



## SDI FINAL EVALUATION FORM 1.1

### PART 1:

Journal Name:	<a href="#">Advances in Research</a>
Manuscript Number:	Ms_AIR_26332
Title of the Manuscript:	Calcium ion binding characteristics of porcine pancreatic alpha amylase outside active site domain and implications: Theory and experimentation.
Type of Article:	Original Research Article

### PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
The lack of validation of the results and methodology , however indispensable In analytical chemistry , may be discounted if the kinetics plays a leading role.	<p>Thank you for your comment. The comment has deeper meaning that needs a lot of thoughtful reflection like lawyers do. First I was largely impressed but with little reservation after reading the work of Tanaka and Hoshino (2002) in which calculated relative velocity of hydrolysis of substrate was used to determine the apparent rate constant and consequently rate constant for unfolding in the presence of calcium ions. REF: Tanaka A. Hoshino E. Calcium-binding parameter of <i>Bacillus amyloliquefaciens</i> <math>\alpha</math>-amylase determined by inactivation kinetics Biochem. J. 2002; 364: 635–639. I observed however, that the authors' model has additional usage apart from the issue of unfolding kinetics even in the presence of rigidifying additive like calcium ion; thus the model was seen to be applicable to refolding kinetics that has nothing to do with Michaelis-Menten model so long as assays are carried out with substrate concentration <math>&lt; K_m</math> (Michaelis-Menten constant). Furthermore I extended the model to include folding equilibrium constant and consequently applied it to the determination of cognate apparent thermodynamic parameters. This implied fitting the data to the model to quantify appropriate parameters as a way of not just testing/validating the extension of initial model authored by Tanaka and Hoshino.</p>