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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : PROSIDING

Judul Prosiding (Artikel) : The Application of Interated Multi Trophic Aquaculture (IMTA) Using Stratified Double Net Rounded Cage (SDFNC) for Aquaculture Sustainability
 Nama/Jumlah Penulis : Sapto P. Putro, **Widowati**, Suhartana, Fuad Muhammad / 4 orang
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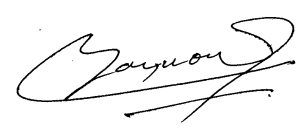
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Semarang, April 2020
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Penulisan artikel baik dan mengikuti standard penulisan artikel di International Journal of Science and Engineering, yaitu abstract, Introduction, Methodology, Result and Discussion (IMRaD), Conclusion dan Acknowledgement. Artikel ini didukung dengan referensi yang sesuai.

2. Ruang lingkup dan kedalaman pembahasan:

Lingkup bahasan dari artikel ini adalah bidang matematika terapan, khususnya pada bidang lingkungan. Dalam artikel ini dibahas dengan baik tentang untuk meningkatkan kapasitas penggunaan produk akuakultur SDNRC (*Stratified Double Floating Net Cage*) secara berkelanjutan melalui penerapan IMTA (*Integrated Multi-Trophic Aquaculture*) dan biomonitoring reguler. Relevansi hasil terkait terciptanya lingkungan yang sehat untuk budidaya perikanan berkelanjutan.

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4. **Kelengkapan unsur dan kualitas terbitan:**

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Surabaya, 18 April 2020
Reviewer 1



Prof. Dr. Basuki Widodo, M.Sc
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Unit kerja : Matematika FSAD ITS

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Total = (100%)	20,00			14.25
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1. Kesesuaian dan kelengkapan unsur isi prosiding:

Kesesuaian dan kelengkapan unsur isi cukup baik. Artikel tersusun dalam kaidah penulisan karta ilmiah. Terdiri atas 4 bagian: Introduction, Materials and methods, Results and Discussions, Conclusion. Didukung 25 referensi yang Sebagian besar berupa jurnal.

2. Ruang lingkup dan kedalaman pembahasan:

Ruang lingkup dan kedalaman pembahasan cukup baik. Nilai kebaruan kurang Nampak ditonjolkan dalam pembahasan. Pembahasan mengenai Applications floating rounded cages SDRNC-IMTA integrated with biomonitoring technique. Termasuk dalam lingkup Matematika Terapan yang sesuai dengan bidang keilmuan pengusul.

3. Kecukupan dan kemutakhiran data/informasi dan metodologi :

Kecukupan dan kemutakhiran data/informasi dan metodologi cukup baik. Terdapat 25 referensi yang sebagian besar berupa jurnal (5 diantara referensi lebih dari 10 tahun). Hasil secara substansi ada nilai kebaruan.

4. **Kelengkapan unsur dan kualitas terbitan:**

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Semarang, April 2020
Reviewer 2



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The application of integrated multi trophic aquaculture (IMTA) using stratified double net rounded cage (SDFNC) for aquaculture sustainability

SP Putro, W Widowati, S Suhartana... - ... Journal of Science ..., 2015 - pdfs.semanticscholar.org

The increase of fishery production nationally and internationally may impact on the potential emergence of a variety of environmental problems. The application of sustainable aquaculture is urgently needed by breeding fish for commercial purposes in a manner such that it has a minimum impact on the environment, contributing to the development of local communities and generating economic benefits. The design of the cage and farming practice in aquaculture activities are the important steps to ensure that farming activity is still ...

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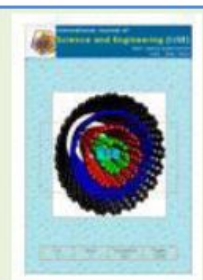
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Gas Chromatographic Method: Tool for Rapid and Sensitive Analysis of Residual Solvents in Amoxicillin and Ampicillin Tablets

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ABSTRACT – A simple and sensitive static head space gas chromatographic (SH-GC) method equipped with FID has been developed and validated for simultaneous determination of residual solvents e.g., methanol, dichloromethane and toluene in two therapeutic drugs such as amoxicillin and ampicillin. The separation was achieved with 30 m long Elite - 5 fused silica capillary column and 0.32 mm inner diameter. The developed SH-GC method offered symmetric peak shape, good resolution and reasonable retention time for all the solvents. Beer's law was obeyed in the concentration ranges 100 – 1200, 50 – 1000 and 50 – 500 ppm for methanol, dichloromethane and toluene, respectively. The method was validated according to international conference on harmonization (ICH) guidelines in terms of specificity, linearity, precision, accuracy, limit of detection, limit of quantitation, robustness and solution stability. The degrees of linearity of the calibration curves, the percent recoveries, relative standard deviation for the method were also determined. All the validation parameters were within the acceptable range. The developed SH-GC method could, therefore, be suitable for simple and rapid detection of trace levels residual solvents in other pharmaceutical products and thereby it could be used for routine analysis in any analytical laboratory.

Keywords: amoxicillin, ampicillin, residual solvents, SH-GC

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1. INTRODUCTION

The presence of solvents is essential in all steps of pharmaceutical process (e.g., reaction, separation and formulation). It is well known that a typical drug synthesis route usually consists of three to eight reaction steps and four or more different solvents are employed in the process. These solvents are not completely removed by practical manufacturing techniques and their traces may remain in the final products. The presence of these unwanted solvents (called residual solvents or organic volatile impurities) even in small amounts may influence a potential toxic risk of pharmaceutical products and have been a concern of

manufacturers for many years. Moreover, residual solvents can also affect the quality and stability of not only drug substances but also drug products. Thus the amount of such solvents is limited by international conference on harmonization (ICH) guidelines [1]. Residual solvents are mainly classified into three classes on the basis of the toxicity level and the degree to which they can be considered an environmental hazard. **Class I** solvents are known carcinogens and are harmful to humans and the environment, so the use of these solvents should be avoided. **Class II** solvents are nongenotoxic animal carcinogens or possible causative agents of other



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Nutrient Potency of Rice Straw Processed with Amofer as Cattle Feed Stuff in East Kalimantan

Hamdi Mayulu¹⁾ and Suhardi¹⁾

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Abstract–Forage demand can be supplied from rice straw which processed with certain feed technology innovation. Some advantages can be derived under this technology i.e. increasing nutrient content, optimizing the utilization, improving the efficiency and reducing production cost by minimizing feed cost. Ammoniation fermentation (amofer) as an applied technology could give solution over the limitation of rice straw availability. The objective of this research was to determine the potency of rice straw processed with amofer (amofer-rice straw) as raw material to formulate complete feed. The experiment was carried out with randomized block design with three treatments and six replications. Amofer treatment was carried out by adding urea 3% from the total material and then placed into plastic jar \pm 12 liter and then incubated under an-aerobic process for 18 days. Fermentation material i.e. biology starter by 1% of total material was added at the ninth day. Dry Matter (DM) content resulted from each treatments was 87,28%, 85,96% and 84,61% for T₁, T₂ and T₃, respectively. Crude Protein (CP) content was T₁=24,48%, T₂=21,04%; and T₃=24,46%, Crude Fiber (CF) content was T₁=31,30%; T₂=31,30%; and T₃=31,39%. Total Digestible Nutrient (TDN) for version 1 was T₁=57,29; T₂=56,19; and T₃=56,89 and version 2 was T₁=53,11%; T₂=52,28%; and T₃=51,10%. The average value of Non Nitrogen Free Extract (NNFE) was T₁=23,49%; T₂=28,08%; and T₃=26,57%. The utilization of amofer as applicable technology is considered as the most appropriate method to increase the quality of rice straw by significantly increase nutrient content in term of crude protein (CP) and reduce crude fiber (CF) content. This increasing quality can be seen from the result of proximate analysis, NNFE and TDN content.

Keywords: Potency, nutrient, rice straw, amofer, feed, cattle(;))

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I. INTRODUCTION

Feed plays important role for cattle including optimizing the productivity during growth, pregnancy and lactation phase. Feed also plays on the ability of cattle to survive and produce milk, calf, meat and energy. In addition, feed roles to maintain durability and health at a good performance. However, feed should be in a good quality and fed at enough amount in accordance with the cattle needs and production (Mayulu *et al.*, 2013; Mayulu, 2012; Mayulu *et al.*, 2010; Kuswandi, 2011).

Feed is an important element in the production of beef cattle especially to support their productivity. Limit availability of forage due to land conversion gives direct impact on low productivity of beef cattle business. The utilization of biomass such as rice straw may give good opportunity to supply beef cattle's feed with cheaper price. However, direct usage of bulky-rice straw contains low quality of feed material.

Technology innovation is much needed in order to supply feed material for cattle business to avoid competition with human and or other animals. Minimizing the production cost of cattle business requires technology innovation to manage and increase nutrient content of rice straw. Needs of forage can be supplied from rice straw which available in abundant amount under certain feed processing technology. Ammoniation fermentation (amofer) technology is an applied technology which could increase the nutrient content of rice straw.

Ammoniation fermentation can be carried out by adding urea and life micro-organism which contained in biology starter (starbio) consisted of lactic acid bacteria, lactobacillus genus and *bifidobacteria* genes and fungi (*saccharomyces cerevisiae*). The addition of urea and micro-organism works together to increase the nitrogen content, palatability, consumption and digestibility of rice straw. The addition of urea for ammoniation could increase nutrient content such as protein, metabolic