Muhammad Yusuf Hidayat <yusufitri@poliupg.ac.id>

Review Reports

2 pesan

Managing Editor <info@foodandnutritionjournal.org> 13 Maret 2020 15.29
Kepada: yusufitri@poliupg.ac.id

Dear Dr. Muhammad Yusuf,

Attached are the review reports of your article.

We request you to go through the reports and send us the final highlighted revised file including corrections suggested by the reviewers.Kindly send us two individual response forms (1 and 2) addressing both the reviewers along with one revised manuscript.

Also, attached is the similarity report of your paper.
Please reframe the highlighted sentences(excluding scientific terms) using new words and make sure all the sources mentioned have been properly cited.
The similarity should not be more than **15%.**

Moreover, please share **ORCID ID's** of all the authors.

Best Regards

Fatima Shaikh
Editorial Assistant
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Optimization_Ultrasonic_Assisted_Extraction__UAE_.pdf
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R1.docx
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Comments 2.docx
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Muhammad Yusuf Politeknik Negeri Ujung Pandang <yusufitri@poliupg.ac.id> 16 Maret 2020 13.20
Kepada: Managing Editor <info@foodandnutritionjournal.org>

Fatima Shaikh
Editorial Assistant
Current Research in Nutrition and Food Science
www.foodandnutritionjournal.org
Member of COPE

We have done the writing correction, answered the questions and explained about the aspects we review, both from Reviewer 1 and 2, and have made corrections to the similarity sentences in our article.
Response 1 and 2 and revised manuscript enclosed in the form of attach files.
We hope our research can be received and published in the Current Research in Nutrition and Food Science Journal.

Best Regards,

Corresponding Author

Muhammad Yusuf

[Kutipan teks disembunyikan]

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Politeknik Negeri Ujung Pandang

Muhammad Yusuf Hidayat <yusufitri@poliupg.ac.id>

Review Reports (Paper ID 53199086)

2 pesan

Muhammad Yusuf Politeknik Negeri Ujung Pandang <yusufitri@poliupg.ac.id> 21 April 2020 21.16
Kepada: Managing Editor <info@foodandnutritionjournal.org>

Dear Fatima Shaikh
Editorial Assistant
Current Research in Nutrition and Food Science
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Member of COPE

We have done the writing correction, answered the questions and explained about the aspects we review, both from Reviewer 1 and 2, and have made corrections to the similarity sentences in our article.
Response 1 and 2 and revised manuscript enclosed in the form of attach files.
We hope our research can be received and published in the Current Research in Nutrition and Food Science Journal.

Best Regards,

Corresponding Author

Muhammad Yusuf

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Response Form 2.docx
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Response Form 1.docx
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Revised Manuscript of Bioactive Compound from Sea Urchin (Diadema setosum).docx
1535K

Managing Editor <info@foodandnutritionjournal.org> 23 April 2020 00.01
Kepada: Muhammad Yusuf Politeknik Negeri Ujung Pandang <yusufitri@poliupg.ac.id>

Dear Dr. Muhammad Yusuf,

Thank you for the revision.

Please highlight the changes done in the word file.

Stay Home! Stay Safe!

Best Regards

Fatima Shaikh
Editorial Assistant
Current Research in Nutrition and Food Science
www.foodandnutritionjournal.org
Member of COPE

[Kutipan teks disembunyikan]

Politeknik Negeri Ujung Pandang

Muhammad Yusuf Hidayat <yusufitri@poliupg.ac.id>

Revised Manuscript (Paper ID 53199086) - Similarity 2

2 pesan

Muhammad Yusuf Politeknik Negeri Ujung Pandang <yusufitri@poliupg.ac.id> 22 Juni 2020 01.36
Kepada: Managing Editor <info@foodandnutritionjournal.org>

Dear
Fatima Shaikh
Editorial Assistant
Current Research in Nutrition and Food Science
www.foodandnutritionjournal.org
Member of COPE

We have paraphrased our articles, followed the advice given (steps 1-3), hopefully the level of similarity can decline. Thank you for the advice given.

Stay Home! Stay Safe!

Best Regards,

Corresponding Author

Muhammad Yusuf

Revised Manuscript Paper ID 53199086 (June 21, 2020) - Similarity 2.docx
1538K

info@foodandnutritionjournal.org <info@foodandnutritionjournal.org> 22 Juni 2020 14.03
Kepada: Muhammad Yusuf Politeknik Negeri Ujung Pandang <yusufitri@poliupg.ac.id>

Dear Dr. Yusuf,

Thanks for the revised file submission. We are now forwarding the manuscript for Final recommendation.

We will soon revert with the outcome of the same.

We also request you to send us the social media profiles such as Facebook, LinkedIn, Twitter of all the authors.

Best Regards

[Kutipan teks disembunyikan]

Current Research in Nutrition and Food Science

Author's Response to Reviewer's Comments

Reviewer number 1

Paper title: **Optimization Ultrasonic Assisted Extraction (UAE) of Bioactive Compound and Antimicrobial Potential from Sea Urchin *(Diadema setosum)***

Title	Reviewer's Comments	Author's Response
Abstract	I propose this corrected form. Authors may consider rewriting: Sea urchins have potential to be developed as a source of new type of antibiotic to be used in the pharmaceutical field. They are rich in bioactive compounds such as steroids, triterpenoids, saponins and antioxidant properties. Conventional extraction generally takes long time, is less environment-friendly and potentially triggers bioactive compound damage. So, it needs alternative methods such as Ultrasound Assisted Extraction (UAE). In this study, the UAE extraction technology with solvent variation (ethyl acetate and methanol) for bioactive compound extraction from sea urchin (*Diadema setosum*) from the Barrang Lompo Island in South Sulawesi were optimized and compared considering extraction time and solvent type as variables. The method was also compared with traditional methods of extraction, namely ---------. An UAE treatment	Yes, we have made corrections to the writing in that section Namely : Comparing the maceration and ultrasonic assisted extraction methods Statement about: Oxygen scavenging potential directly could be related to the antibacterial properties (!!check if correct!!). The yield was higher; each part of sea urchin produces a different yield. We agree to the opinion of the reviewer, and we have corrected this Why have the authors not added GC and other analytical results in the abstract? Yes, we've added a conclusion about GC-MS in the abstract : *Gas Chromatography-Mass Spectrometry (GC-MS) results indicate the ultrasound-assisted extraction produce compounds in general that are palmitic acid, CHOLEST-5-EN-3-OL (3. BETA.), 9-Octadecenoic acid (Z) -, methyl*

	of 30 minutes with ethyl acetate showed the best extraction results. The results implied that extracts obtained by sonication showed the highest extraction of bioactive compounds and antioxidant activity. Oxygen scavenging potential directly could be related to the antibacterial properties (!!check if true!!). The yield was higher, each part of sea urchin produces a different yield. Why the authors have not added GC and other analytical results in the abstract?	*ester, stearic acid, oleic acid, flavonoids, phenols, pentadecanoic acid and batilol and steroid, which has a function as an antioxidant, anti-inflammatory, anti-tumour, anti-cancer agents and antibacterial.*
Keywords	-	-
Introduction	Sea urchins are small, spiny, globular purple sea urchin: What does this mean? Animals which, with their close kin, such as sand dollars, constitute the class Echinoidea of the echinoderm phylum: What is close kin? Animals which, with their close kin … - Is this sentence making correct? The shells are known to contain various pigments is polyhydroxylated naphtoquinone spinochromes: The shells are known to contain various pigments such as polyhydroxylated naphtoquinone spinochromes ?? [1] of which bacterial compound effect. In Sea urchin gonads polyhydoxylated naphthoquinone, which potential antioxidant activity: This part also could not be understood? Has been reported that…: It has been reported that…?	Yes, we have made corrections to the writing in that section, by changing the sentence narrative and inserting a new reference : Sea urchins are small and spiny, has a high selling value and mostly consumed by Japanese people (sushi)[1], South America and France as well as in the United States (Boston, California, New York, British Columbia)[2]. The shell that are known to contain various pigments are polyhydroxylated naphthoquinone (PHNQ) spinochromes [3] of antibacterial effect. Sea urchin part gonads has potential as antibacterial, because has a compound polyhydroxylated naphthoquinone [4], according to research [5], extracation polyhydroxylated Naphthoquinone it from the spines and shell sea urchin

	Extraction methods that most reported is…: Mostly reported extraction methods are …..? Ultrasound Microwave Assisted Extraction (UMAE) and Ultrasound-Assisted Extraction (UAE) has use of new sustainable…: Ultrasound Microwave Assisted Extraction (UMAE) and Ultrasound-Assisted Extraction (UAE) are new sustainable…..? reduce time and energy-consuming procedures: reduced time and energy-consuming procedures? Ultrasonic radiation use power 20-100 kHz to extract natural compounds provides high reproducibility: Ultrasonic radiation uses power of 20-100 kHz to extract natural compounds providing high reproducibility…. ultrasound can allowing high diffusion rates across the cell wall and enhancing the mass transfer: ultrasound can allow high diffusion rates across the cell wall and enhance the mass transfer In research[9], reported use frequency of 25 kHz from orange peel using an ultrasonic processor operated can produce higher extraction yields of polyphenols: One research reported the use of 25 kHz frequency on orange peel using an ultrasonic processor, which could produce higher extraction yields of polyphenols. Sonication is a simpler, faster and more effective technique than maceration to extract organic	evechinus chloroticus (New Zealand) using six different macroporous resins as an alternative to using organic solvent extraction alone. Using the instrument HPLC and GC-MS, the It were found to be prone to degradation on exposure to light, with the aminated PHNQ it being the least stable. Research [6], extracting sea urchin *Echinometra mathaei* shell and spine parts by using a solvent diethyl ether. Screening uses HPLC instrument and antioxidant analysis (1-diphenyl-2 picrylhydrazyl radical scavenging assay). Acquired PHNQ it (Spinochrome B and C, Echinochrome A and Spinochrome A) was confirmed using a photodiodes array detector and LC – ESI – MS. Results show that sea urchin shell and spines, most of which are discarded as waste, may serve as a new biologically active resource. 1. Kuwahara R, Hatate H, Chikami A, Murata H, Kijidani Y. Quantitative separation of antioxidant pigments in purple sea urchin shells using a reversed-phase high performance liquid chromatography. *LWT - Food Sci Technol*. 2010. doi:10.1016/j.lwt.2010.03.005 2. Amarowicz R, Synowiecki J, Shahidi F. Chemical composition of shells from red (Strongylocentrotus franciscanus) and green (Strongylocentrotus droebachiensis) sea urchin. *Food*

	compounds from Ilex nextraction of bioactive compound and antimicrobial from sea urchin using Ultrasonic Assisted Extraction (UAE).: Make this sentence understandable. Therefore, the objective of this study was to evaluate the effect of ultrasonic assisted extraction treatment on the total bioactive compound content and antimicrobial of extracts from sea urchin gonad and shell. In addition, a comparison was made with respect to the traditional method.: total bioactive content or total bioactive content extraction? Why antimicrobial of extracts? Dis you mention anything about it in the description of Introduction? Why from gonad and shell? Why not other organs? Nothing is mentioned about these specific parts in the Introduction. Which traditional method? You have named a number of traditional methods. You need to specify which one you took for comparison with the UAE method.	*Chem*. 2012. doi:10.1016/j.foodchem.2012.01.099 3. Hou Y, Vasileva EA, Mishchenko NP, Carne A, McConnell M, Bekhit AEDA. Extraction, structural characterization and stability of polyhydroxylated naphthoquinones from shell and spine of New Zealand sea urchin (Evechinus chloroticus). *Food Chem*. 2019. doi:10.1016/j.foodchem.2018.08.046 4. Soleimani S, Yousefzadi M, moein S, Rezadoost H, Bioki NA. Identification and antioxidant of polyhydroxylated naphthoquinone pigments from sea urchin pigments of Echinometra mathaei. *Med Chem Res*. 2016. doi:10.1007/s00044-016-1586-y Yes, Ultrasound Microwave-Assisted Extraction (UMAE) and Ultrasound-Assisted Extraction (UAE) have the use of sustainable. Some research references indicate that : [1] Adeel S, Rehman F ur, Iqbal M U, Habib N, Kiran S, Zuber M, Zia K M and Hameed A 2019 Ultrasonic assisted sustainable dyeing of mordanted silk fabric using arjun (Terminalia arjuna) bark extracts *Environ. Prog. Sustain. Energy*

		[2] Adeel S, Zia K M, Abdullah M, Rehman F ur, Salman M and Zuber M 2019 Ultrasonic assisted improved extraction and dyeing of mordanted silk fabric using neem bark as source of natural colourant *Nat. Prod. Res.* [3] Zhou P, Wang X, Liu P, Huang J, Wang C, Pan M and Kuang Z 2018 Enhanced phenolic compounds extraction from Morus alba L. leaves by deep eutectic solvents combined with ultrasonic-assisted extraction *Ind. Crops Prod.* [4] Saha S K, Dey S and Chakraborty R 2019 Effect of choline chloride-oxalic acid based deep eutectic solvent on the ultrasonic assisted extraction of polyphenols from Aegle marmelos *J. Mol. Liq.* Therefore, the objective of this study was to evaluate the effect of ultrasonic-assisted extraction treatment on the total bioactive compound content and antimicrobial of extracts from sea urchin gonad and shell. Besides, a comparison was made for the traditional method.: total bioactive content or total bioactive content extraction? Why antimicrobial of extracts? Did you mention anything about it in the

		description of Introduction? Answer:Yes, we have made corrections to the writing in that section Why from gonad and shell? Why not other organs? Nothing is mentioned about these specific parts in the Introduction. Answer: Yes, we have made corrections to the writing in that section Which traditional method? You have named several conventional methods. You need to specify which one you took for comparison with the UAE method. Answer: Yes, we have made corrections to the writing in that section
Methodology	Authors must provide photographs of the collected sea urchin, the shell and gonads for a understanding by global readers. The gonads separated from the sea urchin shell, then washed to remove other components and taken to laboratory by carrying in coolbox, and stored in the freezer (-20^{o}C) until the gonads and shell sea urchin were processed in Food Science and Instrumental Analysis Laboratory, Chemical Engineering Department, Politeknik Negeri Ujung Pandang, Indonesia.: The gonads were	Yes, we've added some images according to the suggestion (Figure 1) Sea urchin bled to death; different organs and tissues were carefully dissected out and pooled. The sea urchin divided into intestinal organs, eggs, gills, and body wall (including plates, feet, and spines). After removal of the internal organs, gonads and the shells were washed by a stream of cold water and cut it into small pieces. : Why? You had

	separated from the sea urchin shell, washed to remove other adhering components and taken to the laboratory in coolbox before storing in a freezer (-20^{o}C) until further processing and analysis at Food Science and Instrumental Analysis Laboratory, Chemical Engineering Department, Politeknik Negeri Ujung Pandang, Indonesia. The various chemicals used in this study ethyl acetate, methanol, aquadest were procured from Merck (US). The tools used are water bath, Hettich Zentrifugen EBA-20 and Hitachi centrifuge brands, Elmasonic P30 (P30), Shimadzu GC 2010 brand gas chromatography plus and tools used in chemical extraction and analysis: The various chemicals used in this study, namely ethyl acetate, methanol and aquadest were procured from Merck (US). I suggest the authors should include the names and make of equipment and tools while describing the extraction and analytical methodologies. Sea urchin were bled to death, different organs and tissues were carefully dissected out and pooled. The sea urchin was divided into intestinal organs, eggs, gills, and body wall (including plates, feet, and spines). After removal of the internal organs, gonads and the shells were washed by a stream of cold water and cut it into small pieces. : Why? You had mentioned that you separated the shells and gonads during collection itself.	mentioned that you separated the shells and gonads during collection itself. Answer: To assist in the extraction process so that the solvent can attract the bioactive compounds in the sample, then the gonads and shell parts in the cut into several small pieces. I suggest the authors should include the names and make of equipment and tools while describing the extraction and analytical methodologies. Answer: Yes, we have made corrections to the writing in that section were weighed and 300 ml of methanol and was added: were weighed and 300 ml of methanol was added…? Answer: Yes, we have made corrections to the writing in that section The various sea urchin was dissolved in methanol and ethyl acetate: Various? You mentioned only *Diadema setosum* in the abstract. Answer: Yes, we have made corrections to the writing in that section

	were weighed and 300 ml of methanol and was added: were weighed and 300 ml of methanol was added…? Various sea urchin was dissolved in methanol and ethyl acetate: Various? You mentioned only *Diadema setosum* in the abstract.	
Results	-	-
Discussion	-	-
Conclusion	-	-
References (Appropriateness)	-	-

Current Research in Nutrition and Food Science

Author's Response to Reviewer's Comments

Reviewer number 2

Paper title: **Optimization Ultrasonic Assisted Extraction (UAE) of Bioactive Compound and Antibacterial Potential from Sea Urchin *(Diadema setosum)***

Title	Reviewer's Comments	Author's Response
Abstract	-	-
Keywords	-	-
Introduction	-	-
Methodology	The extract was filtered and evaporated by rotary evaporator.	Yes, we have made corrections to the writing in that section The extract was filtered and evaporated by a rotary evaporator at temperature 39^{o}C. The working principle of the rotary evaporator not only lies in heating but by lowering the pressure and regulating the velocity at a certain point so that the solvent methanol and ethyl acetate will evaporate and the soluble compounds in the solvent do not follow Evaporate but settlers. The boiling point of methanol and ethyl acetate solvent ranges from 64.7^{o}C and 77.1^{o}C, with heating below the boiling point of the solvent, so that the compounds contained in the solvent are not damaged by high temperature[14]

Commented [SZ1]: At what temperature did the process occurred? The same BP of the solvent? or under vacuum? Be specific.

		Reference : Wang L and Weller C L 2006 Recent advances in extraction of nutraceuticals from plants *Trends Food Sci. Technol.*
	Methanol and ethyl acetate was used as a solvent due to their strong polarity and volatility in order to improve the yield and concentrate the desired compounds[10]. Various sea urchin was dissolved in methanol and ethyl acetate. The yield of sea urchin (%) is the ratio of the resulting sea urchin (g) compared to the sample weight used in the process (g). The calculation of the yield is calculated by the formula.	The solvent will evaporate perfectly when the evaporation process on the rotary evaporator until obtained the solvent that has not dripped again on the round base flask and can also be seen with the more potent substances present in the sample round base flask So that the bubbles will be formed on the surface of substances
	This would be best to be considered as OFAT analysis with respect to yield and bioassay - it is possible to be analysed using design expert software for better discussion and intrepretation.	Excellent advice, we also think about using Design Expert 11 software to measure the response of the surface methodology. Still, the number of sample variables we use is not sufficient for that matter, in subsequent research we will seek to do so.
	Does the A.i. considered volatile compounds?	Partially antibacterial compounds include volatile compounds, e.g. Tetradecanoic Acid, Methyl Ester, 9-Octadecenoic acid (Z) -, methyl ester, hexadecanoic acid ethyl ester and 9-acid octadecanoic methyl ester, that is antibacterial
	Since you were using GC, please include data to proof that the extract was exhautively free from solvent.	Sea urchin extracts have been free of methanol and ethyl acetate solvents, this can be

		attest to the chromatogram produced from Gas Chromatography-Mass Spectrometry. When there are compounds of methanol and ethyl acetate, Chromatogram will show it both the amount and type of its compounds, and it is seen in the first peak of the Chromatogrham.
Results	Statistical analysis to confirm differences?? $p<0.05$? Statistical analysis and symbol to differentiate differences Methanol solvents able to extract components derived from alkaloids, phenolic, rubberonoid, tannin, sugars, amino acids Some of the Octacosanol compounds amounting to 0.35% function as Anti-fatigue and Anti-Parkinson's effects. As well as a small fraction of 2.81% of the Gamma.-Sitosterol compound can	Yes, we have made corrections to the writing in that section. Create standard deviation charts and p-value. Reference : Anwar F, Przybylski R. Effect of solvents extraction on total phenolics and antioxidant activity of extracts from flaxseed (Linum usitatissimum L.). *Acta Sci Pol Technol Aliment*. 2012. Anwar F, Kalsoom U, Sultana B, Mushtaq M, Mehmood T, Arshad HA. Effect of drying method and extraction solvent on the total phenolics and antioxidant activity of cauliflower (Brassica oleracea L.) Extracts. *Int Food Res J*. 2013. Yes, we have made corrections to the writing in that section. The most significant content is CHOLEST-5-EN-3-OL (3. BETA.) or steroid with 46.24%

Commented [SZ2]: Reference to back up the statement?

	function as an antihypoglycemic. Analysis results also show antimicrobial components and anti-inflammatory drugs have the highest content among other compounds. The detected antimicrobial component is CHOLEST-5-EN-3-OL (3. BETA.) With 46.24% contained.	as antibacterial.
Discussion	-	-
Conclusion	-	-
References (Appropriateness)	-	-

Commented [SZ3]: It is imperatively possible too at least giving the results of several important A.i. with its concentration using either external of internal std method. Identify of which compound would be best to be used as therapautic properties and what is the concentration/yield taken from the extract (back calculation perhaps) - Select only the highest amout of A.i from different set of sample and make a proper table for comparison of its A.i yield and concentration