

Review Form 1.7

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_116598
Title of the Manuscript:	Comparative assessment of the concentration of radioactive materials in natural sources associated with mining activities in the Republic of Niger using two measurement techniques.
Type of the Article	

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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)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</p>	<p>Yes. The aim of this work was to measure natural radioactive materials in the Agadez region, Republic of Niger, and to compare the results of two methods: normal mode gamma spectroscopy and thermal neutron activation analysis. In the present work, the results of radioactivity measurements were carried out in soils from the COMINAK and SOMAIR mining areas, using normal mode gamma-ray spectroscopy (NMGS) and thermal neutron activation analysis (TNAA). This study will help to assess the environmental impact around the mining areas.</p> <p>Yes.</p> <p>No.</p> <p>Yes.</p> <p>Yes.</p> <p>No.</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>Yes.</p>	
<p>Optional/General comments</p>	<p>The paper is generally well written, easy-to-read and to-follow. However, in my opinion the paper has some shortcomings in regards to some data analyses and text. This paper has a potential to be accepted, but some important points have to be clarified or fixed before acceptance. This paper needs revision and as such it cannot be recommended for publication for the following reasons.</p> <ol style="list-style-type: none"> 1. In the Abstract section, it is necessary to quantify the results and add some information about the quantitative results. The structure of the abstract needs revision. Revise the abstract to provide: <ol style="list-style-type: none"> (i) the significance of the study, (ii) the major conclusion of the study 2. The state of the art requires substantial improvement through citing most relevant related articles. There are many relevant articles in the open literature that could be looked at to make the literature review complete. The authors should mention the related previous works in the introduction section. The "Introduction" part of the paper should be made clearer. The authors should provide key points and the contribution of the current study to the literature. The originality of the paper needs to be stated clearly. The Introduction should make a compelling case for why the study is useful along with a clear statement of its novelty or originality by providing relevant information and providing answers to basic questions such as: What is already known in the open literature? What is missing (i.e., research gaps)? What needs to be done, why and how? Clear statements of the novelty of the work should also appear briefly in the Abstract and Conclusions sections. Add the research question of your study at the end of the introduction section. 3. The results given in the paper seem to be too short based on one sample from each location (COMINAK and SOMAIR mining areas). The authors should elaborate on the number of soil samples collection, location map of the samples, and sample preparation. How to avoid cross 	

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	<p>contamination during sample preparation?</p> <p>4. The authors did not mention anything about the energy calibration, efficiency calibration, energy resolution of the detector, geometry size of the sample container etc. The authors should provide an efficiency curve gamma-energy spectrum of soil samples.</p> <p>5. The authors should elaborate in detail about the validation of the method with the IAEA samples.</p> <p>6. The authors did not mention anything about the neutron activation method, sample irradiation, neutron flux, neutron energy, and neutron source.</p> <p>7. In Table 1: The authors should provide the results in Bq rather than counts.</p> <p>8. In Table 2: The authors should provide the concentration in ppm rather than mg/kg (as stated in the introduction).</p> <p>9. In Table 3: The results are misleading. The authors mentioned the MDA values in Bq/kg as well as Bq/l. Further clarification is needed.</p> <p>10. The authors should add more recent relevant references.</p> <p>11. The valuable discussions of the results are missing. I believe that there is more information in the results than the author has indicated.</p> <p>12. Comparison of the results with findings of any previous work would put additional weightage to the observation.</p> <p>13. The conclusion is poor. It should be rewritten according to the significance of the results. The authors should mention how to achieve the research question mentioned at the end of the introduction.</p> <p>14. There are some minor punctuation errors and a general simplification/rewording is needed for some sentences.</p> <p>15. The paper merits publication after necessary modification/revision.</p>	
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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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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