ISSN: 2320-5407
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

Manuscript No: IJAR-54073 **Date: 29-09-2025**

Title: CELLULAR TOXICITY INDUCED BY ALCOHOL IN VITRO: COMPARATIVE STUDY OF ANTIOXIDANT, HEPATOPROTECTIVE, ANTI-HEMOLYTIC AND DNA PROTECTIVE ACTIVITY OF NATURAL VS SYNTHETIC VITAMIN C.

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: Mir Tanveer

Reviewer's Comment for Publication:

This manuscript presents a thorough **in-vitro comparison of natural (amla and lemon juice) versus synthetic vitamin C** in protecting against alcohol-induced oxidative damage. The work is well-motivated, exploring inexpensive, dietary alternatives to synthetic supplements for alcoholic liver disease prevention.

Strengths

- **Novel focus** on fresh, raw juices rather than purified extracts, reflecting real dietary consumption.
- Multi-assay approach (ABTS, DPPH, MTT, AST, RBC hemolysis, catalase, comet assay) provides convincing evidence of antioxidant, hepatoprotective, anti-hemolytic and DNA-protective activities.

ISSN: 2320-5407
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

- Data tables clearly demonstrate significant protective effects, with amla slightly outperforming lemon and approaching the efficacy of synthetic vitamin C.

Minor Revisions Suggested

1. Methodological clarity
    - Provide precise units for all IC_{50} values (µl/ml vs µg/ml) for direct comparability.
    - Expand details of statistical analysis: specify software, exact p-values, and correction for multiple comparisons.
2. Language & Formatting
    - Edit for minor grammatical errors and typographical issues (e.g., spacing around units, consistent use of µl/µg).
    - Improve figure legends—Figure 1 should include scale bars and clearer labeling of treatment groups.
3. Discussion/Conclusion
    - Briefly acknowledge the limitations of extrapolating in-vitro results to human clinical settings and potential variability in juice composition.
4. References
    - Ensure all citations follow a consistent style; a few entries have formatting inconsistencies (e.g., missing journal issue numbers).

Overall, the study is original, significant, and methodologically sound, with results supporting the potential of commonly available fruits as cost-effective antioxidant and hepatoprotective agents.