



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	Ms_IRJPAC_43140
Title of the Manuscript:	Innovative fractionation and separation of bio-crude oil
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)
<p>Compulsory REVISION comments</p>	<p>Page 1, line 10: please replace through with 'using' Page 1, line 28: please delete 'the' Page 1, line 28-30: The statement '...a process that converts based on the thermochemical conversion of biomass principally to a bio-crude oil (BCO)' is not clear, please rephrase. Page 1, line 35: The phrase 'For quite a long time', the time frame is not given. Please be specific. The author may use 'For decades' instead of 'For quite a long time' Page 1, line 41-42: Please modify 'detection (GC-MS/FID) and electron-impact mass spectrometry (EIMS) chemical ionization mass spectrometry (CIMS)' to 'detection (GC-MS/FID), electron-impact mass spectrometry (EIMS) and chemical ionization mass spectrometry (CIMS)' Page 2, line 52-55: Please modify the statement 'For some reasons analysis of these components is difficult owing to the complexity of the BCO mixture and the non-volatile character of this fraction, which hinders the direct use of GC-MS analysis' to 'For some reasons analysis of these components have been a challenge mostly due to the complexity of the BCO mixture' Page 2, line 55-56: please modify 'And the separation of these components by distillation is impossible due to the thermal instability of this fraction' to 'In addition, the separation of these components by distillation is impossible due to the thermal instability of this fraction' Page 2, line 59: please replace 'for' with 'of' Page 2, 68-70: please delete the sentence 'Through the addition of water, the coherence of BCO is lost, and the indissoluble pyrolytic lignin (PL) is precipitated (Radlein and Piskorz 1997, Scholze and Meier 2001)' Page 2, line 72-73: please modify the statement 'But relatively little is known about the characterisation of non-volatile polar BCO fraction,..' to 'However, there are limited data on characteristics of non-volatile polar BCO fraction, ...' Page 2, line 88: Modify 'and related information are listed in....' to and related information are listed in Table 1. <i>All font size in Table 1, including the legend should be uniform. Page 3 is empty, what is in page 3, if nothing please delete.</i> Page 4, line 108: procedures for lignin precipitation is not clear. For example, '1ml was introduced into a mixer...; 1ml of what was introduced into a mixer? 'Additional 500ml water to further clean the residue', also not clear. Please rephrase section 1.1.2. Page 7, line 195: please modify 'Results and Discussions' to 'Results and Discussion' Page 7, line 196: modify '2.2 Separation' to '2.1. Separation' Page 7, line 197-198: please modify 'The result of the fractionation shown in Table 2 showed that water constitutes about197 24% of whole BCO' to 'The data obtained from the fractionation is presented in Table 2. As shown in Table 2, water constitutes about197 24% of whole BCO' Page 7, line 198: please replace 'Following' with 'After' Page 7: subsection 2.3.1 is not clear. For example chromatograms of different fractions of the samples analysed using GC-FID are shown as overlays in, in what? Please rephrase for clarity. Improve Figure 2, not clear enough, you may increase the size.</p>	
<p>Minor REVISION comments</p>	<p>Please see column above</p>	



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<p>Optional/General comments</p>	<p>The introductory section should be thoroughly revised, highlighting previous work and challenges.</p> <p>I expected the author(s) to describe how the bio-oil was produced, the reaction conditions etc.</p> <p>The methodology is not clear and there were some repetitions. The methodology needs to be improved</p> <p>Presentation and discussion of result needs major revision. The report seems difficult to read, where there were findings, the author(s) couldn't reason out comprehensively.</p> <p>Result obtained seems to contradict with the title of the work. All cited references are old, author(s) should include recent references.</p> <p>Major revision is recommended before the paper may be accepted for publication</p>	
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