



SDI Review Form 1.6

Journal Name:	<u>International Research Journal of Pure and Applied Chemistry</u>
Manuscript Number:	2014_IRJPAC_9555
Title of the Manuscript:	Red Onion skin extract-formaldehyde resin as Corrosion Inhibitor for Mild Steel in Hydrochloric Acid Solution
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:

(<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 (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 line 200 to 210, authors have mentioned the covalent bond formation on the metal surface with inhibitor molecules. But covalent bonds are usually chemical bond. Its strong bond. But authors concluded that the ROSE/ Formaldehyde adsorbs on the metal surface by physisorption mechanism. Physical bonds are usually weak bond. If the inhibitor forms the covalent bonds, its chemisorptions mechanism not physisorption. Its controversy. Authors have reported only 70% Inhibition efficiency achieved at 50v/v concentration of inhibitor. What about 60, 70, 80 v/v concentration. authors must carry out the experiment for further concentration and to check whether the inhibitor will make above 70% I.E or not.	<i>The formation of covalent bond was an assumption based on the structure of the inhibitor but the trend for ROSE/formaldehyde suggests physisorption because the inhibition efficiency decreases as the temperature increases.</i> <i>I HAVE REMOVED THE LINES THOUGH</i> <i>This should be a suggestion for further studies.</i>				
Minor REVISION comments	<table border="1"> <thead> <tr> <th>Line No.</th><th>Correction</th></tr> </thead> <tbody> <tr> <td>119, 124,131</td><td>Concentrations of ROSE/Formaldehyde</td></tr> </tbody> </table> In Fig.4 and Fig 6, 30, 40, 50°C should be written like this.	Line No.	Correction	119, 124,131	Concentrations of ROSE/Formaldehyde	Corrected
Line No.	Correction					
119, 124,131	Concentrations of ROSE/Formaldehyde					



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<u>Optional/General</u> comments	1. There is no evidence for protective film formation. The formation of protective film on the metal surface can only be proved by the characterisation studies like SEM, EDX, FT-IR. But the authors have not reported that. 2. Authors have carried out the experiments for different temperature ranges. But they are not studied about the thermodynamic parameters like enthalpy, entropy, free energy change which only tells about the adsorption process is whether exothermic or endothermic and spontaneity of the process. 3. Authors should take electrochemical studies which is more sensitive and accurate than mass loss method. 4. Mass loss method is not enough for this study. Characterisation studies or electrochemical studies are also important. Red Onion Skin extract only as corrosion inhibitor article is already published. Addition of formaldehyde is new one.	<i>Yes, there were no characterisation studies, but a decrease in inhibition efficiency with rise in temperature is frequently interpreted as being suggestive of formation of an adsorption film.</i> <i>The thermodynamics parameters were deliberately left out.</i> <i>This should be a suggestion for further studies.</i> <i>This should be a suggestion for further studies.</i> <i>Yes, addition of formaldehyde is new one. Red Onion Skin extract only was also published by two of the Authors.</i>