



SDI Review Form 1.6

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2014_BJAST_10593
Title of the Manuscript:	Fabrication of Energy Efficient Improvised Incubator
Type of the Article	Method 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>)



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PART 1: Review Comments

	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>
Compulsory REVISION comments	1) Please, review in the text all the units. Respect standards from the International System of Units (SI), the Metric System, and so on. For instance, for time unit, you cannot express second unit as "S" but you must express it as "s". Another example, it is not KWH but the correct form is kWh. Pay close attention to that. Moreover, it is necessary to put a single space between the number and the unit (write 300 V and not 300V; write 5 °C and not 5°C) along all the manuscript. There are several mistakes about units. 2) Figures 4 and 5: write "s" and not "sec"; write "°C" and not "C". 3) The proposed manuscript has compared two types of incubator: conventional (commercial) and "improvised" one. However, as a reader, I have no all important information available on the text to understand such comparison. For example: 3.1 Both incubators are provided with the same PID algorithm? The time necessary to set up temperature (and, energy waste/consumption as consequence) depends on such algorithm. Is it possible to know such information? Please, explain it. 3.2 Heaters and compressors in both incubators require the same quantity of energy? In which basis are you comparing both incubators? Volume? 4) Please assign the second section as Material and Methods, and not PROTOTYPE DEVELOPMENT. 5) Separate Discussion from Conclusion. Do not provide a Table within the conclusion section.	1) The manuscript has been revised as suggested. 2) The manuscript has been revised as suggested. 3.1) Yes, the same industrial sensors (PT-100) and PID controller has been used and the same information has been included in revised manuscript at 127. 3.2) Study compares the overall performance of both incubators in terms of overall dynamic response and energy efficiency. 4) Manuscript has been revised as suggested. 5) Manuscript has been revised as suggested.



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<u>Minor</u> REVISION comments	1) According to an English dictionary, the term “improvised” could means “to invent, compose, or perform with little or no preparation” or even “to make or provide from available materials”. Maybe, the authors could use the term “homemade” that also means “simply made”. The present paper demonstrates the usage of ordinary (simple) materials that can be bought easily. However, there is a serious preparation, an electronic technique behind the incubator construction, and it was not constructed with improvisation. 2) BOD analyses accept a temperature variability of ± 0.1 °C. Please, provide that information on the text (line 38). The “improvised” incubator respected this limit of temperature variation? Please cite the Standard Methods 5210B (APHA). Discuss this appointment. 3) Provide more citations in Introduction sector for a deeper background. Focus on biochemical analyses and not on neonatal care of babies because the constructed apparatus was intended to biochemical digestion of organic matter (BOD). 4) Revise grammar and orthography on the text. 5) Numbered equations: line 87, “PID controller standard [6] as given by equation (1)”; line 106, “The power is calculated by the equation (2). 6) The aspect of the equation 2 (lines 107-114) should be improved to be shown as professional.	1) Under present study equipment has been improved by redesigning the physical parameters, employing improved functional unit and incorporating uninterrupted power supply to the existing design and technology. 2) The suggested information has been added in the revised manuscript and 2 references have been added. 3) Two references have been added in revised manuscript. 4) Manuscript has been revised for grammatical and linguistic mistakes. 5) Manuscript revised as suggested. 6) Manuscript revised as suggested.
<u>Optional/General</u> comments	The theme proposed by the manuscript is meritorious when we think about educational institutions worldwide with economic restrictions. The other praiseworthy aspect of the proposed theme is to discuss inside undergraduate classrooms how some equipment works and the mathematical logical in it. It is a multidisciplinary project. The more details this kind of paper provides the better.	