

# Review of: "Evaluation of Ambient Air Quality Levels at Various Locations within Lead City University, Ibadan"

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Potential competing interests: No potential competing interests to declare.

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**Type:** Article

**Title:** Evaluation of Ambient Air Quality Levels at Various Locations within Lead City University, Ibadan

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This study is aimed to evaluate ambient air quality (i.e., temperature, relative humidity (RH), CO, CO<sub>2</sub>, and particulate matter (PM)) at various locations within Lead City University, Ibadan.

## **Comments to the Editorial Office (Confidential)**

Dear Editor,

Thanks for choosing me to review this manuscript.

I think it should be "Accept after major correction" to improve it before publication.

Best regards,

## **Comments to the Authors:**

- In general, authors have confusion about indoor and outdoor sites. In addition, they wrote about indoor and outdoor pollution, but they introduce results of outdoor only. These make interruption and confusion for readers.

## **Abstract:**

- Authors wrote "Based on this, evaluation of ambient air quality (i.e., temperature, relative humidity (RH), CO<sub>2</sub>, and particulate matter (PM<sub>2.5</sub>)) at various locations within Lead City University, Ibadan, is essential," but in the abstract, they mentioned CO and CO<sub>2</sub> levels. They wrote "The findings also show that afternoon CO<sub>2</sub> levels range from 468.5 ppm to 971.6 ppm, with Location 13 having an unusually high average. Morning CO levels ranged from 4.1 µg/m<sup>3</sup> to 49 µg/m<sup>3</sup>, with location 13 showing an outlier at 184.2 µg/m<sup>3</sup>. CO<sub>2</sub> and CO levels are mostly within acceptable ranges." In addition, they did not mention PM levels. These make it confusing for readers, so the abstract should be corrected.

- Authors wrote “Ambient concentrations of carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), relative humidity (RH), temperature (TEMP), and particulate matter (PM) were recorded from 15 locations across Lead City University over a two-week period.” Why did the authors write “Indoor Air Quality” in the keywords?
- Keywords need to change and be 4-6 at least.

### **Introduction:**

- Authors wrote “Some of the most common air pollutants include particulate matter (PM), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), ozone (O<sub>3</sub>), lead (Pb), and volatile organic compounds (VOCs),” this is enough to mention common air pollutants. So, authors should not need to write about NO<sub>2</sub>, SO<sub>2</sub>, O<sub>3</sub>, and Pb.
- Scope of the Study is the same meaning as Main and Specific Objectives; why do authors repeat the same meaning?

### **Materials and Methods**

- In Study Area, can authors add a map showing sampling sites and land use around the university location?
- Authors wrote “Identification of Sampling Locations: Areas or zones within Lead City University were selected as sampling locations. These areas were representative of the various activities and potential sources of air pollution within the university, such as the school entrance gate, school exit gate, library, hospital, basketball pitch, workshop, car park, radio station, Senate College of Medicine, Pharmacy/Nursing/EHS/Chew, chapel, dumpsite, male hostel, and female hostel”. According to this description, it is not ambient air sites only. Authors should have classified them into ambient air sites (outdoor sites, such as the school entrance gate, school exit gate, basketball pitch, dumpsite, and car park) and indoor sites (such as library, hospital, workshop, radio station, Senate College of Medicine, Pharmacy/Nursing/EHS/Chew, chapel, male hostel, and female hostel).
- Authors wrote “Specific air quality parameters were selected for assessment. These parameters include indoor and outdoor relative humidity, temperature, particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), carbon dioxide (CO<sub>2</sub>), and carbon monoxide (CO). The selection of these parameters is based on their relevance to air quality assessment and their association with potential sources of pollution within Lead City University”. Were those parameters measured at indoor and outdoor sites?
- In Selected Air Quality Parameters, authors should mention only the parameters they measured, not repeat the same text with the same meaning as in the introduction.
- Authors wrote “An air quality detector was used in measuring CO<sub>2</sub>, CO, temperature, relative humidity, and particulate matter”. They should write the detector name and model. In addition, which type of PM?
- In my opinion, these parts are not needed: “2.7.2. Materials Required; 2.7.3. Post-Measurement Steps; 2.7.5. Safety Precautions; 2.7.4. Data Analysis and Interpretation; 2.8. Data Sheets; and 2.8.1. Data Validation.”
- “2.11. Limitations of the study” should be transferred before the conclusion part.

### **Results**

- Table -1 should be transferred to “2.2.1. Identification of Sampling Locations”.
- In results (table 2), the author introduces PM levels, while in Materials and Methods: 2.7. Parameters Measured, the

author wrote “Specify the air quality parameters measured, including Relative Humidity (RH), Temperature, PM<sub>2.5</sub>, CO<sub>2</sub>, and CO”. Why did they not change PM in the table into PM<sub>2.5</sub>?

- Units in tables and figures not present.

### **Discussion**

- Manuscript did not contain a discussion of the results obtained.

### **Summary of Findings and Conclusion**

- It should be divided into a discussion part and a conclusion part.
- Conclusion not clear.

### **References**

- Need to update, more than 75% before year 2018.