Accepted Manuscript

Title: An ionic liquid treatment and fractionation of cellulose, hemicellulose and lignin from oil palm empty fruit bunch

Authors: Safia Syazana Mohtar, Tengku Nur Zulaikha Tengku Malim Busu, Ahmad Mujahid Md Noor, Norsalliana Shaari, Hanapi Mat



 PII:
 S0144-8617(17)30240-0

 DOI:
 http://dx.doi.org/doi:10.1016/j.carbpol.2017.02.102

 Reference:
 CARP 12081

To appear in:

Received date:	23-9-2016
Revised date:	24-2-2017
Accepted date:	24-2-2017

Please cite this article as: Mohtar, Safia Syazana., Busu, Tengku Nur Zulaikha Tengku Malim., Noor, Ahmad Mujahid Md., Shaari, Norsalliana., & Mat, Hanapi., An ionic liquid treatment and fractionation of cellulose, hemicellulose and lignin from oil palm empty fruit bunch.*Carbohydrate Polymers* http://dx.doi.org/10.1016/j.carbpol.2017.02.102

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

An ionic liquid treatment and fractionation of cellulose, hemicellulose and lignin from oil palm empty fruit bunch

Safia Syazana Mohtar¹, Tengku Nur Zulaikha Tengku Malim Busu¹, Ahmad Mujahid Md Noor¹, Norsalliana Shaari¹ and Hanapi Mat^{1,2*}

¹Advanced Materials and Process Engineering Laboratory, Faculty of Chemical and Energy Engineering, Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor, Malaysia.

²Advanced Material and Separation Technologies (AMSET) Research Group, Health and Wellness Research Alliance, Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor, Malaysia.

Research Highlights

- 1. Cellulose, hemicellulose and lignin were successfully extracted from OPEFB.
- 2. Only 73.71 and 82.94 % wt. of cellulose and lignin were recovered, respectively.
- 3. High recovery of hemicellulose (273.71 % wt.) due to its impurities.
- 4. [bmim][Cl] degraded after the fourth cycle.

^{*}Corresponding author. Tel.: + 607-5535590, Fax: +607-5581463, Email: hbmat@cheme.utm.my

Download English Version:

https://daneshyari.com/en/article/5157359

Download Persian Version:

https://daneshyari.com/article/5157359

Daneshyari.com