

Review Form 1.6

Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	Ms_CJAST_79556
Title of the Manuscript:	Assessment of Radionuclide Concentration Associated With Locally Produced Palm Kernel Oil in Osun State, Nigeria
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>The manuscript needs revision and cannot be published within current format.</p> <ul style="list-style-type: none">• My major issue with the paper is that, the obtained results are not analyzed statistically to know the level of significance (p values). So, I recommend employing some statistical methods like one-way repeated ANOVA to know such differences among different areas and different factories.• Why only 16 samples are used and not more? Since 16 (sample size) is small?• What about of effects of background radiation on your measurements?• I suggested to present results of the specific activity concentration of ⁴⁰K, ²³²Th and ²³⁸U for study areas in a Table not like this format of presenting in Radioactivity Content section of results and discussion.• Remove “<i>This study has provided information on radionuclides as well as their derived health implication associated with locally produced palm kernel oil collected from various producing factories in specified areas in Osun state, Nigeria.</i>” From concluding points of the study, which in opinion is not necessary.	
Minor REVISION comments	<ul style="list-style-type: none">• <i>The samples were then sealed and kept for at least twenty eight (28) days</i> (from Gamma Spectrometric Analysis section), either remove 28 or twenty eight, keep one of them.• <i>The result ranged between 6.05 to 19.45 Bq L-1 (with a mean of 10.94 Bq L-1) for Ife, 6.99 to 33.7 Bq L-1 (with a mean of 15.20 Bq L-1) for Modakeke, 18.91 to 47.10 Bq L-1 (with a mean of 30.46 Bq L-1) for Sekona, 2.43 to 6.01 Bq L-1 (with a mean of 4.59 Bq L-1) for Ede with an overall mean of 4.27 Bq L-1.</i> (from 3.2.2 Radium Equivalent Activity Index section). Either replace the word (between) with (from) or replace the word (to) with (and) for the whole sentence.• <i>The external radiation hazard (Hext) ranged between 0.02 to 0.05 with a mean of 0.04 for Ife, 0.02 to 0.09 with a mean of 0.04 for Modakeke, 0.05 to 0.13 with a mean of 0.09 for Sekona, 0.01 to 0.02 with a mean of 0.02 for Ede while the internal radiation hazard index (Hint) ranged between 0.02 to 0.05 with a mean of 0.04 for Ife, 0.02 to 0.10 with a mean of 0.05 for Modakeke, 0.07 to 0.19 with a mean 0.13 for Sekona, 0.01 to 0.02 with a mean of 0.02 for Ede.</i> (from 33.2.3 Radiation Hazard Indices section). <i>Do the same above</i>, either replace the word (between) with (from) or replace the word (to) with (and) for the whole sentence.• Please keep one format of presenting unit in Tables. In Table 3.1 unit of measurement is written in caption of the Table, but in Table 3.1 it is written in the Table not caption of the it.	

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Optional/General comments	<ul style="list-style-type: none">Authors in this study assessed the natural radioactivity and their derived health implication in locally produced palm kernel oil in Osun State, Nigeria from 16 samples which were collected from four major factories in four towns via using Thallium-doped sodium iodide (NaI (TI)) scintillation detector.The study findings showed that the detected and quantified radionuclides were the naturally-occurring radionuclides ²³⁸U and ²³²Th decay series, and non-series ⁴⁰K. Variations were observed in the measured activities in the palm kernel oil even within the same factory, which is attributed to production processes.Authors reported that, the impact parameters of all radiological were lower than their respective world average values. In addition, they concluded that, low values of impact parameters of all radiological of imply that the probability of suffering serious radiation hazards is low in the study areas.The paper is well written, and the chapters of the review are discussed in light of previous relevant studies.	
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PART 2:

	Reviewer’s comment	Author’s comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	

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