



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_42996
Title of the Manuscript:	ESTIMATION OF ANNUAL EFFECTIVE DOSE DUE TO INGESTION AND INHALATION OF RADON IN GROUNDWATER FROM KADUNA, NIGERIA.
Type of the Article	Original Research Paper

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>)

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>Overall: The findings of the paper were not very clear and the language usage and paper structure could be heavily improved. Please be careful in your use of Radon concentration and activity. Concentration is a mass unit, whereas for radionuclides, decay per sec is used to quantify them. Please correct the terminology accordingly.</p> <p>The Introduction lacks clarity and the primary objective of the paper remain elusive. Improving on these points could help make paper much better read.</p> <p>Lastly, to improve the overall impact of the paper, it will be helpful to know the Ra content in the water as both Rn and Ra contamination in groundwater is a problem. Knowing Ra activities in groundwater will also provide a metric to keep track of Rn mass balance and identify any leaks/degassing which may have occurred during sampling in the field.</p>	<p>Corrected</p> <p>Attempted to</p> <p>Corrected</p> <p>Noted, but too late for now.</p>
Minor REVISION comments	<p>Line57: Please provide some numbers regarding the Radon activities in groundwater measured in Nigeria and how does that compare to threshold Nigerian regulated maximum allowed Rn in groundwater?</p> <p>Line 66: Please provide a map of your field site, identifying the location where sampling was performed.</p> <p>Line 176: Careful with terminologies...you are reporting data in Radon activities but title says Radon concertation.</p> <p>Line 42: It is not clear why Rn-222 activities vary in groundwater. Please refer to paper: Mehta, N.; Kocar, B.D. Deciphering and Predicting Microscale Controls on Radon Production in Soils, Sediments and Rock. <i>Soil Syst.</i> 2018, 2, 30. to clarify why you would suspect variation in Rn activities in groundwater.</p> <p>Line 62: Again why Rn activities vary in groundwater</p> <p>Line 100: Include method reference for measurement of Rn in aqueous sample.</p> <p>Line 101: Please justify why toluene based cocktail is used versus Ultima-AB or any other</p> <p>Line 136: Please use notations to write Equation 2 as in its present form. You can define the various notations under the equation, as done for Eq 1.</p> <p>Line 141-144: Where are the reference for DCF values?</p> <p>Line 185: Couple more sentences discussing the low level of Rn and spatial variability in</p>	<p>Done</p> <p>Map included</p> <p>Corrected</p> <p>Corrected</p> <p>Noted</p> <p>Included</p> <p>Done</p> <p>Corrected</p> <p>Included</p> <p>Done</p>



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	Rn activity here will increase the impact of manuscript Line 190: Provide briefly the errors that may be associated with the Rn measurement technique, including Rn leakage during sample collection etc. and how they could play a role in measured low Rn activity levels in groundwater.	Provided
<u>Optional/General</u> comments		

PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	