

REVIEWER'S REPORT

Manuscript No.: IJAR-52681

Date: July 07, 2025

Title: Effectiveness of Tea Residue to Reduce Heavy Metal Contents from Industrial Waste Water

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		X		
Techn. Quality			X	
Clarity			X	
Significance			X	

Reviewer Name: Lakhdar Guerine

Date: July 07, 2025

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

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Detailed Reviewer's Report

REVIEWER'S REPORT

This study evaluates the effectiveness of tea residues as a low-cost adsorbent to remove heavy metals (Pb, Cr, Zn) from industrial wastewater in the BSCIC area of Mymensingh, Bangladesh. Water samples were analyzed for physicochemical parameters and metal concentrations, revealing levels exceeding standards in three of four sites. Various doses of tea waste (2g, 5g, 10g) were tested over 1, 7, and 15 days, showing higher removal rates with 10g doses at 7 to 15 days depending on the metal. The results demonstrate the potential of tea waste as an economical and environmentally friendly solution for reducing metal pollution in industrial effluents.

Strengths

- a) Relevant topic: addresses water pollution from heavy metals, a significant environmental issue.
- b) Low-cost solution: proposes using tea waste as an eco-friendly, inexpensive adsorbent.
- c) Simple methodology: easy to replicate with basic lab equipment.
- d) Clear results: higher doses of tea residue showed good heavy metal removal efficiency.

Weaknesses

- 1) Language and writing: English is awkward and lacks scientific precision.
- 2) No statistical analysis: missing significance testing to validate results.
- 3) No adsorption modeling: lacks advanced analysis like Langmuir or Freundlich isotherms.
- 4) Structure is confusing: text is long, repetitive, and poorly organized.

Recommendations :

Major revision to improve English, structure, and statistical analysis. The topic is relevant for local environmental management in Bangladesh.