

Conference Program Timetable

2nd International Young Scientists Conference on Analytical Sciences

Theme "Pure and Applied Sciences for the Future"

September 17-18, 2013

Padang, Indonesia

Organized by

Laboratory of Analytical Environmental Chemistry
Department of Chemistry
Faculty of Mathematics and Natural Sciences
The University of Andalas
Padang, 25163, Indonesia



	O ₂ gases production from water
PP-16	Elvinawati, I. N. Chandra and S. Rahmadani (Bengkulu University) The effect of Trico-G fungi to physical and chemical parameters of waste water of rubber industry
PP-17	R. Suhaili, A. Rahayu, L. W. Lim and T. Takeuchi (Andalas University) Determination of common inorganic anions in commercially refillable drinking water by capillary ion chromatography
PP-18	Harmesa Comparison of BOD sensors based on <i>Rhodotorula mucilaginosa</i> UICCY-181 with <i>Candida fukuyamaensis</i> UICC Y-247
PP-19	Melia Ines Kurniawan, Rahmiana Zein and Edison Munaf (Andalas University) Isotherm and Kinetic Modeling of Pb(II) and Cu(II) Uptake by <i>Annona muricata</i> L. Seeds
PP-20	Khairunnisah, MarniatiSalim and ElidaMardiah (Andalas University) BioethanolProductionfromSagoWaste(<i>Metroxylon sp</i>)withPretreatmentProcess and SimultaneousSaccharificationandFermentation(SSF) Method
PP-21	E. W. Nengsih, B. Oktavia and S. B. Etika (Padang State University) Optimasi Analisa Kadar β Karoten Dalam Jagung (<i>Zea Mays. L</i>) Dengan Metoda HPLC Terhadap Pengaruh Lama Perebusan, Variasi Eluen Dan Kolom
PP-22	Helmiyati, Wina yulianti, Asep Saefumillah (University of Indonesia) Analysis and Swelling Capacity of grafted poly (acrylicacid-co-acrylamide)cellulose of rice straw superabsorbent
PP-23	Reno Permatasari Pasaribu, Sumaryati Syukur and Endang Purwati (Andalas University) Isolation, characterization and identification of lactic acid bacteria dna dadih region aia dingin solok
PP-24	Eka Putra Waldi, AriadiHazmi, SyukriArif, HairulAbral (Andalas University), Yoshinobu Murakami, NaohiroHozumi and Masayuki Nagao (Toyohashi University of Technology) Breakdown on LDPE Film due to Partial Discharge AC and Square Wave Voltage
PP-25	Suryati, Henny Lucida and Dachriyanus (Andalas University) Determination of an in-vitro sun protection effect of germanicolcinnamate isolated from the leaves of Tabatbarito (<i>Ficusdeltoides</i> Jack)
PP-26	YosiSiska, Marlina, Rusdi (Andalas University) Detection Of <i>Cytochrome-B</i> As A Gene Marker Of Pork From <i>Pizza</i> In The Padang City Using The <i>Polymerase Chain Reaction</i> (PCR) Method
PP-27	Yusra, FauzanAzima, Novellinaand Periadnadi (Andalas University) Bacterial Diversity Associated with Budu, an Ethnic Traditionally Fermented Fish Product of West Sumatera
PP-28	Dwisari Dillasamola, Surya Dharma and Helmi Arifin (Andalas University) The Effect of vanadyl sulphate with chromium (III) chloride by combination or single administration on creatinin blood level of white mice which induced by dexamethasone
PP-29	EmaErlina, Yulilzati, Putri Amanda, Deswati and Refilda (Andalas University) Water Quality Analysis of BatangKuranji River and The Effects on Gariang Fish Population (<i>Tor tambroidesdi</i>)
PP-30	Yetria Rilda, Silvi Kurniawan and Syukri Arief (Andalas University) Modification of nano surface morphology ZnO with the addition biopolymer chitosan

Bacterial Diversity Associated With Budu, An Ethnic Traditionally Fermented Fish Product of West Sumatera

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ABSTRACT

Budu, a traditionally fermented fish product mainly in the coastal area in the province of West Sumatera prepared from Spanish mackerel (*Scomberomorus guttatus*) and leatherskin (*Chorinemus tala*). The purpose of this research is to study the current traditional processed of budu and the bacterial diversity especially the lactic acid bacteria (LAB) associated with it. The bacteria isolated were growth on glucose tripton agar (GTA) + CaCO₃ medium and then performed purification by plate out on *deMan Rogosa and Sharpe* (MRS) Agar. It was found 138 isolates of LAB showed with clear zone around the culture. Bacterial diversity associated with this fermented fish product *budu* comprised of *Bacillus sphaericus*, *Bacillus polymyxa*, *Bacillus cereus*, *Bacillus pantothenicus* and *Micrococcus lactis*.

Keywords: *Bacterial diversity, budu, fermented fish, traditional product, West Sumatera.*



BACTERIAL DIVERSITY ASSOCIATED WITH BUDU

an Ethnic Traditionally Fermented Fish Product of West Sumatera

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ABSTRACT

Budu is a traditionally fermented fish product usually in the coastal area in the province of West Sumatera prepared from Spanish mackerel (*Scomberomorus guttatus*) and leatherjackets (*Chromerius teleo*). The purpose of this research is to study the current traditional processed of budu and the bacterial diversity especially the lactic acid bacteria (LAB) associated with it. The bacteria isolated were grown on glucose trypton agar (GTA) + CaCO₃ medium and then performed purification by plate out on De Man Rogosa and Sharpe (MRS) Agar. It was found 138 isolates of LAB obtained with clear zones around the culture. Bacterial diversity associated with this fermented fish product budu composed of *Bacillus subtilis*, *Bacillus polymyxa*, *Bacillus cereus*, *Bacillus pasteurianus* and *Micrococcus lactis*.

Keywords: Bacterial diversity, budu fermented fish, traditional product, West Sumatera

Introduction

Budu
Budu is a traditional fermented fish product usually in the coastal area in the province of West Sumatera prepared from Spanish mackerel (*Scomberomorus guttatus*) and leatherjackets (*Chromerius teleo*). The purpose of this research is to study the current traditional processed of budu and the bacterial diversity especially the lactic acid bacteria (LAB) associated with it. The bacteria isolated were grown on glucose trypton agar (GTA) + CaCO₃ medium and then performed purification by plate out on De Man Rogosa and Sharpe (MRS) Agar. It was found 138 isolates of LAB obtained with clear zones around the culture. Bacterial diversity associated with this fermented fish product budu composed of *Bacillus subtilis*, *Bacillus polymyxa*, *Bacillus cereus*, *Bacillus pasteurianus* and *Micrococcus lactis*.

Objective

The purpose of this research is to study the current traditional processed of budu and the bacterial diversity especially the lactic acid bacteria (LAB) associated with it.

MATERIAL AND METHODS

Material

Spanish mackerel (*Scomberomorus guttatus*) and leatherjackets (*Chromerius teleo*) were used as the main material.

10

Medium used: GTA, MRS, and MRS + CaCO₃.

Identification: Gram staining and Morphology.

Result and Discussion

Fresh Fish

Harvested at room temperature (25-28°C)

Encased into a butterfly style

Washed and intestinal organ removed

Layered with coarse salt ratio of 1:5

Allowed to stand 1 hrs

Rinsed

Sun-dried to 5 days

Budu

Table. Characterization of isolated bacterial strains

Strain	Gram	Shape	Size	Motility
Bacillus subtilis	+	rod	1-2 μm	+
Bacillus polymyxa	+	rod	1-2 μm	+
Bacillus cereus	+	rod	1-2 μm	+
Bacillus pasteurianus	+	rod	1-2 μm	+
Micrococcus lactis	+	square	1-2 μm	-



Conclusion
The results of this study showed that the bacterial diversity associated with budu fermented fish product was dominated by lactic acid bacteria (LAB). The most isolated species were *Bacillus subtilis*, *Bacillus polymyxa*, *Bacillus cereus*, *Bacillus pasteurianus*, and *Micrococcus lactis*.

CERTIFICATE

This is to certify that

Yusra

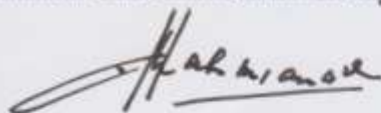
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Poster Presenter

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**Held in Convention Hall, Andalas University, Padang, Indonesia
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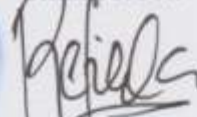
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