



SDI Review Form 1.6

PART 1:

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	MS: 2013_IRJPAC_3555
Title of the Manuscript:	Adsorption Characteristics of Sodium oleate onto Calcite.

General guideline for Peer Review process is available in this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 9 parts. Kindly note that you should use all the parts of this review form.



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PART 2: 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	Introduction: It is necessary to make clear the importance of the present study. An introductory sentence in the last paragraph (line 55) indicating the necessity of adsorption of fatty acids on the surface of minerals is suggested, instead of referring to such a necessity at the end of the paragraph (line 68). Experimental: In line 84 there is no clear reference to the different concentrations of oleic acid – Na-oleate applied, whereas in the Results and Discussion and in the figures there is a reference. The concentrations applied should be referred to in the Experimental part. Results and Discussion: In lines 220-229 there is a reference to critical micelle concentration. It is mentioned that at pH=4 and pH=6 micelle formation is observed at Na-oleate concentration $9.0 \times 10^{-3} \text{M}$. So, is this the CMC? How is this value determined? Is that deriving from bibliographic or experimental data? It should be referred to clearly. If it is an experimental data, a clearer reference to the method of its measurement is necessary. Also, in	The aim of present study is to investigate the effect of various mechanisms of adsorption of oleate onto calcite such as contact time, pH and temperature. In the experimental section different concentrations of Na-oleate were used :- Contact time : 10.56 and 12.05 mg/g Effect of pH: 0.007 and 0.011M Effect of temperature: 5.50 and 8.50mg/g $9.0 \times 10^{-3} \text{M}$ is the critical micelle concentration (cmc) of Na-oleate. CMC is determined using viscosity method. The cmc is determined experimentally. CMC changes at high pH values since there was a shift in cmc at high pH, this was determined experimentally. The equation explained the solubility of CaCO_3 and Na-oleate in aqueous solution.



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	lines 261-278 there is a reference to CMC. How have you come to the conclusion that the CMC is pH dependent? Is that a bibliographic or experimental data? A clearer explanation of the equations is also suggested.	
<u>Minor</u> REVISION comments	Abstract: An introductive sentence indicating the necessity of Na-oleate adsorption on the surface of calcite is suggested.	The need for separation of calcite from other minerals has been a concern. Na-oleate has been found useful as a good adsorbate for separation of calcite from other minerals. This prompted the need for this study.
<u>Optional/General</u> comments		