



## **Effect of Lead and Zinc Mining Activities on Groundwater Quality in Ishiagu, Ebonyi State, Nigeria**

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**Abstract:** Concentrations of lead and zinc in groundwater samples were investigated in four towns in Ishiagu. Twenty groundwater samples were collected from five villages in each of the towns. The water samples were analyzed for possible health problems in the area using atomic absorption spectrophotometer. The results show that the whole water samples contained lead and zinc in relatively high quantity. It shows that the whole water exceeded the recommended 0.01 and 0.03mg/l by World Health Organization permissible limit for drinking water. Based on this, the groundwater from Ishiagu is unfit for human consumption without treatment. The lead level ranges from 0.01 to 0.08 and 0.03 to 0.57 respectively for rainy and dry season while zinc ranges from 0.03 to 0.09 and 0.010 to 0.059 for dry and rainy seasons. The statistical analysis also shows that there is significance different between dry and rainy season concentrations of these metals in the four selected village.

**Key word:** *Groundwater pollution, environmental health problems, mining.*

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