



**SDI Review Form 1.6**

Journal Name:	<b><u>Physical Science International Journal</u></b>
Manuscript Number:	<b>Ms_PSIJ_32273</b>
Title of the Manuscript:	<b>Health Detriment Associated with Exposure to Natural Radioactivity from the Soil of Ondo and Ekiti States South Western, Nigeria.</b>
Type of the 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:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



**SDI Review Form 1.6**

**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)
<b>Compulsory</b> REVISION comments	<ol style="list-style-type: none"> <li>1. Lines 52-55; transfer to Materials and Methods.</li> <li>2. No map for the samples sites</li> <li>3. Line 59; [120 g] is little amount to give good results with accepted uncertainty</li> <li>4. Lines 71 and 72; why the author neglect the gamma lines of <math>^{214}\text{Pb}</math> for <math>^{226}\text{Ra}</math> calculation and the gamma lines of <math>^{228}\text{Ac}</math> for <math>^{232}\text{Th}</math> calculation? The average of many gamma lines give more accurate results.</li> <li>5. Line 116; [0.7 Sv y<sup>-1</sup>] error expression</li> <li>6. Line 122; [0.7 Sv Gy<sup>-1</sup>] check expression. In general, the conversion factor from Gy to Sv is 1 for gamma radiation.</li> <li>7. Lines 74 and 75; [The energy and efficiency calibrations were performed using certified soil reference standards for various radionuclides.] This information is not enough for the environmental measurements. The author has to give more information about the radioisotopes used in these kinds of calibration and give results of these calibrations. In addition, the reference standard used what their type and sources and what are the radioisotopes inside.</li> <li>8. The quality control information and results is missing</li> <li>9. Line 75; what is the volume of the Marinelli beaker and how he close these beakers for three weeks tightly.</li> <li>10. Line 156, 159, 162, 163 and table 2; the soils have <math>^{137}\text{Cs}</math>, how and what is the source of this man made radioisotope. Its concentration was about 9 Bq/kg! it is not traces.</li> <li>11. There is no solid justification of the presence of <math>^{137}\text{Cs}</math>.</li> <li>12. Lines 150-151; [This index assumed that 370 Bq Kg<sup>-1</sup> of <math>^{226}\text{Ra}</math> or 259 Bq Kg<sup>-1</sup> of <math>^{232}\text{Th}</math> or 4810 Bq Kg<sup>-1</sup> <math>^{40}\text{K}</math> produce the same</li> </ol>	



SDI Review Form 1.6

	<p>gamma dose.] <b>these values are used for the calculation of the external hazard index <math>H_{ex}</math> and not for radium equivalent activity.</b></p> <p><b>13. In all the text; correct [Kg] to [kg]</b></p> <p><b>14. There is no concrete justification for the higher concentrations of the detected radioisotopes than the other parts of the world as listed in table 3. In addition to line 257</b></p> <p><b>15. Line 213; [others] it has refer to different organs inside the body and out of the list.</b></p> <p><b>16. Line 261; [the world average of <math>1 \text{ mSv/y}^{-1}</math>] this value is the guideline for radiation dose for public.</b></p> <p><b>Give concrete justification of the 137-Cs and the relatively higher results</b></p>	
--	---	--



**SDI Review Form 1.6**

<p><b>Minor</b> REVISION comments</p>	<ol style="list-style-type: none"> <li>1. Line 6; change [constant monitoring] to either [continuous monitoring] or [constant monitoring program].</li> <li>2. Lines 10 and 15 (repeated comment); uniform the style of [States] or [states]</li> <li>3. Line 18; delete the first [respectively]</li> <li>4. In all the text; before the [respectively] has to be a comma [,]. Example at line 18; change [States respectively] to States, respectively]</li> <li>5. Line 20; correct [ <b>KEYWORDS</b>] to [<b>KEYWORDS</b>]</li> <li>6. Line 23; change [microorganism. Man uses soil or otherwise called land] to [microorganisms. Man use soil or land]</li> <li>7. Line 24; change [Agriculture] to [agriculture]</li> <li>8. Line 25; delete [Man is a product of his environment.] do not put religious thinking in a scientific work</li> <li>9. Line 25; change [The environmentalist has] to [The environmentalists have]</li> <li>10. Line 27; delete [dead]</li> <li>11. Line 33; change [Scientist and or radiologist] to [Scientists and or radiologists]</li> <li>12. Line 35; change [And natural] to [Natural]</li> <li>13. Line 37; change [Medicine] to [medicine]</li> <li>14. Lines 38 and 39; [primary or secondary sources] who are the primary and secondary sources</li> <li>15. Line 40; change [Tumour] to [tumour]</li> <li>16. Line 43; delete [are reported]</li> <li>17. Line 44; change [But data] to [Data]</li> <li>18. Line 50; change [Precambrian] to [Precambrian]</li> <li>19. Line 53; change [Spectrometry] to [spectrometry]</li> <li>20. Line 66; change [Concentrations] to [concentrations]</li> <li>21. Line 67; delete the first [Detector]</li> <li>22. Line 72; change [lines] to [line]</li> <li>23. Line 102; delete [the ones]</li> <li>24. Line 118; need reference</li> <li>25. Lines 159 and 162; delete the first [and]</li> <li>26. Line 174; change [Akoko and <sup>40</sup>K] to [Akoko. <sup>40</sup>K]</li> <li>27. Line 179; change [Industries] to [industries]</li> </ol>	
---------------------------------------	--	--



**SDI Review Form 1.6**

	28. Table 4; the columns title of the table are not clear 29. Lines 240-241 and 244-245; these caption of the figures have to be down of the figures and not up. In the caption of the table did not capital letters	
<b><u>Optional/General</u></b> comments	Author must give solid justification of two main points: 1. why $^{137}\text{Cs}$ and from where and what is the source of this man made radioisotope 2. why the results are higher than comparable values overall the world. 3. In addition, the lack of the quality control.	

**Reviewer Details:**

Name:	<b><i>Ayman El-Gamal</i></b>
Department, University & Country	<b><i>Marine Geology Department, Coastal Research Institute, National Water Research Centre, Egypt</i></b>