



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2014_IRJPAC_9869
Title of the Manuscript:	Separation of Palmitic and Palmitoleic Acid and their FAMES using Transition Metal Salts
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.

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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	The overall presentation of the manuscript lacks scientific detail. There are some poor phrasing of sentences e.g. Line 41, 59, 77, 79 (word scalable does not make sense here), 93,115, 119 (time of stirring does not make technical sense), 141 There are minor typographical errors. Lines 35,51,69,110, 124,125,126 (spelling error and poor layout of equations), 136, 157, 160 (degree celcius sign) ,173, 181	Suggested corrections , changes and rephrasing of sentences ,have been made in lines pointed out by the reviewer. Line 41, 50,51, 71-77 Layout of equations has been changed, spelling errors have been corrected .lines 131-135 Line 126 : Time of stirring was included to check if the time of interaction of the aqueous layer containing the metal ions and the organic layer of hexane containing the FAME , plays role in facilitating the complex formation between the metal ions and the unsaturated FAME Line 121 :“The response was measured as the percentage difference in decrease of concentration of C16:1 FAME and C16:0 FAME from the hexane layer” is explained via equations 1,2 and 3. We are aiming to see whether more amount of C16:1 FAME (than C16:0) is getting transferred to the metallic-aqueous layer due to the property of metal ions to form complexes with the C=C double bond. So, more the difference in the transfer of C16:1 and C16:0 (C16;1-C16:0) , more effective is the metal ion in forming a complex with the C=C double bond in the unsaturated FAME



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	define symbol alpha Some claims highlighted in the introduction have no valid referencing e.g. Lines 29 ,30 ; 33,34,35; Design Expert (no definition of this programme). No clear information has been highlighted e.g. line 131 – salts need to defined as hydrates or not. The photos are labelled as figures and the captions are too long e.g. figs.1 and 2. The results and discussions are extremely sketchy and are not logically explained. The large error bars are not accounted for in Figure 3. The caption of figure 3 is too long and does not make scientific sense. The axes of figure 3 needs attention. The caption in figure 3 is an explanantion by the author: “we can clearly see a trend....” The illogical explanation of the results is clearly evident in lines 221 and 222 when the author write:” the FAMEs not staying in the aqueous layer” is highly non-scientific. Lines 229, 230,231 are nonsensical discussions:”While the difference in case of blank solution is negligible...” The author also discusses “kinks” and “bends” in the	Alpha symbol has been defined .line 129 References have been added. Line 30 Design expert has been defined. Line 128 Hydration information about salts has been added. line 141 Reason for large error bars has been explained in line 228,229,230 Figure captions are shortened. We checked the axes for accuracy and feel that all confirms to the best of our knowledge. The objective of this manuscript was to report the interesting observations that were made while using select forms of metal salts for precipitating fatty acids and fatty acid methyl esters. At this point, we only have conjectures for explaining the observed behavior. Essentially, more focused experiments (possibly with theoretical simulations) are necessary to pin-down the intermolecular phenomena that is occurring to explain the crystallization behavior.
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	structure of the fatty acids which makes absolutely no sense from a bonding mechanism point of view. The author needs to clearly explain the type of bonding or complexation that facilitates the precipitation between metal ions and fatty acids. The overall content is extremely weak. The discussions are non-scientific and highly flawed. The conclusions are inconclusive and no-sensical for example the author concludes "in separating a singular ester from a mixture..."	Such work is out of the scope of this manuscript. We would like to point out that the observations were repeatable and believe that the observations are of value to scientific community. We did an honest attempt to revise the manuscript reducing speculation while clearly stating so when we conjectured.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments	In my opinion the paper required extreme major revision in both results, discussion and conclusion sections. This paper cannot be published in this format even with suggested corrections and rephrasing	