discussing the health risks of nickel exposure could be more comprehensive. It briefly mentions potential health effects, but a more detailed discussion of the specific risks, including allergic reactions, respiratory issues, and carcinogenicity, would provide a stronger foundation for understanding the significance of studying nickel levels in fruits.4. Transition to Study Rationale: The transition from general information about fruits and their nutritional value to the specific focus on nickel could be made more explicit. Clearly stating why nickel levels in fruits are important or relevant to health and environmental concerns would strengthen the rationale for the study.5. Justification for Studying Pineapples and Bananas: While the choice of pineapples and bananas as study subjects is mentioned, providing a brief rationale for why these particular fruits were selected would add depth to the introduction. This could include factors like their popularity, widespread consumption, or their known susceptibility to nickel accumulation.6. Potential Contributions to Existing Knowledge: It would be beneficial to briefly discuss how the study's findings could contribute to existing knowledge about nickel levels in fruits and their potential implications for human health. This could highlight the originality and significance of the research.7. Link to Regulatory Standards: The introduction touches on the importance of establishing regulatory standards, but it could be beneficial to briefly explain how findings from this study could potentially inform or influence existing regulations or guidelines related to nickel levels in food.8. Integration of Citations: While the introduction cites various sources, there could be a smoother integration of these citations within the text. This would ensure that the information is supported by relevant research and strengthen the overall credibility of the introduction.9. Conclusion of Introduction: It might be useful to conclude the introduction by summarizing the key points discussed and stating the specific aims of the present study, or add it after the Introduction section under a title named: (Aims of the current work). <p>III- Methodology:</p> <ol style="list-style-type: none">1. Sample Size Justification: It would be beneficial to include a brief rationale for why five samples of each fruit were chosen. This could be based on factors like representativeness, feasibility, or statistical power.2. Preparation of Nitric Acid: Clarifying the concentration or purity of the nitric acid used in the digestion process would be helpful. This information is crucial as variations in acid concentration can affect the digestion process.3. Safety Measures: Given that nitric acid is a hazardous chemical, it's important to briefly mention any safety measures taken during the digestion process. This could include the use of a fume hood, personal protective equipment, or specific disposal procedures.4. Certified Reference Material (CRM) Handling: While it's mentioned that CRM IAEA-V-8 was used, it would be beneficial to briefly describe how this material was prepared and handled to ensure accuracy in the analysis.5. Data Normality Assumption: Since the Kolmogorov-Smirnov test was used to test for normal distribution, it might be helpful to briefly mention whether the data met this assumption and if any transformations were applied if normality was not met.6. Additional Statistical Tests: It could be helpful to mention if any additional statistical tests or analyses were conducted beyond the Kolmogorov-Smirnov test and independent T-test. This would provide a more complete understanding of the data analysis process.7. Units: Ensuring consistency in units throughout the methods section is important. For example, in the section discussing latitude and longitude, it's mentioned as "8.9647° N, 7.0796° E," but in the digestion process, "20ml" and "100m3" are used. Double-checking	
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	<p>and providing appropriate units will enhance clarity.</p> <p>IV- Results:</p> <ol style="list-style-type: none">1. Discussion of Variability: Consider briefly discussing the variability within the data. For example, mentioning if there was a wide range of nickel concentrations within the samples, or if the standard error of the mean indicates a high or low level of variability.2. Unit Consistency: In Figure 1, it's a good practice to explicitly state the units on the y-axis. This would ensure clarity and consistency in reporting.3. Labeling in Figure 1: The x-axis of Figure 1 could be more descriptive. For instance, instead of "Pineapple" and "Banana," you could specify "Nickel Concentration (mg/kg) in Pineapple" and "Nickel Concentration (mg/kg) in Banana" for clarity.4. Additional Statistical Tests: While you mention that there was no statistically significant difference ($p>0.05$) in nickel concentrations between both fruits, you might want to briefly mention the statistical test you used to confirm this (e.g., t-test, ANOVA, etc.).5. Discussion of WHO/FAO Permissible Limit Exceedance: It would be beneficial to briefly discuss the implications of both pineapple and banana exceeding the WHO/FAO permissible limit for nickel. This could include potential health risks or the need for regulatory measures.6. Reference Formatting: In the table, the FAO/WHO maximum permissible limit is referenced to George-Obeng (2023). It might be helpful to include this source in the reference list. <p>V- Discussion:</p> <ol style="list-style-type: none">1. Potential Sources of Nickel Contamination: While you touch on environmental contamination and agricultural practices as potential sources of nickel in fruits, consider providing more specific information on these sources. For example, mention specific industrial activities, pollution sources, or types of fertilizers that are known to contribute to nickel contamination.2. Bioavailability and Uptake Mechanisms: Elaborate on the mechanisms by which plants absorb and accumulate nickel. This could include discussions on factors affecting nickel bioavailability in soil, root uptake processes, and translocation within the plant.3. Variability in Nickel Concentrations: Discuss any potential reasons for the observed variation in nickel concentrations between banana and pineapple. Factors like soil type, pH levels, and specific plant physiology could contribute to these differences.4. Health Implications: Provide a more detailed discussion on the specific health risks associated with elevated nickel levels in fruits. Mention specific health conditions or diseases that have been linked to excessive nickel exposure.5. Regulatory Measures: Consider discussing existing regulations or guidelines pertaining to nickel levels in fruits in the study area or in other regions. This could provide context for the significance of the findings.6. Risk Assessment: You may want to briefly touch on the importance of conducting a risk assessment, which involves evaluating the potential health risks associated with the observed nickel levels and estimating the level of exposure that consumers may face.7. Limitations of the Study: Mention any limitations or constraints that may have affected the study's findings. For instance, consider factors like sample size, geographic variation, or the analytical method used.8. Recommendations for Future Research: Suggest avenues for future research. This could involve investigating specific sources of nickel contamination, evaluating different agricultural practices, or exploring potential mitigation strategies. <p>VI- Conclusions:</p> <ol style="list-style-type: none">1. Quantitative Recommendations: Consider providing more specific and quantifiable recommendations. For example, in recommendation 2, you could suggest specific testing frequencies for soil and water or recommend certain thresholds that would trigger remedial	
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	<p>actions.</p> <ol style="list-style-type: none"> 2. Incorporate Local Authorities: It might be beneficial to involve local agricultural and environmental authorities in the implementation of these recommendations. They can play a crucial role in monitoring and regulating nickel levels in agricultural products. 3. Community Engagement: Consider including a recommendation about engaging local communities. They can be valuable partners in reporting unusual nickel levels, especially if they are involved in farming or have direct contact with the agricultural environment. 4. Long-term Studies: Suggest the need for long-term studies to monitor trends in nickel levels over time. This would provide a more comprehensive understanding of the issue and help in the development of sustainable practices. 5. Further Research: Emphasize the importance of further research, particularly in understanding the specific sources of nickel contamination and its pathways into plants. Additionally, research on innovative technologies or methods for reducing nickel uptake by plants could be encouraged. 6. Consider Economic Aspects: Include recommendations on assessing the economic implications of implementing stricter regulations. This could involve evaluating the potential costs and benefits for both farmers and consumers. 7. Collaborative Efforts: Encourage collaboration between different stakeholders, including farmers, scientists, regulatory bodies, and local communities. Collective efforts can lead to more effective solutions. 8. Policy Advocacy: Suggest advocating for policies that address nickel contamination in agriculture. This could involve engaging with policymakers to enact or strengthen regulations. 9. Citation for WHO/FAO Guidelines: It might be helpful to provide a citation for the WHO/FAO guidelines on nickel content in plants for reference. <p style="text-align: center;">Thank you & Wishing you all the best</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>	

Reviewer Details:

Name:	Sahar Issa
Department, University & Country	Alexandria University, Egypt