

## ***Interactive comment on “Industrial and Residential Ground Water Physico-Chemical Properties Assessment in Lagos Metropolis” by Lekan Taofeek Popoola et al.***

### **Anonymous Referee #2**

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In this paper the water quality of the groundwater in several areas in Lagos Metropolis is described based on physico-chemical analyses. The topic is of importance since people use groundwater as a source for drinking water, while industries and households pollute the same groundwater. However, the presented paper is rather superficial and only based on 4 water samples. From there conclusions are derived that are not based on sound observations, analyses and literature. General comments: - It is not clear how this research relates to existing literature - It is not clear from the paper why only these physico-chemical parameters were chosen (and not microbiological). - 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. -

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Ground water = groundwater Specific comments: - 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. - 30-31, not clear what is meant. - 66, “to know the concentration of heavy metals” - 82, not clear what is meant and give reference - 89-90, not clear what is meant - 92, delete “each” - 104-105, insert reference - 115, DO is not unitless - 124-125, explanation of pH is not necessary to give. - 127-128, delete sentence (repetition) - 135, this explanation is highly disputable. CO<sub>2</sub> in groundwater does not come from the atmosphere. - 138, which chemical processes? - 150-152, not necessary to explain TDS. Combine TDS with EC. - 171-172, delete sentence (repetition) - 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. - 194-197, how this conclusion can be drawn? - 225-227, not necessary to explain nitrate, etc. ... - 397-399, what is the meaning of these correlations? Can conclusions be drawn about the source of the pollution? - 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. - 423, low cost treatment with chlorine will not remove Fe, Mn and Pb. - 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.

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