OPEN PEER REVIEW

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What is "Open Peer Review" process?

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Jundishapur Journal of Natural Pharmaceutical Products
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Peer Review Report for "Isolation and Identification of Biosurfactant Producing Bacterial Strain from Saline Soil Samples in Iran; Evaluation of Factors on Biosurfactant Production"

Author(s): Marzieh Sajadi Bami, Payam Khazaeli, Hamid Forootanfar, Gholamreza Dehghannoudeh, Mandana Ohadi

Review Timeline:

Submit Date: 6 Aug 2019
Revised Date: 7 Oct 2019
Accepted Date: 22 Oct 2019

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (0) 20 Sep 2019

Dear author;

Thank you for choosing JJNPP for publishing your manuscript.

The only comment which I have;
Figure no.4 is not clear please correct it!

Best wishes!

REFEREE: Reviewer | **Revision** (0) 28 Sep 2019

Dear author;

Thank you for choosing JJNPP for publishing your manuscript. There are some comments which need your precise attention:

1. There is no reference for the most parts of the methods; so that the cause of selection of the concentrations and many other parameters cannot be understood.

2. The conclusion of this article is very general and can be attributed to any result. It is suggested to make the final conclusions based on the data.

4. In the surface tension plot, the obtained curve is not logical. As is seen in the figure 3, there is no change in surface tension value, while in surface tension curve, the relationship between the surfactant concentration and surface tension should be evaluated.

5. If the researcher(s) have studied the effect of the culture medium on the biosurfactant properties, why only one of them is investigated for its properties?

5. The manuscript need to be critically revised regarding grammatical aspects.

With best wishes!

REFEREE: Reviewer | **Revision** (0) 28 Sep 2019

Dear Editor;

The manuscript entitled "Isolation and identification of biosurfactant producing bacterial strain from soil samples; evaluation of factors on biosurfactant production" was reviewed. I call your attention to the following:

1- Original research was conducted to isolate biosurfactant - producing bacterial strains from soil and evaluate factors that have effects on production of biosurfactants. An interesting and valuable subject.

2- The region from which the samples were collected as well as the season are required to be mentioned in the materials and methods. It is also recommended that the name of the country (Iran) be brought in the title to help in retrieval purposes.

3- section 3.3.2 (oil spreading test), clarification is needed. Cell free culture and uninoculated culture are similar, there is no difference in composition, so how they can be used as test and control.

4- How were biochemical tests applied for morphological characterization: Section 3.4.

5- Figure 1. No colony formation are observed , then how were zone diameters measured as stated in the results and discussion section? Clarification is needed.

6- What type of culture medium was used in the emulsification index? Specify.

Following correction of above points, the manuscript can be considered for publication.

Best Regards!

REFEREE: Associate Editor | **Revision** (0) 30 Sep 2019

Dear EIC,
The manuscript is studied, and there are some comments which should be addressed by the author. According to the comments, the document needs minor revision.
Kind regards,

REFEREE: EIC | **Revision** (0) 30 Sep 2019

Dear Author,
The reviewers' comments are mentioned. Please correct the details as mentioned above carefully according to reviewers' request.
Thanks.

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Dear Editor in Chief,

Jundishapur Journal of Natural Pharmaceutical Products,

With special thanks to you, editorial staff and reviewers to give the time for evaluating the manuscript, 96798, entitled “Isolation and identification of biosurfactant producing bacterial strain from soil samples; evaluation of factors on biosurfactant production”. Here are the responses to the Reviewers' comments. All revised parts were highlighted as Green in the text and the responses are mentioned below.

Reviewers' comments #1:

Dear Editor

Query 1: The region from which the samples were collected as well as the season are required to be mentioned in the materials and methods. It is also recommended that the name of the country (Iran) be brought in the title to help in retrieval purposes.

Response 1:

It was added in the text and highlighted (page 1 line 2 and page 4 line 56-57).

Query 2: section 3.3.2 (oil spreading test), clarification is needed, cell free culture and uninoculated culture are similar, there is no difference in composition, so how they can be used as test and control.

Response 2:

It was corrected. (page 5 line 74-75 and page 5 line 85-87).

The selected isolate was cultivated in nutrient broth (NB) medium and incubation at 37 °C for 96 h. Samples were taken intervallic and analyzed for OD600 by photospectroscopy (UV-1800, Shimadzu CO, USA) followed by centrifugation (5000 rpm for 10 min) and determination of EI %, Oil spreading test, surface tension, and pH alteration.

100 µl of the supernatant (as mentioned above) was dropped on to the surface of the mineral oil. The diameter of clear zone on the oil surface was measured and compared with 100 µl of un-inoculated culture media as negative control.

Oil spreading test was performed on the supernatant of culture broth after centrifugation.

Query 3: How biochemical tests were applied for morphological characterization: Section 3.4.

Response 3:

It was corrected. (page 6 line 94-96).

The morphological characterization of the selected isolate was evaluated by macroscopic and microscopic evaluation. Also, by using several biochemical tests the strain of bacteria was further characterized.

Query 4: Figure 1. No colony formation is observed, then how zone diameters were measured as stated in the results and discussion section. Clarification is needed.

Response 4:

The isolated bacteria were streaked on blood agar plate supplemented by sterile sheep blood (5%, v/v).

Query 5: What type of culture medium was used in the emulsification index. Specify.

Response 5:

The selected isolate was cultivated in nutrient broth (NB) medium and incubation at 37 °C for 96 h. Samples were taken intervallic and analyzed for OD600 by photospectroscopy (UV-1800, Shimadzu CO, USA) followed by centrifugation (5000 rpm for 20 min) and determination of EI %, Oil spreading test, surface tension, and pH alteration.

Emulsification index test was performed on the supernatant of culture broth after centrifugation.

Reviewers' comments #2:

Query 1: The figure no.4 is not clear please corrected.

Response 1:

It was corrected.

Reviewers' comments #3:

Query 1: There is no reference for the most parts of the methods; so that the cause of selection of the concentrations and many other parameters cannot be understood.

Response 1:

It was added in the text and highlighted.

Query 2: The conclusion of this article is very general and can be attributed to any results. It is suggested to make the final conclusions based on the data.

Response 2:

It was added in the text and highlighted. (page 14 line 210-215)

Query 3: In the surface tension plot, the obtained curve is not logical. As is seen in the figure 3, there is no change in surface tension value, while in surface tension curve, the relationship between the surfactant concentration and surface tension should be evaluated.

Response 3:

Figure 3 showed that the relationship between the surfactant concentration and surface tension. *B. atrophaeus* was able to reduce the surface tension of culture medium from 62mN/m to 50 mN/m. also, data based on surface activity and emulsification index measurements (section 4.2) showed that there is a correlation

between emulsification index and surface activity and while minimal surface tension was achieved the emulsification index reached maximum.

Query 4: If the researcher(s) have studied the effect of the culture medium on the biosurfactant properties, why only one of them is investigated for its properties?

Response 4:

The main objective of this work was optimization of cultural conditions to reach maximum production of biosurfactant. Medium components such as carbon and nitrogen sources, as well as cations source showed strong influences on biosurfactant production in the present study.

Query 5: The manuscript need to be critically revised regarding grammatical aspects.

Response 5: It was corrected.

I hope that the Editors found the present revision form of the manuscript suitable for publishing in the **Jundishapur Journal of Natural Pharmaceutical Products.**

Best Regards,

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Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (1) 22 Oct 2019

Dear Editor-in-chief;

It seems that the author(s) have corrected the manuscript according to the reviewers comments.

Best regards!

REFEREE: Associate Editor | **Revision** (1) 22 Oct 2019

Dear EIC
Based on the authors' answers to the reviewers' comments, the reviewer(s) have recommended publication.
Kind regards.

REFEREE: EIC | **Revision** (1) 22 Oct 2019

Dear Author,
Your article is reviewed by the reviewers carefully. According to their comments, this document needs minor revision. Please follow their comments as requested.
Thanks.