



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2014_IRJPAC_10977
Title of the Manuscript:	Investigations of ferrous thiamine complex by cyclic voltammetry
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	In its current state, the level of English throughout the manuscript does not meet the journal's desired standard. There are a number of grammatical errors and instances of badly worded/constructed sentences. For example, "Vitamin B1" (first word in "Introduction") used once and others are "thiamine"; Fig. 4. "...between I_{pa} verses ..." should be "...between I_{pc} verses ...", and the horizontal ordinate should be "the mole ratio between ferrous and thiamine"... No clearly research objects. Why study the mole ratio between ferrous and thiamine in complex? The electrochemical results why are not used in the discussion of mechanism? In order to be published, the manuscript should provide a novel approach and/or more in depth data analysis of the reaction mechanism. However, this submission did not do either.	I have corrected the grammatical error. Vit B1 is the second name of thiamine. Fig 4 is plotted again as fig 6 Iron is biologically very important and it is used with vitamins. Their complex is not mention in literatures. Electrochemical results mechanism are discuses in discussion The complexation reaction is found reversible and average diffusion coefficient value is observed between 400 - 500 for both I_{pa} and I_{pc} current. The equilibrium constant values are also calculated through I_{pc} values of 1:2 mole ratio complex and these values are increasing up to 300mV/s and confirmed that 1:2 mole ratio exist between the thiamine and ferrous ion in the complex. At the fast scan rate thiamine in AFe₂ complex oxidized into A⁺Fe₂. This is further converts into A⁺Fe at slow scan rate. A⁺Fe may react with another Fe ion and reduce to complex or may convert into A⁺ and Fe atom. A⁺ may reduce and reacted with two moles of Fe atoms to form complex.
Minor REVISION comments		
Optional/General comments		