

REVIEWER'S REPORT

Manuscript No.: IJAR-53886

Date: 18-09-2025

Title: Systematic Review on Mycodegradation of Plastic.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

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

Reviewer Name: Tahir Ahmad

Reviewer's Comment for Publication.

Overall Evaluation

The manuscript provides a comprehensive systematic review on the mycodegradation of plastics by fungi over the last 30 years. It synthesizes findings from 205 carefully selected publications, analyzing the diversity of fungal species, types of plastics degraded, isolation sources, and analytical methods used. The review is timely and relevant given the global plastic pollution crisis and provides valuable insights for researchers exploring eco-friendly biodegradation strategies.

Strengths

- Extensive and methodical literature review covering a large timeframe (30 years).
- Clear documentation of the systematic review process, including SCOPUS search strategy, inclusion/exclusion criteria, and flowchart.
- Detailed discussion of fungal species, degradation rates, and methods (SEM, FTIR, DSC, GC-MS, etc.), which adds depth and rigor.

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

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- Highlights potential for fungi as a sustainable, eco-friendly solution for plastic waste management.
- Tables and figures effectively summarize complex experimental data.

Suggestions for Minor Revision

1. **Language & Formatting** – Perform careful proofreading to correct minor grammatical errors, long sentences, and spacing issues for improved readability.
2. **Tables & Figures** – Ensure all tables (e.g., summary of fungal species and degradation results) and figures (flowchart) are numbered, captioned, and referenced consistently in the text.
3. **Discussion Depth** – Expand on the practical implications of fungal plastic degradation in large-scale environmental applications and compare trends across regions or polymer types.
4. **Conclusion** – Strengthen the conclusion by summarizing the most promising fungal species and techniques, and outline future research directions.

Conclusion

This systematic review is a significant contribution to environmental microbiology, waste management, and biotechnological research on sustainable plastic degradation. With the suggested minor edits, the manuscript will be suitable for publication.