Dear editor and reviewer I

We would like to thank you very much the editor and reviewer 1 for your attraction of our research and for helpful comments to correct some errors in manuscript.

A. General comments

1. *Please reformat the paper according to the guidelines.*

- Since number of page must be reduced from 18 to 10 pages as Journal of ITB ordered, some sentences and figures mentioned in comments were deleted without breaking the substantial meanings.
- We had corrected manuscript and followed the guidelines of ITB Journal as well as used the template format.
  a. All paragraphs have been separated 12 pt spacing and titles in 12 pt (page 1-9).
  b. All next headings were 18 pt spacing (page 1-9).
  c. Figures and tables were centered, Fig. 1 page 3, Fig. 2 page 4, Table 1 page 5, Fig. 3 page 5, Table 2 and Table 3 page 7, Fig. 4 page 7.

2. *The paper presents an interesting piece of work, however the language use is poor. Please improve the writing, in particular in the results and discussion section.*
   - We have made a total revision in manuscript and then English writing edited by ***Elsevier Editing Service***.

3. *In the result and discussion section, the characterization of IL using NMR and FTIR was discussed. However the result was only presented as text/sentences. Please provide the graphical results as well.*
   The original graphs of NMR and FTIR measurements have been provided in corrected manuscript as explained below in the specific comment in Section 3.1 and 3.2 Fig. 1 page 3 and Fig.2a page 4 as shown below.

4. *The title of graphs are not properly described the data presented, please rewrite the title.*
   The title of some graphs has been rewritten as data presented in section 3.2 Fig. 3 page 5 given in the specific comment below.

5. *Some of the data are presented in more than four digits number, please check the accuracy and use proper digit.*
   All data were presented in lower digit uniformly in section 3.2 Table 1 page 5, section 3.3 Table 2 and Table 3 page 7. The detail revision can be seen in the specific comment below.

6. *Conclusion is too long. Please rewrite and shorten.*
   The conclusion has been shortening compactly and rewritten in page 8 as shown in the last comment.

B. Specific comments

- *Comment 1. A solution of 1% alkaline*

  We have repaired the sentence in the abstract page 1, become Coconut coir dust was pretreated with a 1% alkaline solution.

- *Comment 2. How long?*
  At temperature 60^{o}C, pH 3 for 12 or 48 hours (in the abstract page 1).

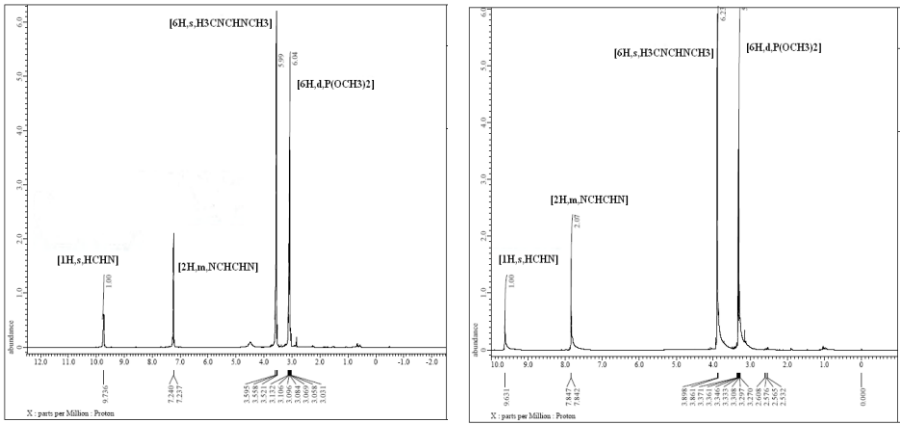
- *Comment 3 and 4. What is SCB*? Decline to or decline by...

  Sugarcane bagasse (SCB); declined by 42% (in the introduction page 1 paragraph 2).

- *Enzymatic reaction was started by adding 0.2 ml of pure enzyme cellulase from A. Niger (Sigma? Novo?).*
  The enzymatic reaction was started by adding 0.2 ml of pure enzyme cellulase from *A. Niger* (*Sigma-Aldrich* St. Louis, MO USA), in the section 2.2 materials and methods page 2.

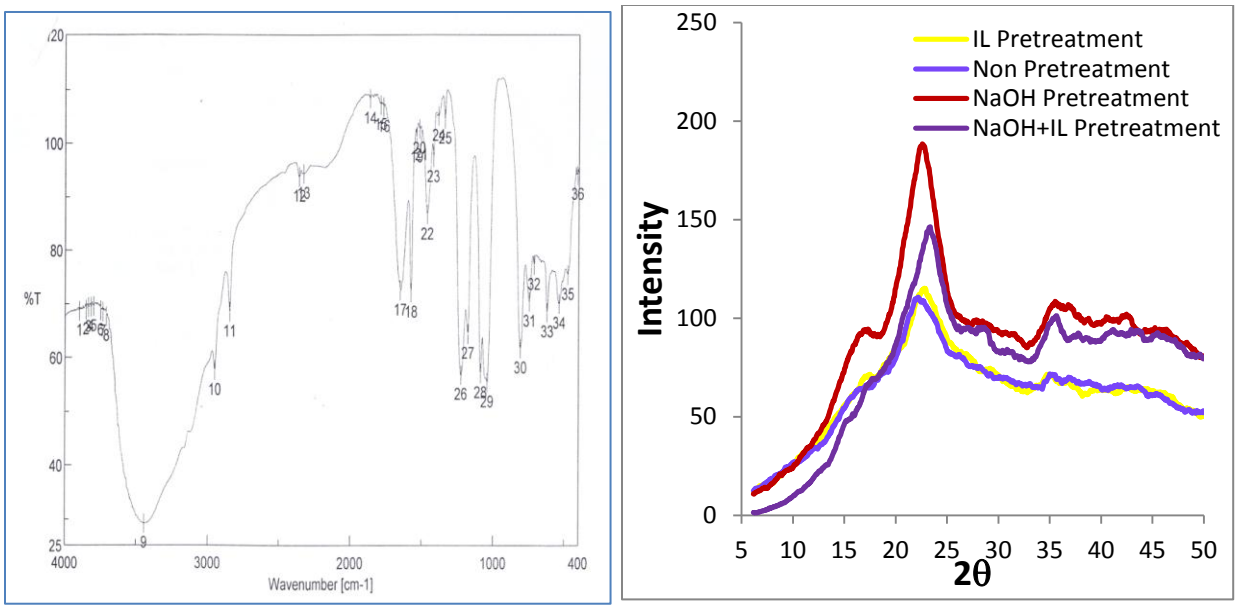
- *Comment 5. Please provide grapical result of these analysis*.

  Graphs, NMR and FTIR have been provided as shown in paper, Fig. 1 page 3and Fig. 2a. page 4.



(a) (b)

Figure 1 NMR Spectra of *1,3-methylimidazolium dimethyl phosphate* with chloroform-D solvent (a) and DMSO-D_6 solvent (b).



(a) (b)

Figure 2 (a). FTIR spectrum of *1,3-methylmethylimidazolium dimethyl phosphate* and (b). XRD patterns of coconut coir dust for three pretreatments and non-pretreatment

- *Comment 6. Add reference to justify*.
  In this study, XRD diffraction peaks were observed at three angles, 2θ = 16°, 22°, and 35°, which related to planes of (101), (002) and (040) in the lattice, as shown in Fig. 2b. These are the typical pattern for crystalline cellulose I, which has been studied by other authors [19,23-25]. in the section 3.2 page 4.

- *Comment 7. Improve the quality of the graph*.

  The X-Ray graph has been improved its quality as shown in Fig. 2b page 4 shown in comment 5.

- *Comment 8. What is the typical pattern of cellulose I? Explain and provide reference*

  Cellulose I properties are close to those of cellulose, with a high crystallinity and distinct peaks at the angles (16°, 22° and 35°) described above. These results were similar and comparable to previously published reports [19-25], section 3.2 page 4.

- *Comment 9. After pretreatment and without pretreatment*.

  The phrase has been modified: The chemical composition of coconut coir dust after pretreatment and without pretreatment is shown in Table 1, section 3.2 page 4.

- *Comment 10. Rephrase this sentence*!

Since the paper had been reduced its page as administration ordered, the sentence mentioned in comment 10 was deleted.

- *Comment 11. Coconut coir or coconut husk*?

  Cocunut husk was changed by coconut coir word, in section 3.2 page 5.

- *Comment 12. Were the experiments conducted in duplicate/triplicate? Please provide the standard deviation to accomodate variations in biomass composition*.

  Experiment on chemical composition calculation was conducted 3 times, triplicate shown in Table 1 page 5.

Table 1: The chemical composition of coconut coir dust with various pretreatment methods

Pretreatment	Cellulose (%)	Hemicellulose (%)	Lignin (%)	Other (%)
Control	26.72±0.15	17.73±0.13	41.19±0.02	14.36±0.23
NaOH	41.81±3.44	20.35±0.59	25.49±0.71	12.36±3.32
IL	21.34±0.86	25.24±0.15	44.06±1.65	9.36±1.98
NaOH+IL	41.97±3.66	19.67±0.26	27.69±1.88	10.68±2.49

- *Comment 13. Control, without any pretreatment*.

  Non word was substituted by control word shown in Table 1, page 5.

- *Comment 14. Different degree of accuracy was obtained for this method? Please presents the results in same digit.*

  The degree of data was simplified uniformly referred on accuracy of measurement as shown in Table 1 , page 5.

- *Comment 15. The title does not described the graph properly! Please rename*!

  The title has been renamed: Figure 3 Time course of the effect of pretreatment on enzymatic hydrolysis (60°C for 48 hours) of coconut coir dust pretreated with 1% NaOH (80°C, 16 hours), IL (120°C, 15 hours), NaOH+IL and native coconut coir dust as control.

- *Comment 16. Why delignification of some lignin and hemicellulose increase TRS? Does hemicellulose undergo delignification*?

  The increase in the substrate digestibility of NaOH-pretreated coconut coir dust was attributed to the delignification of some lignin and the dissolution of hemicellulose. The cellulose was more open but still bound to lignin and hemicellulose so the enzymes easily attacked the cellulose.

Hemicellulose undergoes dissolution, in the section 3.3 page 6.

- *Comment 17. Please rephrase this paragraph*

The TRS concentration was only 2.30 g/L for the non-pretreated substrate after 48 hours of enzymatic hydrolysis. After NaOH pretreatment, the TRS value was 4.05 g/L. The increase in the substrate digestibility of NaOH-pretreated coconut coir dust was attributed to the delignification of some lignin and the dissolution of hemicellulose. The cellulose was more open but still bound to lignin and hemicellulose so the enzymes easily attacked the cellulose. The TRS concentration of IL-pretreated coconut coir dust was 3.55 g/L, section 3.3 page 6

- *Comment 18. Also rephrase this paragraph*

To increase the performance of the enzymatic hydrolysis of coconut coir dust, NaOH pretreatment was followed by IL pretreatment (NaOH+IL). The TRS concentration of NaOH+IL-pretreated substrates was 4.46 g/L after 48 hours, which was the highest TRS concentration achieved by the different pretreatments. This result indicated that the TRS concentration could be significantly influenced by the synergy of the delignification and dissolution of hemicellulose, the openness of the cellulose surface and transformation of the crystal structure from cellulose I to cellulose II. This result was similar to others reported previously, section 3.3 page 6.

- *Comment 19. Please use lower digit, which represents its accuracy*

Table 2 was merged and rearranged compactly and all data had used lower digit as shown below, page 7.

Table 2 Yield (Eq. 1) and HPLC measurement of the enzymatic hydrolysis of substrates obtained by the various pretreatments for 12 and 48 hours

Methods	Compotion of Reducing sugar for 12 and 48 h (HPLC)								DNS		Yield DNS	
	Glucose		Xylose		Galactose		Yield HPLC					
	12 h	48 h	12 h	48 h	12 h	48 h	12 h	48 h	12 h	48 h	12 h	48 h
Control	0.83	0.83	0.01	0.01	0.04	0.04	0.88	0.88	2.30	2.30	0.07	0.07
NaOH	1.67	1.56	0.02	0.11	0.05	0.64	1.75	2.31	3.32	4.05	0.10	0.12
IL	1.57	1.26	0.00	0.00	0.03	0.38	1.60	1.64	2.87	3.55	0.09	0.11
NaOH+IL	1.93	1.32	0.06	0.12	0.06	0.62	2.05	2.06	3.48	4.46	0.10	0.13

- *Comment 20 and 21. Control*

The word ‘no’ has been changed by control as shown in Table 2, page 7.

- *Comment 22. Rephrase the sentence ‘Substrate pretreated by NaOH+IL was the easiest of other pretreated substrates be hydrolyzed by water*.

Since there was reducing of page, the sentence mentioned in comment 22 was deleted.

- *Comment 23. This figure is not necessary, could be removed*.

The figure of HPLC diagram was removed.

- *Comment 24. This table is not necessary, could be removed.*

  The table of retention time and area of HPLC measurement was deleted.

- *Comment 25 and 26. Control*
  We have subsituted 'no words' by control, in Table 3 page 7.

- *Comment 27 and 28. The legend as well as the figure title should be renamed to better illustrate the experiment*.
  Section of effect of recycled IL [MMIM][DMP] on enzymatic hydrolysis of coconut coir dust was removed. This section will be prepared for a new paper.

- *Comment 29. Please present the results in digits that reflect its accuracy.*
  Section of recycled ionic liquid was removed.

- *Comment 30. Conclusion is too long. It was not a complete summary of the obtained results*!

  The conclusion in page has been modified and reduced some sentences as follows:

  Conclusion

  Reducing sugars have been successfully prepared from high-lignin lignocellulose from coconut coir dust pretreated by ionic liquid, alkaline solution and the combination of alkaline and ionic liquid. A comparative study was conducted to analyze the sugar yields from hydrolysis of the IL-, NaOH- and combined NaOH+IL-pretreated substrates as well as non-pretreated substrate as a control. The highest yield of sugar was 0.30g sugar/g cellulose+hemicellulose or 0.13 g sugar/g dried lignocelluloses for NaOH+IL-pretreated coconut coir dust. The yield of sugar from the non-pretreated substrate was 0.15. For coconut coir dust pretreated with IL or NaOH, the yields of reducing sugars were 0.24 and 0.27g sugar/g cellulose+hemicellulose, respectively.