

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : PROSIDING INTERNASIONAL

Judul Karya Ilmiah/Artikel : Changes of Amino and Fatty Acids in Anchovy (Stolephorus Sp) Fermented Fish Paste with Different Fermentation Periods

Jumlah Penulis : 4(empat)

Status Pengusul : Penulis ketiga

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Changes of Amino and Fatty Acids in Anchovy (*Stolephorus* Sp) Fermented Fish Paste with Different Fermentation Periods

AD Anggo, WF Ma'ruf, F Swastawati... - *Procedia Environmental ...*, 2015 - Elsevier

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International Conference on Tropical and Coastal Region Eco-Development 2014 (ICTCRED 2014)

Coral Reef Resilience in 17 Islands Marine Recreation Park, Riung – An Assessment of Functional Groups of Herbivorous Fish and Benthic Substrate

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Abstract

Coral reefs in Indonesia are threatened by destructive fishing including the use of bombs and cyanide. Reefs in eastern Indonesia are particularly affected including reefs within 17 Islands Marine Recreation Park (MRP), Riung, Flores. Coral reef ecosystems that have been damaged can recover when the threat is stopped but the ability to recover will depend on several factors including status of herbivorous fish stocks, availability of suitable substrate for coral larval settlement, larval source, water quality and local oceanography. This research focuses on assessing the recovery potential of coral reefs 17 Islands MRP by assessing these factors at 12 sites including [i.e coral emergence, herbivore fish biomass and abundance, oceanographic factors]. This research showed that South Tiga Island has the highest recovery potential, due to the high population of herbivorous fish that will assist in opening a new substrate for the settlement coral larvae and limit the growth of algae. This site also has good conditions for coral growth indicated by the highest cover of live hard coral, high available substrate and sheltered position. Furthermore this research really important to know site potential for reef recover. Also improve management prioritization of reef sites based on reef resilience factors.

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Keywords: Destructive fishing, Herbivorous Fish, Available Substrate, Reef Resilience, Riung 17 Islands Marine Park

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International Conference on Tropical and Coastal Region Eco-Development 2014 (ICTCRED 2014)

Utilization of n-Hexane as Co-Solvent to Increase Biodiesel Yield on Direct Transesterification Reaction from Marine Microalgae

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Abstract

Direct transesterification reaction requires optimization of reaction conditions due to both the lipid extraction and lipid transesterification reactions that occur at the same place and time. Co-solvent utilization is considered as one of some ways to improve the yield in the direct transesterification reaction. In this study, transesterification was done directly on the marine microalgae biomass *Nannochloropsis* sp. Design variations in this research including the volume ratio of methanol: n-hexane, the molar ratio of lipid: methanol, and reaction time. From these variations, the volume ratio of methanol : n-hexane 1:1, molar ratio of lipid:methanol 1:400, and reaction time 4 hours can increase biodiesel yield until 90.9% for *Nannochloropsis* sp. FAME contents were analyzed by Gas Chromatography and Mass Spectroscopy (GCMS). Saturated fatty acid content is more dominant on biodiesel reached 52.72%.

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Keywords: Biodiesel, co-solvent, direct transesterification, *Nannochloropsis* sp, n-hexane

1. Introduction

Microalgae is autotrophs microorganisms which has three main components, those are carbohydrates, proteins and lipids¹. Microalgal biomass has been developed into food, animal feed, and high value bioactive substances because of the potential content of carbohydrate and protein². Meanwhile, the lipid content in microalgae can be developed into biodiesel. This study will use a species of chlorophyta marine microalgae that is *Nannochloropsis* sp. with lipid content that can reach 32%². Microalgae class of chlorophyta accumulate oils generally higher than other algal taxa such as red algae or brown algae³.

The method for microalgae biodiesel production usually uses transesterification reaction that initiated by lipid extraction. But, this method can reduce lipid content along the extraction and separation process prior to the transesterification reaction. Therefore, to reduce the possibility of lipids loss during this process, transesterification will be done directly on the biomass. Direct transesterification is able to increase biodiesel yield of *Chlorella* sp.

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Detecting Land Subsidence Using Gravity Method in Jakarta and Bandung Area, Indonesia

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Abstract

Since the declining of groundwater level often causes the land subsidence, it is important to monitor both height changes and gravity changes. The rate of gravity changes versus height changes depends on the density of the material. Thus it gives important information about the mechanism of the land subsidence. The objective of research is to monitoring the land subsidence by gravity observations. Establishing a new method to monitor the environmental issues such as groundwater variation, land subsidence, by means of absolute gravity measurements, a field type absolute gravity meter, Micro-G LaCoste Inc. A10 have been conducted in Jakarta and Bandung area, not only to confirm the accuracy of the instrument but also to investigate the practical and efficient measurement methods for the field surveys. The results present that the gravity value increases in the coastal in Jakarta. Otherwise the biggest gravity change was detected around Lembang fault in Bandung area.

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Keywords: Absolute gravity, density, land subsidence, Jakarta, Bandung, Indonesia

1. Introduction

Jakarta and Bandung are example of urbanized cities in Indonesia that have problem of land subsidence. Land subsidence occurs when large amounts of ground water have been excessively withdrawn from an aquifer. The clay layers within the aquifer compact and settle, resulting in lowering the ground surface in the area from which the ground water is being pumped. Over time, as more water is removed from the area, the ground drops and creates a cone. Once the water has been removed from the sediment, it cannot be replaced. Based on several studies [1, 2, 3, 4, 5, 6], there are four different types of land subsidence that can be expected to occur in the Jakarta and Bandung, namely: subsidence due to groundwater extraction, subsidence induced by the load of constructions (i.e. settlement

International Conference on Tropical and Coastal Region Eco-Development 2014(ICTCRED 2014)

ECOSYSTEM APPROACH TO FISHERIES MANAGEMENT IN INDONESIA: REVIEW ON INDICATORS AND REFERENCE VALUES

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Abstract

Although many definitions present the concept of the ecosystem approach to fisheries (EAF), there is lack of consensus on the definition and scope for the management. Design and implementation of this specific management are still ambiguous because the formulation criteria are not specified. Supporting by Coral Triangle Initiative (CTI), EAF in Indonesia has been implemented since 2010. Among 32 EAFM indicators used, standard CPUE, fish size, juvenile caught proportion, and species composition will be reviewed based on the reference values which are more useful in showing single-species approach management. Balance fishery as the alternative of single-species approach will be introduced.

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Keywords: EAF; Single-species Approach; CPUE; Selective Fishing; Balance Fishery

1. Introduction

There are many definitions which are useful in presenting concept of the ecosystem approach to fisheries (EAF) but there is also lack of consensus on the definition and scope of the ecosystem approach in fisheries management. Definition of ecosystem itself is a community of many living organisms (biodiversity) in conjunction with the non-living components of their environment to live, feed, reproduce and interact. Ecosystem approach under the 1995 FAO code describes conservation all species belonging to an ecosystem and together with monitoring and