

Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_83560
Title of the Manuscript:	Experimental results of cooking tests in the dry season in a subequatorial country using a box-type solar cooker with an inclined receiving surface fitted with a flat reflector
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:

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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>Solar cooking is not a new concept; it was introduced in late 18th century, and since then there is much of work done and commercial solar cooking devices are available. Though lack of novelty is not a reason to reject the paper, the manuscript lacks the typical structure and characteristics of a research paper. For example, the introduction is not the typical of a research paper. Typically, the introduction begins with the broadest scope and get progressively narrower, leading steadily to the statement of objectives in the last sentence or paragraph. In this broad-to-narrow approach, the works of others in the same topic is outlined and the missing gaps in the literature are identified, before the objectives of the current paper are clearly stated. This approach is not followed. In fact, no other work on solar cooking is presented. Authors advised to look in detail in literature and/or in specific books (ex. Solar Cooking: Different Types of Solar Cookers, by Elliott Lee) and revise their introduction.</p> <p>Furthermore, if the paper was meant to be engineering-oriented, authors should have put the specifications of their design (which are missing) and compare their solution with existing ones, either research or commercial. A simple search in the Internet reveals that there are commercial solar cookers, with different design than the authors', which take ~20 minutes to cook a meal with maximum temperature ~300°C, under full sunlight. How does these products compare to the authors' prototype with cooking time ~2:30h and maximum temperature ~120°C? Authors should make a clear comment on their prototype, indicating the strengths of their design over the commercially available devices.</p> <p>Finally, authors provide a detailed mathematical description of the problem. They evaluate the heat exchange between the glass and the absorber, the losses, and the energy balance of the cooker. However, they limit themselves in the final mathematical expression. I believe it might be interesting to include their findings from the mathematical analysis in the graphs presented, discuss the differences and similarities between the two cases presented, and compare them with their mathematical model findings.</p>	
Minor REVISION comments	<p>Authors are advised to include in the figure caption in Figures 4 & 6 the symbols (Tp, Tr, etc) that appear in the figure legend.</p> <p>Authors state that they measure the solar radiation, the ambient temperature, and the temperatures of the absorber, the interior air & the utensil. However, in the photograph of the experimental setup (Fig.3) there appear to be more measuring devices (8 for 5 measuring quantities). How the extra devices are used? The same quantity was measured two devices and averaged? Authors should make it clear. Furthermore, authors should indicate the brand/model of the measuring devices, and how the data were collected (on-line, remote, manually).</p> <p>In the present form, this is certainly not a research paper, it does not have the structure of a research paper (introduction, materials & methods, results & discussion and conclusion). I think that is not suitable for publication in the present form. However, it may be improved, if authors take into account the comments, restructure the manuscript, rewrite the introduction, compare the mathematical analysis with their results and provide a more rigid conclusion pointing out the benefits and the limitations of the work.</p>	
Optional/General comments	<p>This is certainly <u>not</u> a research paper. It resembles more an internal Faculty report or a project report, possibly originating from a diploma thesis in ENS of Abidjan.</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>	

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