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.

This article addresses an important and contemporary issue related to the well-being of humans. The paper will need many improvements to be able to meet the standard of an academic article.

General observations

There was no benchmark that justified the conclusions drawn from the study. The national and international ambient standard values are expected to be indicated for the pollutants under study to see if the average values from the study exceeded these standards. The US EPA has the following National Ambient Air Quality Standard for PM_{10}, which is 150 $\mu g/m^3$ for the daily average, and $PM_{2.5}$, which is 35 $\mu g/m^3$, and CO, which is 40 mg/m^3 in 1 hr.

The instruments used for the field work needed to be stated (the names of the instruments); how were the instruments calibrated and validated? What standard procedure was followed during the field measurement? It is not enough to say that 'standard procedures were followed'. The use of blank samples as control suggests that filters were used, and nothing was said about the time period for filter exposure.

What informed the locations chosen for the measurements? For example, library, radio station, chapel, entrance gate. Where exactly were the instruments placed during the measurements (inside or outside the building)?

The sampling period was 10 days; is this a pilot study? Is the period suspected to be the peak period for pollutants at this location?

Wind speed and wind direction are very important in studying air pollutants; how can we be sure of the sources of the pollutants as these pollutants keep moving?

Sampling frequency is another issue; why morning and evening? An important event can happen in between measurements that may not be captured.

The paper mentioned indoor and outdoor measurements, but that did not reflect in the data.

The measured quantities did not carry units, so it is difficult to know what the values mean.

Specific observations

Which PM was measured, PM_{10} or $PM_{2.5}$?

Everything written under 2.7.2 to 2.7.5 should be a reported speech of what actually transpired during the field work.

CO_2 and CO should not be exchanged for each other.

Under data analysis, only what is done should be written, e.g., there was no boxplot, no use of ANOVA, etc.

The raw data are not needed in the paper; we need tables that can help to understand the data. Such tables must be part of the discussion.

The graphs necessary for this study include:

1. Comparison between indoor and outdoor temperatures and RH
2. Average values of each parameter for all locations
3. The diurnal graph for the parameters
4. Correlation between pollutants