

Response to Referees' Queries (DWES-RC2)

| RC2 | |
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| 1. It is not clear how this research relates to existing literature. | 1. This study has been related with previous studies to check its correlation with existing literatures by presenting values of previous studies with the present study in Table 1. |
| 2. It is not clear from the paper why only these physico-chemical parameters were chosen (and not microbiological). | Reason for using these properties has been supported with a reference thus: "In this study, groundwater samples were obtained from prominent industrial and residential locations of Lagos State, Nigeria and were evaluated to know the concentration of heavy metals (copper, zinc, lead, manganese, iron, cobalt, cadmium and chromium) that are present and other physico-chemical properties such as total dissolved solid, pH, electrical conductivity, chemical oxygen demand, biological oxygen demand, chloride, nitrate, sulphate and phosphate (Mohsin et al. 2013)." |
| 3. Only insert figures when it adds to the information in the text. This is not the case for the Figures presented in the manuscript. All information could be given in one Table. | All information has been presented in one Table (Table 1) as instructed by the referee. |
| 4. Ground water = groundwater. | This has been taken care of. |
| 5. 22-23, avoid conclusions that cannot be drawn from the data, since microbiological parameters are also of importance for drinking water production. In addition, the risk of future contaminations is present in all urban groundwaters in the world. | This conclusion has been removed. |
| 6. - 30-31, not clear what is meant. | The statement "Due to these attributes, enormous waste effluents are being generated on an hourly basis through industrial and residential activities with higher demand for domestic water consumption linked to her densely populated instinct." means high industrial and manufacturing activities of Lagos contributed to contamination of groundwater due to large waste effluents generated from these industries. |
| 7. - 66, "to know the concentration of heavy metals" | This has been corrected. |
| 8. - 82, not clear what is meant and give reference | This gives brief information about the study area. Reference has been cited. |
| 9. - 89-90, not clear what is meant. | The sentence has been reframed for proper understanding thus: "The high population with enormous commercial activities attributes was the major reason for choosing these industrial and residential areas as case studies for this research work." |
| 10. - 92, delete "each" | The word "each" has been deleted. |
| 11. - 104-105, insert reference | Reference has been inserted. |
| 12. - 115, DO is not unitless | Thank you for this huge notification. This has been corrected accordingly. |
| 13. - 124-125, explanation of pH is not necessary to give. | The explanation of pH has been removed. |

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| 14. - 127-128, delete sentence (repetition) | This sentence “This revealed pH range of 6.35 to 7.58 with minimum and maximum exhibited by RW1 and IW1 respectively” has been deleted as instructed. |
| 15. - 135, this explanation is highly disputable. CO ₂ in groundwater does not come from the atmosphere. | This statement has been restructured for better understanding thus “Slightly acidic nature of RW1 and RW2 may result from the deposit carbonic acid formed via reaction of carbon dioxide (from larger population in residential areas than industrial areas) with rain water (Tiwari et al, 2015).” |
| 16. - 138, which chemical processes? | An example of chemical process has been given thus: “This may be transported from soil surface level to form deposits in the ground water via chemical process such as leaching over period of time.” |
| 17. - 150-152, not necessary to explain TDS. Combine TDS with EC. | TDS explanation has been removed. |
| 18. - 171-172, delete sentence (repetition) | This sentence “The values range between 450-1190 µS/cm with IW1 exhibiting maximum EC while RW2 exhibited minimum EC.” has been removed. |
| 19. - 192, avoid conclusions that cannot be drawn from the data, since microbiological parameters are also of importance for drinking water production. In addition, the risk of future contaminations is present in all urban groundwaters in the world. | This conclusion has been restructured to reflect better understanding. |
| 20. - 194-197, how this conclusion can be drawn? | Yes, this conclusion can be drawn as increased volume of organics from municipal and solid wastes from residential areas are major contributor of both chemical and biological oxygen demand. |
| 21. - 225-227, not necessary to explain nitrate, etc | The statement has been removed. |
| 22. -397-399, what is the meaning of these correlations? Can conclusions be drawn about the source of the pollution? | The correlation does not give information about the source of pollution. It only gives information about the level of dependency of pollutants over one another. |
| 23. - 416-419, avoid conclusions that cannot be drawn from the data, since microbiological parameters are also of importance for drinking water production. In addition, the risk of future contaminations is present in all urban groundwaters in the world. | The conclusions were arrived at based on the examined parameters excluding microbiological parameters. Thus the statement has been reframed thus: “With reference to the examined properties, groundwater samples from residential locations are more suitable for drinking than those from industrial locations.” |
| 24. - 423, low cost treatment with chlorine will not remove Fe, Mn and Pb. | Authors are not saying chlorine will remove Fe, Mn and Pb. The statement reflects transformation of the heavy metals into sediments which will enhance their removal via filtration due to the presence of added chlorine. |
| 25. - 425-429, not necessary to do this research when it is evident that water quality is bad, so more emphasis must be given to centralized water supply and sewerage. | This recommendation was made to enable researchers expose the world to level of exposure of residents to heavy metals contamination on time basis. A mathematical model can be developed in future to forecast the rate of exposure. |