



SDI Review Form 1.6

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	Ms_IJBCRR_31097
Title of the Manuscript:	Temperature induced conformational entropy of α -amylase with and without additive.
Type of the Article	Original Research 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	It is an interesting manuscript reporting some novelties, which could be enough for suggesting its publication in the Journal "International Journal of Biochemistry Research & Review"; however needs of a lot of revision. Accordingly, authors should to: (1) re-write their manuscript in order to correct: (a) their English (syntax - there are several sentences which cannot be followed), (b) appropriately separate chapters and sub-chapters, (c) write correctly and in one line, equations and their numbering, (d) re-construct Tables by omitting vertical lines (columns should be written accordingly), and Tables should be separated in order to be followed easily, (e) similar comments for the figures. (2) Reorganize and improve their statistical analyses. Although the statistical adequacy of all applied equations should be proved by suitable references, however, this is obligatory for equations (3), (6), and (7); authors should give both the appropriate references, and their statistical treatment, as their statistical analyses (described in 2.4 - using the Microsoft EXCEL facilities) are not sufficient for the employed equations within this manuscript. There are a lot of relative freely available packaged for Academics in the internet. (3) Re-construct appropriately their figures: The	Thank you. Improvement in grammar is carried out. There are two objectives derivation of model with which to determine hydrodynamic radius and the determination of conformational entropy resulting from changes in the former according to Fitter's approach. Hence there are theoretical subsection and experimental subsection. It seems any other chapter implies exceeding the scope of this research. These are also carried out. The Tables are not joined together. This suggestion is not too clear to me. I doubt if a student can be sincere and serious if he/she says that that she/he is unable to carry an assignment to calculate the average values of a parameter including the associated SEM or SD because of the absence of internet network despite the available laptop. Research is carried out within budgetary provision. Duplicate assays were carried out: Plots of



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	main idea and the novelties of the manuscript seems to be “buried” by the authors who use as ordinate (in figures 1 up to 6) the useless and meaningless (among enzymologists) quantity “velocity” and/or its reciprocal etc, instead of using either k_{cat}/K_m, and or k_{cat}, which both have well understanding natural meanings. Overall: This manuscript entitled as “Temperature induced conformational entropy of α-amylase with and without additive” should be undergo a lot of revision.	velocities or activities (whose units perhaps should have been U/mL) of hydrolysis of starch versus temperature were carried out where it was observed that the velocity increased with increase in temperature (a close analogy is Charles’ law); the reciprocal of the velocity was plotted versus temperature (an analogy to it is Boyle’s law). Therefore, the average values were calculated for each parameter extrapolated from relevant graphs. Conversion from velocity in M/ml.min to mU/mL may not change the values of slope and intercepts. While appreciating ...Emm, but it surprising to note that the reviewer does not appreciate velocity of hydrolysis of say starch without which k_{cat}/K_m, and or k_{cat} cannot be determined. k_{cat}/K_m, and/ or k_{cat} are based on extrapolated values from the double reciprocal plot of velocity of hydrolysis versus the concentration of substrate. Some scholars prefer nonlinear regression. Their choice needs to be respected. In line with the context or objective, use of velocity of hydrolysis or activity expressed in mU/mL abounds in literature. “Enzyme activity can be regarded as the most sensitive probe to study the changes in enzyme conformation during various treatments, because it reflects subtle readjustments at the active site, enabling very small conformational variations of an enzyme structure to be detected” (Singh et al, 2015-Please, see Reference Number 11). It is unusual to suggest therefore, that activity of an enzyme is useless. Enzyme activity measurements also indicate the integrity of the tertiary structure of the
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		enzyme against denaturants. The catalytic activity of α-amylase under various conditions of pH, temperature and denaturants was estimated using starch as substrate, as described recently (Singh et al, 2015-Reference number 11). Even at elementary level if a dependent variable, v, decreases as the independent variable, T, increases, then a plot of $1/v$ versus T may yield a straight line graph. Reflect on Boyle's law. <i>The research is not entirely kinetic study.</i> A single concentration of the substrate was used. A true scientific paper should possess content that is in line with the objectives. Issues regarding kinetic parameters are outside the scope of the research.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		