

Review of: "Uncovering Insights Into the Bio-Efficiency of Zingiber Officinale Roscoe: Understanding Components That Contribute Significantly to Ginger's Anti-inflammatory and Antioxidant Potential in Relationship With Modern Drying Methods"

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Potential competing interests: No potential competing interests to declare.

1. Introduction

What exactly is the purpose of this study? This should be clearly defined.

I would recommend supplementing this section with information on the most important or valuable bioactive compounds in ginger.

2.1.1. Plant material:

A more precise location for "farm garden in Ibadan" should be provided.

Was it really possible to ensure exactly "60°C" in the oven?

Where were the crushed samples stored between processing and further analysis (what material was the packaging made of, what was the temperature during storage?).

2.1.2. Preparation of extracts

Did you really weigh the samples to exactly 5g?

Could you really provide exactly "50°C"?

2.1.3. Determination of Total Phenolic Content (TPC)

Could you really provide exactly "25°C"?

"TPC was presented as mg GAE/100 g" What is meant here - 100 g of dry matter or 100 g of product?

2.1.4. Determination of Total Flavonoid Content (TFC)

"TFC was expressed as mg CE/100 g." What is meant here - 100 g of dry matter or 100 g of product?

2.1.5.2. Inhibition of albumin denaturation

Could you really provide exactly "37°C"?

2.1.6. GC-MS analysis

Was it really possible to provide exactly "55°C" and other temperatures?

2.2.5. Protein-ligand complex stability and conformational flexibility by Molecular Dynamics simulations

In the sentence "Visual Molecular Dynamics (VMD) version 1.9.4 [35] was used to monitor the complexes' motions and structural changes through the course of the simulation period" what is [35]?

What data processing methods were used? How many repetitions were performed to determine each parameter? What method was used to determine significant or nonsignificant differences between sample results?

3.2. Phytochemical screening of raw, oven-dried and freeze-dried ginger samples

Below the pictures and tables, please decode the sample abbreviations.

If numerical values are indicated in a figure or table that is visible in the main body of the text, then they should not be repeated in the text of the manuscript. From the visible results, it can be concluded that only one measurement (one repetition) has been carried out in the study, but it is not enough for scientific research.

If in section 2.1.5. Determination of Antioxidant activity is mentioned only in 2.1.5.1. DPPH radical scavenging activity and 2.1.5.2. Inhibition of albumin denaturation, so why do "ABTS Scavenging activity (mg TE/g)" and "Nitric oxide scavenging activity (% inhibition)" appear in the results?

4. Discussions

Is it really the aim of this study, stated in section 1, Introduction, that "The aim of the ADMET study was to predict the qualified ginger ligands' toxicity, distribution, metabolism, and excretion patterns from the molecular docking study."?

Section 4, Discussions, needs to be supplemented with a real discussion and comparison with other studies.

5. Conclusions

I would recommend adding more specific conclusions to section 5, Conclusions, such as which drying method is better to preserve bioactive compounds more effectively.

