

# Review of: "Phytochemical Analysis and Antioxidant Activity of Extracts from *Berchemia zeyheri* — A Swazi Medicinal Plant"

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Potential competing interests: No potential competing interests to declare.

Dear authors,

My review is as follows.

## Abstract

1. Line 11, add unit after .....showed a radical scavenging activity of  $87.84 \pm 0.01$

2. Line 16 Delete  $\mu\text{g/mL}$

## Materials and Methods

3. Please provide the age and growth stage of the plant sample.

4. Why did the author choose the maceration technique followed by the reflux technique? Add more discussion in the Results and Discussion section.

5. Why did the author use different initial plant powders for each extraction? Please provide the extraction yield percentage for comparison.

6. Move 2.4, Solvents, reagents, and chemicals, to the first subheading of the Materials and Methods section.

7. Define the extract concentrations and positive control in the DPPH radical activity assay.

8. Why did the author choose only the DPPH assay for antioxidant activity determination? There are other assays available for this purpose.

## Results and Discussion

9. In the phytochemical screening section, add more discussion about the phytochemicals found in the leaves and stem, noting any similarities or differences.

10. In section 3.2, DPPH Radical Scavenging Activity and  $IC_{50}$  Values, change 'leaf extract' to 'bark extract' in line 4.

11. Table 1,

11.1 Review and revise the assignment of statistical values a, b, c, etc., to ensure that higher or lower averages are consistently labeled as 'a' across the entire table.

11.2 Add the statistical values of  $IC_{50}$ .

11.3 Define the exact  $IC_{50}$  value of ascorbic acid.

11.4 Footnote, Values with different superscript letters are statistically different within a column or row?

12. The data shown in Figure 1 and Figure 2 is the same as in Table 1. Delete Figure 1 and Figure 2.

13. Revise this paragraph “In a previous study, an aqueous....., respectively in the superoxide anion scavenging assay (Ndlala et al., 2006) on page 8” for conciseness.

14. Revise this sentence “Overall, all extracts showed.....than the positive control, ascorbic acid, on page 9” for conciseness.

15. Add more discussion about the effects of solvents on phytochemicals and antioxidant properties. Which solvent yields the best results and why?

16. Statistical analysis comparing solvents and plant parts should be included. Determine whether there are significant statistical differences and add more discussion. This would enhance the experiment's intrigue.