

Review Form 3

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	Ms_IRJPAC_130622
Title of the Manuscript:	Biosorbent Based on Tomato Stems: Adsorption Properties Using Methylene Blue as Pollutant Test
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.	<p>The manuscript presents a methodologically study on tomato stem-derived activated carbon for methylene blue removal. While following standard protocols, it contributes to sustainable waste management research.</p> <p>This work addresses wastewater treatment using agricultural waste, specifically tomato stems from Côte d'Ivoire's agricultural sector. The study demonstrates practical application of waste valorization would strengthen its scientific impact</p>	Thanks for the comments
Is the title of the article suitable? (If not please suggest an alternative title)	<p>The current title "Biosorbent Based on Tomato Stems: Adsorption Properties Using Methylene Blue as Pollutant Test" is suitable but could be more precise.</p> <p>Suggested alternative:</p> <p>Biosorbent from Tomato Stems: Adsorption Properties Using Methylene Blue as Pollutant Test</p> <p>This revision reflects:</p> <ul style="list-style-type: none"> • The biosorbent material source (tomato stems) • The target application (adsorption) • The test pollutant (methylene blue) <p>"Based" is unnecessary and makes the title wordier without adding meaning</p>	Title has been changed to Biosorbent from Tomato Stems: Adsorption Properties Using Methylene Blue as Pollutant Test

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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 ok but would benefit from:</p> <p>Add:</p> <ul style="list-style-type: none"> • Surface characterization details of the prepared activated carbon • Maximum adsorption capacity value (4.15 mg/g) • Brief comparison with similar adsorbents <p>Delete:</p> <ul style="list-style-type: none"> • Vague descriptor "cheaper, safer and more effective" 	<ul style="list-style-type: none"> • Due to the severe lack of characterization equipment's in the University where this work was carried out, we could not do any characterization test. • Maximum adsorption capacity was included in abstract. • Comparisons are given within the main text. <ul style="list-style-type: none"> • Vague descriptor "cheaper, safer and more effective" has been removed.
<p>Is the manuscript scientifically, correct? Please write here.</p>	<p>The manuscript is scientifically correct with appropriate experimental methods and data analysis, but has several areas needing correction:</p> <ol style="list-style-type: none"> 1. Missing material characterization (BET, FTIR, SEM) prevents validation of proposed adsorption mechanisms 2. Temperature dependence claims lack thermodynamic parameters (ΔH, ΔG, ΔS) 3. Pseudo-second-order kinetics conclusion needs stronger justification beyond correlation coefficient 4. Point of zero charge methodology requires more detailed experimental description 5. Error bars/statistical analysis absent from all figures 6. Unit conversions and calculations need verification (especially in Tables 2-4) <p>While these issues don't invalidate the findings, addressing them would strengthen the scientific rigor</p>	<ol style="list-style-type: none"> 1. Due to the severe lack of characterization equipment's in the University where this work was carried out, we could not do any characterization test. 2. Although there are several papers reported in the literature using these relationships $K_d = q_e/C_e$ or $K_c = (C_0 - C_e)/(C_0)$, or $K_d = (V/m) * (C_0 - C_e)/C_0$, or $K_c = C_s/C_e$ as equilibrium constant for obtaining the thermodynamic parameters such as: enthalpy changes, entropy changes, free Gibbs energy, the thermodynamic parameter obtained by these K_c or K_d are not correct. This study need more data. 3. We have chosen this model to describe the kinetics not only based on the correlation coefficient, but also because of the fact that the adsorption capacity calculated with this model is closer to that obtained experimentally. 4. Point zero charge methodology details are given in experimental section 2.3. 5. Experiments were not repeated. Therefore, errors bars could not be given. 6. According to literature and our calculation, units given are corrects. Additionally, all the units are given in DEFINITIONS, ACRONYMS, ABBREVIATIONS section.
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>Some additions would strengthen the manuscript:</p> <ol style="list-style-type: none"> 1. Include recent reviews on agricultural waste-based activated carbons for dye removal 2. Add references on surface characterization techniques for activated carbons 3. Include thermodynamic studies of methylene blue adsorption <p>Suggested references:</p> <ul style="list-style-type: none"> • Dauda et al. (2023) "Investigation of Adsorptive Removal of Methylene Blue from Synthetic Wastewater Using Polymeric Composite" JOTCSA, 961-974 • Dada et al. (2020) "Biosorption of bromo-based dyes from wastewater using low-cost adsorbents: A review" J. Sci. Res. Rep., 26(8):34-56 • Dada et al. "Application of Agricultural Waste for the Adsorption of Pharmaceutical Pollutants in Wastewater: A Review" <p>These would strengthen:</p> <p>Comparative analysis section, Methodology validation and Current state-of-art discussion</p>	<p>These recommendations were addressed above. Thanks for the comments</p>

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<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>While generally clear, the manuscript needs editing for technical phrasing and formatting consistency (e.g., "high--quality" vs "high quality", "L⁻¹" vs "L⁻¹")</p>	<p>Corrected in the manuscript.</p>
<p>Optional/General comments</p>	<p>RECOMMENDATION: The manuscript requires revision before publication consideration. The authors must:</p> <ul style="list-style-type: none"> • Add comprehensive material characterization • Provide comparative advantages over existing adsorbents • Include thermodynamic analysis • Improve technical presentation quality 	<p>All these issues are addressed above.</p>

PART 2:

	<p>Reviewer's comment</p>	<p>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>
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	