

## "Assessment of Radionuclides in some Fruits from Niger Delta, Nigeria, and its Health Risks"

### I - General comments.

This article discusses the radiological risk assessment in terms of ingestion dose and cancer risk in selected fruits collected from Niger Delta, Nigeria. From an analytical point of view, this is interesting because the problem of radionuclide in fruits is topical. However, it contains many errors in both form and substance. So, after a complete revision, the article can be published.

### II - Errors and suggestions for the manuscript

1°)- **The Introduction:** The introduction tells a story, but the context within the study content is empty. The article does not deal with assessing activities in environmental media such as rocks, soil, water, sediment, etc. but fruits. Please the introduction should be paragraph as:

- a. First paragraph: Give a brief description of radiations. Highlight the total annual radiation dose received by a citizen of Nigeria's population each year. What percentage is contributed by Natural sources and Man-made radiation? Stand on the percentage to justify the primary contributor to the total annual dose. Mention one constituent of the primary radiation source (Hint: Ingestion dose) and name the main radionuclides contributed (Hint:  $^{238}\text{U}$  and  $^{232}\text{Th}$  series (..... mSv/y) and  $^{40}\text{K}$  (.... mSv/y).
- b. Second paragraph: How do human beings receive radionuclides through their system? (Hint: Consumption of food with different radionuclides). Discuss the importance of fruits to the human health system.
- c. Third paragraph: Why is it essential to monitor the radiological effects of the consumption of fruits? Are there any concerns raised by researchers around the world about radionuclides in fruits? Detail the types of fruits that have been studied in other parts of the world. In Nigeria, how many fruits have been studied concerning radionuclides assessment? In this current study, why did the authors select those fruits?
- d. Fourth paragraph: Highlight the objective(s) of the study.

2°)- **Materials and Method:** The materials and method section needs to be reorganized.

- a. Study area
- b. Sample collection
- c. Sample preparation
- d. Quality assurance/Quality control
- e. Validation of the analytical technique
- f. Instrumental operation and analysis

g. Radiological Parameters

How can you use only one sample of Apricot fruit to conduct the studies? At least five or more so that the judgment of the results will be clear. Would you please reconsider the number of samples for each fruit selected for the study?

**3°)- Results:**

Separate the results section from the materials and method section. Rearrange the results. Check the various units carefully, especially the ingestion dose conversion factor (Hint: Sv/Bq).

**4°)- Discussion:** Most of the discussion points should be moved to the results section. In the discussion section, please highlight the implications of the study. Write scientifically.

**4°)- Conclusion:** The points raised in the conclusion section is just the summary of the results. Add brief advice according to your study that will be helpful for public or policy-makers

**5°)- One final tip:** always proofread a manuscript before submitting it (Proofread the abstract).

END