



SDI Review Form 1.6

PART 1:

Journal Name:	<u>International Research Journal of Pure and Applied Chemistry</u>
Manuscript Number:	2013_IRJPAC_3927
Title of the Manuscript:	Determination Of Optimum Reaction Temperature And Reaction Time For Biodiesel Yield From Coconut (Cocos nucifera) Oil.
Type of the Article	Research paper

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

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

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



SDI Review Form 1.6

PART 2: Review Comments

	Reviewer's comment	Author's comment <i>(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)</i>
<u>Compulsory</u> REVISION comments		
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments	The author uses new palm oil as feedstock, but they did not measure how much free fatty acid (FFA). This is very important, because the process is highly dependent on the initial FFA. If the initial FFA is known, researchers can determine the process, it was used transesterification, or esterification followed by transesterification, or esterification only. On line 155-157, the author quotes from Reff [23,15]: "This indicates that the oil would be better converted to biodiesel using the two stage process of esterification followed by transesterification or	Not palm oil but coconut oil. The FFA content was carried out and shown in Table 1.



SDI Review Form 1.6

	saponification followed by transesterification”. In some reference can be found that any materials that have FFA below 3% can be processed directly by transesterification, for above 3% FFA typically use a two-stage process (esterification and transesterification), and over 90% FFA used esterification process only. On line 141-142: “while percentage free fatty acid (% FFA as oleic) was determined by multiplying the acid value with the factor 0.503”. My question, for coconut oil, is % FFA determined from oleic or lauric acid? From Table 3: Kinematic viscosity 5.31 mm²/g, acid value 9.8678 mg/KOHg⁻¹ or FFA 4.9635%, saponification value 126.225 mg/KOH⁻¹, moisture content 0.85%. From these data, we conclude that the resulting biodiesel cannot be used on diesel engine because it can damage the engine.	This has been corrected Error, corrected All corrections applied, so conclusion not applicable.
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