LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : JURNAL ILMIAH

Judul Jurnal Ilmiah (Artikel)	:	Characterization of citronella grass essential oil of *Cymbopogon winterianus* from Batang region, Indonesia		
Penulis Jurnal Ilmiah/ Jumlah penulis	:	H P Kusumaningrum, M Zainuri, H Endrawati dan E D Purbajanti / 4 orang		
Status Pengusul	:	Penulis anggota		
Identitas Jurnal Ilmiah	:	a. Nama Jurnal	:	Journal of Physics: Conference Series
		b. Nomor ISSN	:	17426588, 17426596
		c. Volume, nomor, bulan, tahun	:	1524
		d. Penerbit	:	IOP Publishing Ltd.
		e. DOI artikel (jika ada)	:	https://doi.org/10.1088/1742-6596/1524/1/012057
		f. Alamat web jurnal	:	https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012057/pdf
		g. Terindeks di SCOPUS, Q4, SJR 2021 0.21, H Indeks 85		

Kategori Publikasi Karya Ilmiah/buku (beri v pada kategori yang tepat) :
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- [ ] Prosiding Nasional

Hasil Penilaian *Peer Review* :

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	Prosiding ~~internasional~~/ Internasional terindeks** [✓]	Prosiding Nasional [ ]	Nilai akhir yang diperoleh
a. Kelengkapan unsur isi (10%)	3,00		**3,00**
b. Ruang lingkup dan kedalaman pembahasan (30%)	9,00		**8,85**
c. Kecukupan dan kemutahiran data /informasi dan metodologi (30%)	9,00		**9,00**
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	9,00		**9,00**
Total = (100%)	30,00		**29,85**
Nilai pengusul = (60% x 29,85) = 17,91			**17,91**

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3. Kecukupan dan kemutakhiran data/informasi dan metodologi: Data-data hasil penelitian cukup menunjukkan ada kebaruan informasi. Terdapat 17 buah pustaka dari 22 yang kurang dari 10 th terakhir. Sebanyak 19 dari 22 pustaka berupa Jurnal (ini menunjukkan proses review dan kecukupan pustakanya memenuhi). Ada unsur novelty dalam methodology yang memperlihatkan adanya inovasi dalam menghasilkan invensi dengan digunakannya paten sebagai salah satu rujukan. (skor=9,00)
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Semarang, 27 April 2023
Reviewer I

Prof Dr. Endah Dwi Hastuti, MSi.
NIP. 196105051986032003
Unit kerja : Departemen Biologi Fakultas Sains dan Matematika Universitas Diponegoro Semarang

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Semarang, 28 April 2023
Reviewer II

Prof. Dr. Tri Retnaningsih Soeprobowati,M.App.Sc.
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2.	Prof. Dr. Baba Musta	Geochemistry	Faculty of Science, UMS	Malaysia
3.	Prof. Dr. Ir. Rokhmin Dahuri, MS.	Marine Resource and Environmental Studies	President of Indonesian Aquaculture Society; Proffesor in Marine Resource and Environmental Studies	Indonesia
4.	Sapto P. Putro, M.Si., Ph.D.	Marine Ecology and Aquaculture	Faculty of Science and Mathematics, Diponegoro University	Indonesia

II. Invited Speaker

No.	Name	Department	Institution	Country
1.	Dinar Mutiara Kusumo Nugraheni, S.T., M.InfoTech.(Comp).	Computer Science	FSM UNDIP	Indonesia
2.	Dr. Eng. Ali Khumaeni, S.Si., MS	Physics	FSM UNDIP	Indonesia
3.	Dr. M. Cholid Djunaidi, M.Si.	Chemistry	FSM UNDIP	Indonesia
4.	Dr. Lilih Khotimperwati, S.Si., M.Si.	Biology	FSM UNDIP	Indonesia
5.	Dr. Tarno, M.Si.	Chemistry	FSM UNDIP	Indonesia
6.	Farikhin, M.Sc. Ph.D.	Mathematics	FSM UNDIP	Indonesia

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Isolation and identification of rare actinomycete-like bacteria from soil-based on 16S ribosomal RNA gene sequences

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Abstract. The rare actinomycete-like bacteria are mycelium-forming bacteria other than phylum *Actinobacteria* that difficult to isolate and cultivate. This group of bacteria was recently speculated by many scientists as a potential new microbial resource for the discovery of novel compounds, as a substitute for actinomycetes. In this study, we isolate and identify rare actinomycete-like bacteria from forest soil collected under bamboo trees, near the CisolokGeysers, Sukabumi, Indonesia. The isolation of bacteria was performed using Reasoner's 2A (1:10 dilution) medium with 2% gellan gum instead of agar and incubated at 30 °C for three weeks. The 16S rRNA gene sequences of the isolates were examined to determine their taxonomic position. Four isolates designated K17-1, K17-2, K42, and K44 showed pale oranges colonies and formed mycelia were obtained. The results of 16S rRNA gene sequences of these isolates showed high similarity to members of the genus *Dictyobacter* in the family *Dictyobacteraceae* of the class *Ktedonobacteria* of the phylum *Chlorofexi*, with values 97.16-98.02%, and most closely related to the species *Dictyobacteraurantiacus* S-27^{T} (97.16-98.02% similarities). This result suggested that the member of the class *Ktedonobacteria*, which considered as rare actinomycete-like bacteria, such as *Dictyobacter* could be found in the forest soil of the geothermal area.

1. Introduction

Actinobacteria are gram-positive bacteria that have a high percentage of guanine and cytosine in their genome [1]. This group morphologically comprises unicellular organisms to mycelium-forming bacteria which called Actinomycetes [1,2]. However, bacteria that have filamentous appearance also could be found in the phylum *Chlorofexi*. The member of this phylum which has actinomycete-like morphology is present in the four different class namely *Chlorofexi*, *Anaerolineae*, *Caldilineae*and *Ktedonobacteria* [3]. Among these class, *Ktedonobacteria* has some obvious morphological features which distinguish themselves from others. The member of *Ktedonobacteria*are aerobic organism and forming branched mycelia with spores like actinomycetes [3,4]. Moreover, most validly published strains of *Ktedonobacteria*budding their multiple spores per cell on the aerial mycelium which unique among bacteria [5]. All of*Ktedonobacteria*identified as gram-positive bacteria while almost of the member in phylum *Chlorofexi* were gram-negative [3,6]. Based on these exceptional characters, class *Ktedonobacteria* could be included as the rare actinomycete-like bacteria.

Rare actinomycete-like bacteria could provide an alternative for the discovery of new compounds derived from microorganisms because spore formation usually would be followed by the production of secondary metabolites [7,8]. Further analysis of the genomic of nine members of rare actinomycete-like bacteria

Finding parameters relationship for disinfectant gas production

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Abstract. Water purifying is an important process to get fresh water for human needs. Several treatments such as advanced filtering using activated carbon and chlorine have been done to get clean water. However, most of the previous treatments required complex maintenance and left a by product. The choice for disinfectant gas is going to ozone gas because it has a minor harmful impact on the environment. This work is to find related parameters and to formulate those parameters in the equation to predict disinfectant gas production in the silent discharge process. The theoretical analysis provides a general approach for the equation models and experimental results complete the required data for the regression technique to determine constants and terms in equation model at the saturated region. Finally, a proposed equation model has successfully produced a prediction curve that is matched with experimental results.

1. Introduction

Water is an important substance for humankind. Many efforts are carried out to get fresh and clean water taken from any resources. The membrane bioreactor removed the only heavy organic component. Advanced filtering has given impact to eliminate soft and silky organics and components i.e. bacteria and viruses less than 1 – 5 μm. The implementation of activated carbon was reported to implement, but short life and frequent replacement become the burden of using activated carbon. Oxidation treatment for water was also reported by using chlorine and chloride oxide, but they produce a by product in the form of unpleasant taste and smell. The choice for disinfectant gas is going to ozone gas because it has a minor harmful impact on the environment. The most economical technique of ozone generation is a silent discharge [1,2] and the mechanism of discharge has been investigated [3]. The production of ozone as disinfectant gas is interesting work by determining the related parameters and then to formulate them in a mathematical model properly. Previous models in the pulse streamer discharge process have been developed for ozone generation [4,5]. It is also recorded for double dielectric carrier discharge the relationship parameters was revealed as the function of current and voltage during generation [6,7]. However, no record is found for the silent discharge process in production ozone as a disinfectant gas.

2. Theoretical and experimental analysis

There are a number of parameters that significantly influence on disinfectant production in the form of ozone concentration. Based on the evidence available in the literature [1-6], the most significant factors influencing the ozone concentration are the applied voltage V, the feed gas flow rate fr, the power needed W, the pressure P, and the applied frequency f. In the high frequency silent discharge