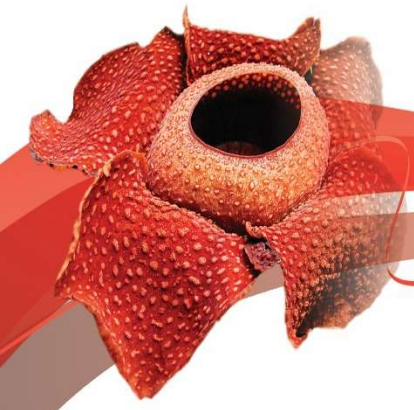

Abstracts Book

Chemistry

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`` Science and Technology for Nation Prosperity ``

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Daftar isi

JADWAL SESI PARALEL

Ruang : Halekoa 1
Penanggung Jawab Ruang : Charles Banon

No	Author	Title
KI-1	Nazarudin, Yogie Yogendra Hans , Oki Alfernando	Methyl Ester from Used-Cooking Oil Cracking ProcessUsing Ni Impregnated Activated Carbon Catalyst
KI-2	Saiful, Marlina, Rahmi	Membrane Forward Osmosis as Alternative Method in Water Treatment
KI-3	Zulhadjri, Bilian Sahiga J.I., Aulia Arivin Billah, Syukri Arief, and Upita Septiani	Four Layers Aurivillius $Ca_{1-x}Bi_{3+x}LnTi_{4-x}Mn_xO_{15}$ (Ln = La^{3+} and Nd^{3+}) Synthesized By Molten Salts Technique
KI-4	Retti Hanggia Anggela, Evi Maryanti, Asdim	Synthesis of SnO_2 Nanoparticles using Tea Leaves Extract (*Camellia sinensis*) by Hydrothermal Method
KI-5	Novia Mia Yuhermita, Oki Alfernando, Muhammad Haviz, Nazarudin	Catalytic Cracking Of Used Cooking Oil Using Cobalt Ion-Exchanged Carbon (Co-Carbon)
KI-6	D.R. Gusti, Yusnelti, D. Mastutik and Y.W. Rofiah	Effect of Graphite Concentration in TiO2 Semiconductors on Efficiency of Dye-Sensitized Solar Cell (DSSC) Using Dye-*Melastoma malabathricum L* Fruit Extract
KI-7	N Ngatijo, R Bemis, A Aziz, R Basuki	Reinforcement of Quaternary Ammine Modified Silica (QAMS) with Magnetite and its Application by Solid Phase Adsorption (SPA) to Adsorb Chromate Ions
KI-8	Crystina Simanjuntak, Rikson Siburian, Harlem Marpaung	Magnesium Coated Graphite and Graphene for Good PerformanceElectrodes in Primary Cell Battery
KI-9	Lenny Marlinda, Edwin Permana, Rahmi, Muhammad Al-Muttaqi, Danawati Hari Prajitno, Achmad Roesyadi	Hydrocarbon Distribution in Liquid Fuel Product from Hydrocracking of *Cerbera Manghas* Oil with Cobalt-Nickel suported on HZSM-5 Catalyst
KI-10	Lenny Marlinda, Intan Lestari, Rahmi, Muhammad Al-Muttaqi, Maulana M. Yusuf	Sunan Candlenut ShellsActivated Carbon: Preparation, Characterization andIts Application on Rhodamine B Adsorptionin Dilute Solutions
KI-11	Rikson Af Siburian, H. Sihotang, Saur Lumban Raja, Minto Supeno, C. Simanjuntak	Reaction Model of Graphene Nano Sheets Formation
KI-12	Rahadian Zainul	Effect of Moleculer Dynamic and Catalytic in Humic Acid Phototransformator
KI-13	A S Zulaicha, Buhani and Suharso	Coating of active carbon from palm oil shells with magnetite particles and adsorption tests on Cu(II) ions in solution
KI-14	Nancy Willian, Syukri , Zulhadjri, Syukri Arief	Eco-Friendly Synthesis of Silver Nanoparticles (AgNPs) Using Fruit Extract of Mangrove *Rhizophora Stylosa* and Their Antibacterial Activity
KI-15	C Nusantari , A Kiswandono,	The Synthesis of Copoly-Eugenol DVB 4% as

	and S Hadi	Carrier Compound for Phenol Transport in Artificial Waste using PIM Method
KI-16	M. F. Alif, S. Arief, Y. Yusuf, and Yunita	Purification of peat water using hydroxyapatite synthesized from Langkitang (*Faunus ater*) clams shell
KI-17	Nurhasni,Sariana Harahap, dan Hendrawati	Utilization Of Sugarcane As Adsorbent Substance Methylene Blue And Malachite Green
KI-18	Basta Nius Zega, Ashar Muda Lubis, Shaoneng He	Characteristics Of Stable Isotope Compositions (Δ^{18}o And Δ^{2}h) In Serut And Hitam Rivers And Unib Lake

Ruang : Halekoa 2
Penanggung Jawab Ruang : Ghufira

No	Author	Title
KI-19	Mai Efdi ,Dara Pratama and Afrizal	Isolation and Structure Elucidation of An Antioxidant Flavonoid Glycoside from Cacao Mistletoe (*Scurrula ferruginea* (Jack) Danser)
KI-20	Imelda H Silalahi, and Duncan W Bruce	Photochemistry of Chloroplatinate Anions
KI-21	Alizar Ulianas, Nadia Sabrina, Nurlely and Yulkifli	Molecularly Imprinted Polymer (MIPs) Nanomaterials Design as Absorbing Cholesterol in Blood
KI-22	M Taufik, Z Alfian, D Ardilla, M Razali, I Kurniawan, N W A Nasution, R A Pulungan, S D Sihotan	Investigation Of Lard In Pork Floss To Support The Improvement Of Halal Food Products In Indonesia
KI-23	D Ardilla, M Taufik, D M Tarigan, M Thamrin, M Razali, D Fahraeny	Analysis of lard that was adulterated with Chicken Nugget
KI-24	Surtini Karlinasari, Tati Suhartati, Heri Satria, Sutopo Hadi andYandri	Enzymatic Conversion of Potato Starch into Glucose using The purified α-Amylase Enzyme from Locale Isolate Bacteria *Bacillus subtillis* ITBCCB148
KI-25	Sutopo Hadi, Noviany, Tati Suhartati, Hardoko Insan Qudus and Yandri	The Biological Activity of Some Organotin(IV) benzoate compoundsas new antimalarial agents
KI-26	Saur L raja, Harlem Marpaung, Saudin Simanjuntak, Crystina Simanjuntak, Eko Pudjadi	Distribution and Risk Assessment of Natural Radioactive Elements in Volcanic Ashes, Cold Lava, River Waters Due to Volcanic Eruption of Mount Sinabung
KI-27	Endah Wahyuningsih, Noviany, and S.D Yuwono	Synthesis And Characterization Of Carboxymethyl Cellulose (Cmc) From Mikrocellulose Of Cassavapeel
KI-28	Uce Lestari , Yokobeth Ade Jesika Limbong, Muhaimin	Formulation Peel Off Gel Mask From Palm Shell*(Eleis Quinemis Jacq)* Activated Charcoal As Facial Cleanser With Polyvinyl Alcohol (Pva)
KI-29	A Labanni, Zulhadjri, D Handayani and S. Arief	One Pot Green Synthesis Of Ultra-Trace Silver-Doped Hydroxyapatite Using *Uncaria Gambir* Roxb. And Diethanolamine
KI-30	Erizal Zaini, Enjar Ori Purwanto, Rina Wahyuni, Friardi Ismedand Lili Fitriani	Multicomponent Crystal of Piperine – Succinic Acid with Improved Dissolution Rate
KI-31	M Muhdarina, E Damayanti,	Activated sulfate clay as an adsorbent of free fatty

	D K Putri, N Nurhayati and S Bahri	acid from Crude Palm Oil (CPO)
KI-32	Yusnelti, Fuldiaratman , Minarn	Test The Activity Of Vegetable Oils From Shorea Sumatrana Sym Against Bacteria Salmonella And Bacteria Eschericia Coli
KI-33	Yasir Amrulloh, Syukri, Syukri Arief	The Effect Leaf Extract of Gambir (Uncaria gambir Roxb.) on Green Synthesis of
KI-34	R Arissa, H I Qudus, and S Hadi	Study of Chemical Reactivity of Tributyltin(IV) Chloride, Triphenyltin(IV) Chloride, and Diphenyltin(IV) Dichloride Using Cyclic Voltammetry
KI-35	Netri Elisma, Arniati Labanni, Emriadi, Yetria Rilda, Syukri Arief	Effect of Precursor Anions on the Synthesis of Copper Nanoparticles Using U*ncaria gambir robx.* Leaves Extract
KI-36	D Ratnawati, E Widiyati	Microencapsulation of *Solanum Muricatum* Aitonby Solvent Evaporation Technique
KI-37	Aisyah Fitrida	Biodegradation of Napthalene Toxic Compound Environmental

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Abstract. Pork floss is one of the most sought after food products in Indonesia specifically in North Sumatera. The price of pork is cheaper than beef. Significant impact of price competition with beef floss causes its to be extradited by pork floss. A simple method was developed for analyzing lard. This method includes preparation, extractionand analysis using UV spectroscopy. Purposive sampling has been done in sampling. Electrosynthetic coupling maceration extraction was carried out at temperature = 50^0C. The maceration time was variated at 30, 60, 90, 120, and 180 minutes. Qualitative analysis begins by using a spot test and solubility indicating the presence of lard. The optimal time was obtained in 120 minutes. Iodine number, index bias, melting point, acid numbers respectively: 0.895, 73, 1.462, 37^0C, and 2.541. UV Spectroscopy was developed at an optimal wavelength (270 nm). The optimum extraction time was 120 minutes and the lard content of 39 %

KI-23

Analysis of lard that was adulterated with Chicken Nugget

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Abstract. Technological advancements produce very diverse food products with excellent quality and prices. In this case, processed food products often adulterated with lard. This adulteration is intended to improve taste and reduce the price of production by mixing ingredients with lard. In this study, chicken nuggets were adulterated with lard (1: 1). Maceration extraction was developed using n-hexane. The n-hexane concentration and maceration time were varied to study interactions using the Completely Randomized Design method. The n-hexane concentration had a significant effect on the level ($P < 0.05$) on specific gravity and was significantly different at the level ($P < 0.01$) of iodine numbers, acid numbers and total microbes. The maceration time had a very significant effect on the level ($P < 0.01$) on specific gravity, iodine number, acid number and total microbes. The treatment interactions between the effect of n-hexane concentration and maceration time had a significantly different effect on the level ($P < 0.05$) of specific gravity and iodine numbers. The concentration of lard analyzed using UV spectroscopy (yield = 32%).

KI-24

Enzymatic Conversion of Potato Starch into Glucose using The purified α-Amylase Enzyme from Locale Isolate Bacteria *Bacillus subtillis* ITBCCB148

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Abstract. The objective of this study is to determine the ability of the purified α-amylase enzyme to convert potato starch into glucose. For this aim it is needed to isolate and purify of α-amylase from locale isolate bacteria *Bacillus subtillis* ITBCCB148. The isolation of the extracellular α-amylase was conducted using cold centrifuge methode to separate the enzyme from the cells. The purification of the α-amylase was examined by fractionation using ammonium sulfate salt followed by dialysis. The activity of the α-amylase enzyme was determined by the Fuwa method and Mandels while the protein content was determined by the Lowry method. Purified α-amylase that obtained from 20–80% of ammonium sulfate saturation has specific activity 11312.64 $U.mg^{-1}$, in case of the purity increased to 6.41 times compared with the crude one (1765.25 $U.mg^{-1}$). On the other hand the purification in dialysis step could increse the specific activity at 28834.13 $U.mg^{-1}$, which the purity rose to 16.33 time higher than crude. The purified enzyme has an optimum pH at 5 and optimum temperature at 65ºC. The purified amylase from dialysis step then applied for enzymatic conversion with various concentrations of potato starch 0.1; 0.2; 0.4; 0.6 and 0.8 % respectively to produce glucose. These starch consentration could produce glucose at 0.14; 0.33; 0.49; 0.72 and 0.71 $mg.mL^{-1}$ respectively. The activity of α-amylase since conversed the starch potato are 26.54; 60.51; 91.18; 133.33 and 131.72 $U.mL^{-1}$ respectively. The purified α-amylase enzyme was able to convert potato starch to glucose with an optimum concentration of potato starch 0.6%.

Keywords: α-Amylase; Bacillus subtillis ITBCCB148; *Purification; Potato Starch*

KI-25

The Biological Activity of Some Organotin(IV) benzoate compoundsas new antimalarial agents

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ABSTRACT. The organotin (IV) carboxylate and its derivatives are widely known since the derivative of these compounds are very active and strong even at very low concentration. This condition makes these compounds continue to attract more attention to be used in many biological activities. We have previously succeeded in the syntheses and performed many activity studies of some organotin(IV) benzoates, in this work, we reported the antimalarial activity studies of some organotin(IV) derivatives. The targeted compounds were prepared from their organotin(IV) chlorides via the intermediate products of dibutyltin(IV) oxide, diphenyltin(IV) dihydroxide and triphenyltin(IV) hydroxide, respectively and followed by reacting the intermediate products with 2,3,4-chlorobenzoic acid. The antimalaria activity was performed against *Plasmodium falcifarum.* The results showed that the IC_{50} of all organotin(IV) compounds tested were little bit higher than the chloroquine as the positive control, however one advantage is that the organotin(IV) compounds are not resistent to the Plasmodium, thus making the used of organotin(IV) as antimalaria is widely opened. The triphenyltin(IV) compound is more potent to be used as antimalaria and has potential to be developed as antimalarial drug in the near future.
Keywords: antimalarial,IC_{50}, organotin(IV) benzoate, P. Falcifarum

SERTIFIKAT

diberikan kepada

Yandri A.S.

Atas partisipasinya sebagai

Pemakalah

Pada Seminar & Rapat Tahunan BKS PTN Wilayah Barat Bidang MIPA 2019
"Science and Technology for Nation Prosperity"
Bengkulu, 6-7 Juli 2019

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