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Journal Name:	**Physical Science International Journal**
Manuscript Number:	**Ms_PSIJ_28111**
Title of the Manuscript:	**GROSS ALPHA AND BETA ACTIVITY CONCENTRATIONS IN LOCALLY PROCESSED SALT FROM EBONYI STATE, NIGERIA**
Type of the Article	**Original Research Article**

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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.
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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	Material and methods Sample collection and pelletisation What about radon exhalation from pellets? did you wait for at least two days to avoid interference due to radon daughters in the measurement? Counting Equipment and Calibration of the Detector Are the reported efficiencies correct ? they seem to be very high - Lines 95 -96: it is strange to report such big background for beta counting (78 CPM). But, in case this is correct, the detection limit for beta counting cannot be lower than the background. The concept of detection limit deals with the capacity of the measurement system to distinguish counts from background (essentially, of course there are better definitions). So, if the background is 78 CPM, the detection limit cannot be 1.4 CPM (almost 70 times lower). This is very important and authors must check out this issue carefully. - Equation 2: how is the spillover taking into account? the contribution due to spillover must be subtracted in the case of beta determination. Please, check out this	

	important issue Results and discussion The paragraphs reporting the results and discussion need improvement. They present the results in terms of mean values for each location. Since the number of samples is not too high (10 samples/site), not too much can be said for each site. However if considering the results as a whole, authors could try to find the type of distribution, perform hypothesis test to compare mean values in each site, or compare the mean values for the three sites by means of non-parametric methods. Hence, the recommendation is to rewrite this section considering previous remarks. In addition, the linear fits should include the equation, individual errors of the parameters and goodness of the linearity. Also, authors based the linearity of curve fitting on the result of R-squared. This is enough but not sufficient condition for the linearity. Further studies based on residuals are needed. Specific issues: - Lines 210 - 211: the main source of error is due to measuring instrument, i.e, counting error. This is not a possibility, it is a fact. The error type of error, the error due to sampling handling is difficult to quantify. - Lines 221- 225: it is very good to compare results of the present study with similar studies from the literature. Since authors have these publications, they can insert another table on the text comparing values of their study with other publications. Conclusion This paragraph needs revision paying special attention to the points summarized	

	below. In addition, the conclusion lacks outcomes regarding radiological protection. Is the consumption of these salts something to take care about from the point of view of radiological protection to the population? - Lines 251 - 253: the trend Uburu salt > iodized sachet salt > Okposi Okwu salt is only valid for the gross beta, not for both gross alpha and beta as it is written on these lines. Correction needed. - Lines 253 - 254: the values of R-squared have been already reported in the previous section. The values are lightly different. The information should appear once, not duplicated. Figures Figure 3: This figures has some problems that should be corrected: y-axis has no units and legend; although it is obvious that alpha activity is much lower than beta activity, it is necessary to modify the figure to show the real size of the bars in the alpha activity according to the real values. Authors can make this by inserting a secondary y-axis for instance; the bars have no error bars, please include them and specify on the caption of the figure the meaning (standard deviation?, standard error of the mean?) Abstract - Line 5 of the abstract contains the term "possibly". It is not clear the meaning of this term on the context of the abstract. Does it mean that is not clear on which neighbouring towns the samples were taken? Introduction Although it is very clear the main goal of the investigation summarized on the paper,	

	this section needs improvement. For instance, most of the references used to show the interest of the topic ([5]-[9]) are Nigeria based studies. Have authors checked similar studies in other parts of the world? (it seems so because they refer to other studies in the discussion section) if so please include them in this section. It is advisable to include some reference to the existing reference levels for gross alpha and beta in the study area. In case they do not exist, try to refer to international reference levels. - Line 19: insert reference to support this statement Material and methods Study area Please include a map of Nigeria to show locations of the study areas. It would be better if the map include geological units Figures Figures 4, 5 and 6: These group of figures try to show a linear fit of experimental values. However it is not possible to observe all the points. In addition, the Figures need legends on the x-axis and include units on y-axis. Figure 5 include partially the linear fit equation. It is better to avoid this and add the equations on another part of the body text. It is also recommended to include error bars on each experimental point Tables Tables 1, 2 and 3: The use of the term "error" is not appropriate. It seems that authors wish to provide the uncertainty as a result of the measurement of each	

	sample in the proportional counter. Therefore modify "error" by "uncertainty". The last row of each table include the results in terms of mean value. The figure in the error cell, does it represent standard deviation? if so please specify. Finally represent units following the standards as Bq g-1 (pay attention to the use of small letters where applies instead of capital letters) Table 3: Apparently there is a mistake on the use of "OKPOSI OKWU SAMPLES", should not this name be "iodized sachet salt" instead?	
Minor REVISION comments		
Optional/General comments		

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