ISSN(O): 2320-5407 | ISSN(P): 3107-4928

ISSN NO. 2320-5407

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

REVIEWER'S REPORT

Manuscript No.: IJAR-56942

Title: PHYTOCHEMICAL PROPERTIES AND IN VITRO ANTIOXIDANT ACTIVITY OF *LAWSONIA 7 INERMIS (*L) EXTRACTS.

Recommendation:
Accept as it is .....
Accept after minor revision.....
Accept after major revision .....
Do not accept (*Reasons below*) .....

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

Reviewer's ID: Dr. Sumathi

Detailed Reviewer's Report

1. **Lawsonia inermis, also known as hina, the henna tree, the mignonette tree, and the Egyptian privet, is a flowering plant and one of the only two species of the genus Lawsonia, with the other being Lawsonia odorata. It is used as a traditional medicinal plant.**
2. **Phytochemistry is the scientific study of chemical compounds produced by plants, focusing on isolating, analyzing, and understanding the role of plant secondary metabolites. It bridges botany and chemistry to examine plant defense mechanisms, chemical structures, and potential medicinal, nutritional, or industrial applications.**
3. **Phytochemistry is the study of phytochemicals, which are chemicals derived from plants. Phytochemists strive to describe the structures of the large number of secondary metabolites found in plants, the functions of these compounds in human and plant biology, and the biosynthesis of these compounds.**
4. **Antioxidant activities involve inhibiting molecular oxidation, scavenging free radicals, and neutralizing reactive oxygen species (ROS) to prevent cellular damage and oxidative stress. These**

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

compounds act as hydrogen/electron donors, transitioning metal chelators, or enzymatic agents (e.g., superoxide dismutase) to stop chain reactions. Key sources include polyphenols, vitamins C and E, and carotenoids, categorized by their efficacy in reducing ROS-related chronic diseases.

5. **In vitro antioxidant activity refers to the measured ability of a compound or extract to neutralize free radicals and inhibit oxidative damage in a controlled, non-living environment (such as test tubes or cell cultures). These tests are rapid, cost-effective screening methods used to identify antioxidants by assessing their capacity to scavenge radicals (e.g., DPPH, ABTS) or reduce metals.**
6. **Phytochemicals are bioactive, non-essential compounds produced by plants for protection, providing health benefits such as antioxidant, antimicrobial, and anti-inflammatory properties. Found in fruits, vegetables, nuts, and herbs, they help combat chronic diseases like cancer, diabetes, and cardiovascular disease by regulating immunity and reducing cellular damage.**
7. **Key words can be added more.**
8. **Result part is awesome with graphs for values.**
9. **Summary points can be included.**
10. **Discussion points also be added some more.**
11. **After those changes good to publish in your journal.**