



Buku Program dan Abstrak Seminar Nasional Kimia 2017



SNK 2017

"Green Chemistry dan Energi Terbarukan
untuk Kehidupan Masa Depan"

11 September 2017
The Axana Hotel

Dilaksanakan oleh:

Jurusan Kimia

Fakultas Matematika dan Ilmu Pengetahuan Alam

Universitas Andalas

**Buku Program dan Abstrak
SEMINAR NASIONAL KIMIA 2017**

SNK 2017

**“Green Chemistry dan Energi Terbarukan
untuk Kehidupan Masa Depan”**

**11 September 2017
The Axana Hotel**

**Dilaksanakan oleh
Jurusan Kimia
Fakultas Matematika dan Ilmu Pengetahuan Alam
Universitas Andalas**

DAFTAR ISI

KATA SAMBUTAN KETUA PANITIA.....	i
KATA SAMBUTAN DEKAN	ii
PANITIA SEMINAR NASIONAL KIMIA 2017.....	iii
SUSUNAN PROGRAM.....	v
DAFTAR ISI	vii
PS-01 KEBIJAKAN PEMERINTAH DALAM PENGEMBANGAN ENERGI BARU DAN TERBARUKAN Sudjoko Harsono Adi.....	2
PS-02 PLENARY SPEECH 02 John Hendry	3
KS-01 GREEN CHEMISTRY - ISU SEKARANG DAN MASA DEPAN PADA SINTESIS NANO-LOGAM Syukri Arief.....	5
KS-02 CHITOSAN AND ITS CHEMICAL MODIFICATION: APPLICATION TO ENVIRONMENTAL, BIOSCIENCE, AND ENERGY FIELDS Akhmad Sabarudin.....	6
INV-A MODIFIKASI EKSTRAK GAMBIR SEBAGAI <i>GREEN INHIBITOR</i> PEMBENTUKAN KERAK KALSIMUM KARBONAT (CaCO ₃) Suharso ^{a*} , Tiand Reno ^a , Teguh Endaryanto ^b , Buhani ^a	9
INV-B TEKNIK PELAPISAN Fe ₃ O ₄ DALAM SINTESIS HIBRIDA ALGA- SILIKA SEBAGAI PENYERAP LOGAM BERAT Buhani, Indry Yani Saney, Indah Wahyu Purnamasari, Suharso..	10
OA-01 ADSORPSI ION Cd(II) DENGAN KULIT SAGU (<i>Metroxylon sagu</i>) Syiffa Fauzia ^a , Hermansyah Aziz ^b , Dahyunir Dahlan ^c , Rahmiana Zein ^{a*}	12
OA-02 CHEMICAL COMPOSITION OF LIQUID FUEL PRODUCED BY CO- PYROLYSIS OF SUGARCANE BAGASSE AND RUBBER SEED OIL USING ZEOLITE-X SYNTHESIZED FROM RICE HUSK SILICA AND ALUMINUM METAL AS CATALYST Wasinton Simanjuntak[*], Zipora Sembiring, Kamisah D. Pandiangan, Veronika, Ruliana, and Hermayana.....	13
OA-03 AKTIVASI DAN MODIFIKASI ZEOLIT ALAM UNTUK MENINGKATKAN EFEKTIVITAS PENJERAPAN AMONIA DALAM AIR Tiur Elysabeth ¹ , Gina Ramayanti ¹ , Slamet ² , Setiadi ²	14

OA-02

CHEMICAL COMPOSITION OF LIQUID FUEL PRODUCED BY CO-PYROLYSIS OF SUGARCANE BAGASSE AND RUBBER SEED OIL USING ZEOLITE-X SYNTHESIZED FROM RICE HUSK SILICA AND ALUMINUM METAL AS CATALYST

Wasinton Simanjuntak*, Zipora Sembiring, Kamisah D. Pandiangan,
Veronika, Ruliana, and Hermayana
*Department of Chemistry, The University of Lampung Jalan Prof. Soemantri
Brojonegoro No. 1 Bandar Lampung, 35145
email: wasinton.simanjuntak@fmipa.unila.ac.id*

Abstract

In this investigation, a mixture of sugarcane bagasse and rubber seed oil was subjected to pyrolysis for liquid fuel production. A series of pyrolysis experiments was conducted using zeolite-X synthesized from rice husk silica and aluminum metal through sol-gel route as catalyst. Before use, the zeolite was subjected to calcination treatment at different temperatures of 600, 700, 800, and 900 °C, to enable the evaluation of the effect of calcination temperatures on the chemical composition of the liquid fuel obtained. The pyrolysis experiments were conducted at the temperature range of 250 to 500 °C, and the liquid fuels produced were analyzed using gas chromatography-mass spectrometry (GC-MS) technique for component identification. The experimental results indicate that liquid fuels composed of a series of compounds which can be categorized into hydrocarbon, alcohol, ester, and ketone. The results also display significant effect of the calcination temperatures on the composition of the liquid. Liquid fuel with the highest hydrocarbon content of 89.3% was obtained using the catalyst calcined at 700 °C.

Keywords: *Liquid fuel, pyrolysis, bagasse, rubber seed oil, zeolite.*