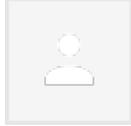# Please resubmit manuscript with JWPE_2019_1388

Nicholas Hankins (Journal of Water Process Engineering)
<EviseSupport@elsevier.com>

Oct 13, 2019,
11:40 PM

to me

Ref: JWPE_2019_1388
Title: Mechanistic Models of Electrocoagulation Kinetics of Pollutant Removal in Vinasse
Waste: Effect of Voltage
Journal: Journal of Water Process Engineering

Dear Dr. Sarto,

Thank you for sending your manuscript to the Journal of Water Process Engineering . Before
we can proceed with the consideration of your manuscript we would like to ask you to
address the comments listed at the end of this letter and resubmit your manuscript.

To submit your revised manuscript:

- Log in to EVISE®
  at: http://www.evise.com/evise/faces/pages/navigation/NavController.jspx?JRNL_ACR=JWP
  E
- Locate your manuscript under the header 'My Incomplete Submissions' on your 'My Author
  Tasks' view
- Click on 'Agree to Resubmit'
- Make the required edits
- Click on 'Complete Submission' to approve

What happens next?
After you approve your submission preview you will receive a notification that the
submission is complete. To track the status of your paper throughout the editorial process, log
in to EVISE®
at: http://www.evise.com/evise/faces/pages/navigation/NavController.jspx?JRNL_ACR=JW
PE.

I look forward to receiving your revised manuscript as soon as possible.

Kind regards,

Journal of Water Process Engineering

Comments from the editors and reviewers:

The article contains too many figures; please reduce these to no more than 12. This may mean plotting the same figures on one graph, or removing others.

Have questions or need assistance?
For further assistance, please visit our [Customer Support](#) site. Here you can search for solutions on a range of topics, find answers to frequently asked questions, and learn more about EVISE® via interactive tutorials. You can also talk 24/5 to our customer support team by phone and 24/7 by live chat and email.

Decision on submission to Journal of Water Process Engineering

Inbox

em@editorialmanager.com Thu, Feb 27, 2020, 10:20 AM

to me

Manuscript Number: JWPE_2019_1388

Mechanistic Models of Electrocoagulation Kinetics of Pollutant Removal in Vinasse Waste: Effect of Voltage

Dear Dr Sarto,

Thank you for submitting your manuscript to the Journal of Water Process Engineering.

I have completed my evaluation of your manuscript. The reviewers recommend reconsideration of your manuscript following further revision and modification. I invite you to resubmit your manuscript after addressing the comments below. Please resubmit your revised manuscript by Mar 27, 2020.

When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and provide suitable rebuttals for any comments not addressed. Please note that your revised submission may need to be re-reviewed.

To submit your revised manuscript, please log in as an author

at and navigate to the "Submissions Needing Revision" folder under the Author Main Menu.

Journal of Water Process Engineering values your contribution and I look forward to receiving your revised manuscript.[OBJ]

Kind regards,

Nicholas Hankins

Co-Editor

Journal of Water Process Engineering

Editor and Reviewer comments:

Reviewer #1: The article "Mechanistic Models of Electrocoagulation Kinetics of Pollutant Removal in Vinasse Waste: Effect of Voltage" describes the iron-based electrocoagulation treatment of bioethanol production wastewater underlying the possible mechanisms of COD removal by modeling and experimental velidation. It is shown that COD was slightly removed using different combinations of the studied parameters (Voltage, iron electrodes). While there are reports of these processes being used to treat bioethanol production wastewater in the literature, the major contribution of this work is the emphasis on modeling of possible combinations of mechanisms of COD removal. On the one hand, mainly the article is written as a report rather than a scientific paper. Few details are provided on electrochemical process itself and quite basic findings (current density increase with voltage increasing, production of ferrous ions, increase in pH and temperature). On the other hand, modeling
part seems very appealing and significant in terms of development of EC methods. I suggest this paper to be considered with a major revision and profound clarification.
Major comments:
The following comments focus primarily on methods, including improving the content and clarity of the methods section to better convey approaches used in the study (and the basis thereof). There are also several recommendations for introduction, presenting data and discussing the results.
1.   Abstract:
-      "During EC process some mechanisms occur in the system". Specify the mechanisms with the relevant references in the Introduction.
-      "Model two was better than the others" What were the assessing criteria, please, specify in methods. And try to avoid such general statements.
2.   Section 2. One sentence may not be a paragraph, please, provide the reader with more information or combine Sections 2.1 to 2.3 and use Italic to underline the configurations.
-      How k_a, k_e and k_f were determined, please specify
3.   Section 3. Which tools were used for modeling?
-      Have you considered the electric charge A h/m3 of treated water? This can help to avoid changes in electrode area.
-      Please, give an explanation/definition of a net rate term.
-      COD was quite poorly removed; do you believe the model is relevant at these removal rates? What is the error of COD measurements?
4.   Materials and Methods.
-      What was the concentration of TSS and TDS in raw vinasse? Were those parameters monitored? What is their input to settled and floated sludge?
-      How many experiments in total were performed? Where there any replicates? Was a design

of experiments used?

- why the electrode distance of 5.5 cm was used. What about the resistivity and ohmic pressure?
- Was the sample volume considered when modelling?
- How the amount of floated sludge was determined? What about other contaminants presented in water? Removal of those contaminants will influence the formation of settled as well as floated sludge.
5. Results and Discussions
- Recommended combining Sections 5.1 to 5.5 in one section as a Summary of the laboratory results. The data presented in this section are very general and already known, that will be more valuable and relevant to focus on modeling part
- Recommended removing explanation of Eq 27 to nomenclature
- "… conductivity of solution at 12.5 V was higher than that at 7.5 V" What is the reason for that? Is there an explanation?
- Second paragraph Section 5.4 Please, provide with the reference and check the mechanisms once again. Is not it so that once formed ferric ion is oxidized to Fe^{3+} and then Fe^{3+} reacts with OH radicals? Not excluding some amount of Fe^{2+} reacting with OH radical as well.
- Authors claimed that the remaining concentration of Fe^{2+} was changing? How the concentration was measured? Was Fe^{3+} measured then? Or were the measurements performed related to Fe total? Check and explain, that is critical.
- Section 5.2 "Some authors believe that the z is 2…" For more references: Separation and Purification Technology 2019, 216, pp. 43-50, 2019, Environ. Sci. Technol. 2016, 50, 24, pp. 13502-13510, etc.
- Section 5.4 "This study confirmed that pH above 7.7…" The confirmation is very unclear. Which analysis were performed? What are the assumptions?
6. Introduction. ".. is a dark-brown-color wastewater having very high Chemical Oxygen Demand (COD) level and low power Hydrogen (pH) level…" How high and how low? What are the average values? What is the environmental risk? Please, provide the reader with more information to attract more attention from the very first sentences. Why COD should be removed? What are the current limits? Are they established?
7. "EC is one of the potential methods…." What are other technologies currently available? Does commercial process exist?
8. "Many authors have used empirical models…". For more references: Science of The Total Environment <https://www.sciencedirect.com/science/journal/00489697> 2016, 557–558 <https://www.sciencedirect.com/science/journal/00489697/557/supp/C> , pp. 276-284, Journal of Water Process Engineering 2019, 32, 100929, etc. It is recommended to support you Introduction and Results and discussion part with more references and review of existing research.
9. In general, it is recommended providing a solid ground to emphasize the novelty. Is it only the case of volume? Obviously, there are more benefits of the presented approaches. Could you, please, focus on that.

Minor comments:

1. Recommend following SI units (minutes instead of second, etc.) throughout the text.
2. Recommend removing decimal part where they are not relevant (ex. Figures, anode weight, errors)
3. Recommend drawing all the Charts using black and white scale with different markers, dash lines and pattern fillings. It makes it easier to follow when reading black and white version.
4. Recommend improving Fig. 9-11 by using only one legend, removing decimal part where not required
5. Recommended to support text with Figures and Tables, it is very difficult to follow article when

no supporting information is provided in the body of the text

6.   Recommend adding more information to the titles of the figures in a way that it is understandable what is the water source and what is the treatment method applied by only following the title of the figure.

7.   Recommend following Elsevier guidelines to write the abstract and conclusion.

8.   Proof reading by a native English speaker is recommended.

Reviewer #5: This paper is well organised and it has a potential applications. However, the following issues must be addressed before this paper can be accepted for publication:

1- The English language of this paper requires minor revision.

2- In the introduction, the first sentence was supported by 4 references, which is too much. One or two references are enough.

3- The literature review shows some modelling trials for the behaviour of the EC method (from different aspects), it would be a good idea to mention few examples and compare your models with those models.

4- The authors did not provide a definition for the electrocoagulation method.The definition could be found in the following references:

* Hashim, K.S., Shaw, A., Al Khaddar, R., Pedrola, M.O. and Phipps, D., 2017. Defluoridation of drinking water using a new flow column-electrocoagulation reactor (FCER)-Experimental, statistical, and economic approach. Journal of environmental management, 197, pp.80-88.

* Hashim, K.S., Hussein, A.H., Zubaidi, S.L., Kot, P., Kraidi, L., Alkhaddar, R., Shaw, A. and Alwash, R., 2019, September. Effect of initial pH value on the removal of reactive black dye from water by electrocoagulation (EC) method. In Journal of Physics: Conference Series (Vol. 1294, No. 7, p. 072017). IOP Publishing.

5- The most important advantage of the EC method is dose not require chemical additives, which means it dose not produce intermediates. This advantage must be added and the references for this point are:

* Hashim, K.S., AlKhaddar, R., Shaw, A., Kot, P., Al-Jumeily, D., Alwash, R. and Aljefery, M.H., 2020. Electrocoagulation as an eco-friendly River water treatment method. In Advances in Water Resources Engineering and Management (pp. 219-235). Springer, Singapore.

* Abdulhadi, B.A., Kot, P., Hashim, K.S., Shaw, A. and Al Khaddar, R., 2019, August. Influence of current density and electrodes spacing on reactive red 120 dye removal from dyed water using electrocoagulation/electroflotation (EC/EF) process. In IOP Conference Series: Materials Science and Engineering (Vol. 584, No. 1, p. 012035). IOP Publishing.

* Hashim, K.S., Al-Saati, N.H., Alquzweeni, S.S., Zubaidi, S.L., Kot, P., Kraidi, L., Hussein, A.H., Alkhaddar, R., Shaw, A. and Alwash, R., 2019, August. Decolourization of dye solutions by electrocoagulation: an investigation of the effect of operational parameters. In IOP Conference Series: Materials Science and Engineering (Vol. 584, No. 1, p. 012024). IOP Publishing.

More information and support

FAQ: How do I revise my submission in Editorial Manager?

https://service.elsevier.com/app/answers/detail/a_id/28463/supporthub/publishing/

You will find information relevant for you as an author on Elsevier's Author Hub: https://www.elsevier.com/authors.

FAQ: How can I reset a forgotten password?
  https://service.elsevier.com/app/answers/detail/a_id/28452/supporthub/publishing/kw/editorial+manager/

For further assistance, please visit our customer service site: https://service.elsevier.com/app/home/supporthub/publishing/. Here you can search for solutions on a range of topics, find answers to frequently asked questions, and learn more about Editorial Manager via interactive tutorials. You can also talk 24/7 to our customer support team by phone and 24/7 by live chat and email.

_____

Confirming handling editor for submission to Journal of Water Process Engineering

Inbox

em@editorialmanager.com Mon, Mar 30, 2020, 12:33 AM

 to me

This is an automated message.

Manuscript Number: JWPE_2019_1388R1

Mechanistic Models of Electrocoagulation Kinetics of Pollutant Removal in Vinasse Waste: Effect of Voltage

Dear Dr Sarto,

The above referenced manuscript will be handled by .

To track the status of your manuscript, please log into Editorial Manager at https://www.editorialmanager.com/jwpe/.

Thank you for submitting your work to this journal.

Kind regards,

Journal of Water Process Engineering

More information and support

You will find information relevant for you as an author on Elsevier's Author Hub: https://www.elsevier.com/authors.

FAQ: How can I reset a forgotten password?
    https://service.elsevier.com/app/answers/detail/a_id/28452/supporthub/publishing/kw/editorial+manager/

For further assistance, please visit our customer service site: https://service.elsevier.com/app/home/supporthub/publishing/. Here you can search for solutions on a range of topics, find answers to frequently asked questions, and learn more about Editorial Manager via interactive tutorials. You can also talk 24/7 to our customer support team by phone and 24/7 by live chat and email.

_____
In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Use the following URL: https://www.editorialmanager.com/jwpe/login.asp?a=r). Please contact the publication office if you have any questions.

Decision on submission to Journal of Water Process Engineering

Inbox

em@editorialmanager.com Sat, Apr 18, 2020, 10:13 PM

 to me

Manuscript Number: JWPE_2019_1388R3

Mechanistic Models of Electrocoagulation Kinetics of Pollutant Removal in Vinasse Waste: Effect of Voltage

Dear Dr Sarto,

Thank you for submitting your manuscript to the Journal of Water Process Engineering.

I am pleased to inform you that your manuscript has been accepted for publication.

My comments, and any reviewer comments, are below.

Your accepted manuscript will now be transferred to our production department. We will create a proof which you will be asked to check, and you will also be asked to complete a number of online forms required for publication. If we need additional information from you during the production process, we will contact you directly.

We appreciate and value your contribution to Journal of Water Process Engineering. We regularly invite authors of recently published articles to participate in the peer review process. You are now part of the Journal of Water Process Engineering reviewer pool. We look forward to your continued participation in our journal, and we hope you will consider us again for future submissions.

Kind regards,
Nicholas Hankins
Co-Editor

Journal of Water Process Engineering

Editor comments:

Please note that the term 'power Hydrogen' on lines 105-106 is incorrect, and I have changed this to the correct term 'potential hydrogen'.

Korespondensi dengan *Reviewer* ke 1

Reviewer #1: The article "Mechanistic Models of Electrocoagulation Kinetics of Pollutant Removal in Vinasse Waste: Effect of Voltage" describes the iron-based electrocoagulation treatment of bioethanol production wastewater underlying the possible mechanisms of COD removal by modeling and experimental velidation. It is shown that COD was slightly removed using different combinations of the studied parameters (Voltage, iron electrodes). While there are reports of these processes being used to treat bioethanol production wastewater in the literature, the major contribution of this work is the emphasis on modeling of possible combinations of mechanisms of COD removal. On the one hand, mainly the article is written as a report rather than a scientific paper. Few details are provided on electrochemical process itself and quite basic findings (current density increase with voltage increasing, production of ferrous ions, increase in pH and temperature). On the other hand, modeling part seems very appealing and significant in terms of development of EC methods. I suggest this paper to be considered with a major revision and profound clarification.
Major comments:
The following comments focus primarily on methods, including improving the content and clarity of the methods section to better convey approaches used in the study (and the basis thereof). There are also several recommendations for introduction, presenting data and discussing the results.
1.   Abstract:
-       "During EC process some mechanisms occur in the system". Specify the mechanisms with the relevant references in the Introduction.

Response:

Thank you.
We have revised the abstract (page 1, Line 16-17).
And then, we have specified the mechanisms in Introduction section (page 6, Line 130-140).

- "Model two was better than the others" What were the assessing criteria, please, specify in methods. And try to avoid such general statements.

Response:
Thank you. We have revised the abstract (page 1, Line 20-22). The SSE calculation has been presented in methods, especially section 4.5 (page 17, Line 405-409).

2. Section 2. One sentence may not be a paragraph, please, provide the reader with more information or combine Sections 2.1 to 2.3 and use Italic to underline the configurations.

Response:
Thank you. We have revised it.
Page 7 Line 175-177
Page 8 Line 199
Page 9 Line 204 and 210

- How ka, ke and kf were determined, please specify

Response:
Thank you. We have added explanation about it in section 4.5 (Page 17, Line 403-409).

3. Section 3. Which tools were used for modeling?

Response:
Thank you. We used MATLAB program. Page 17 Line 407.

- Have you considered the electric charge A h/m3 of treated water? This can help to avoid changes in electrode area.

Response:
Thank you for your advice. The change in electrode area is caused by the change in volume of vinasse during EC process. Therefore, it is to be same whether it is expressed in electrical charge (A h/m3) or current density (A/m2). We prefer the current density because it has correlation with the models.

- Please, give an explanation/definition of a net rate term.

Response:
Thank you. We added a explanation on page 10 Line 246-247.

- COD was quite poorly removed; do you believe the model is relevant at these removal rates? What is the error of COD measurements?

Response:
Thank you. Yes, we believe. The value is reasonable. Detail COD concentration and COD mass data are shown in Table 5 (page 37 Line 976). Furthermore, comparison of this study

with the other studies has been discussed in the paper in term of correlation between charge loading and COD removal efficiency (section 5.8 page 23 Line 571-595).

4.   Materials and Methods.
-       What was the concentration of TSS and TDS in raw vinasse? Were those parameters monitored? What is their input to settled and floated sludge?

Response:
Thank you. We did not monitor the TSS and TDS. We have added the explanation about that in section 4.4.3 (page 16 Line 378-391).

-       How many experiments in total were performed? Where there any replicates? Was a design of experiments used?

Response:
Thank you. Total experiment = 2 (voltage of 7.5 and 12.5 V). No replication of experiment. Section 4.3 (Page 14 Line 324-325).

-       why the electrode distance of 5.5 cm was used. What about the resistivity and ohmic pressure?

Response:
Thank you. This value (distance of 5.5 cm) was chosen based on the previous study (section 4.2, page 13 Line 316-317). The resistivity, resistance and conductivity were estimated (section 4.4.4, page 16-17 Line 393-399) and shown in Table 5 (page 37 Line 976) and then discussed in Results and discussions (section 5.1, page 18 Line 431-438).

-       Was the sample volume considered when modelling?

Response:
Thank you. The sampling of 10 mL during EC process was considered to have no effect on volume reduction. In other words, the decrease in volume was assumed due to evaporation and reduction of water. Section 4.3, page 14 Line 330-333.

-       How the amount of floated sludge was determined? What about other contaminants presented in water? Removal of those contaminants will influence the formation of settled as well as floated sludge.

Response:
Thank you. The determination of the floated sludge mass was shown in section 4.4.2 (page 16 Line 372-376). Meanwhile, the settled sludge mass estimation was shown in section 4.4.3 (page 16 Line 378-391).

5.   Results and Discussions
-       Recommended combining Sections 5.1 to 5.5 in one section as a Summary of the laboratory results. The data presented in this section are very general and already known, that will be more valuable and relevant to focus on modeling part

Response:

Thank you. We made Table 5 (page 37 Line 976) presenting summary of all measured data. Furthermore, the data were discussed clearly in section 5.1 to 5.5 (page 18-21 Line 423-522).

- Recommended removing explanation of Eq 27 to nomenclature

Response:
Thank you. We have replaced the equation 26-27 to Methods section (especially in section 4.4.4, page 17 Line 397-399) and explanation of them has been removed to nomenclatures (page 4 Line 84-89).

- "… conductivity of solution at 12.5 V was higher than that at 7.5 V" What is the reason for that? Is there an explanation?

Response:
Thank you. We have given explanation about it. Page 18 Line 436-438.

- Second paragraph Section 5.4 Please, provide with the reference and check the mechanisms once again. Is not it so that once formed ferric ion is oxidized to Fe^{3+} and then Fe^{3+} reacts with OH radicals? Not excluding some amount of Fe^{2+} reacting with OH radical as well.

Response:
Thank you. We have added explanation about that. Page 19-20 Line 471-482.

- Authors claimed that the remaining concentration of Fe^{2+} was changing? How the concentration was measured? Was Fe^{3+} measured then? Or were the measurements performed related to Fe total? Check and explain, that is critical.

Response:
Thank you.
Section 4.4.1. (page 15 Line 365-370)
Section 5.4. (page 19-20 Line 471-482)

- Section 5.2 "Some authors believe that the z is 2…" For more references: Separation and Purification Technology 2019, 216, pp. 43-50, 2019, Environ. Sci. Technol. 2016, 50, 24, pp. 13502-13510, etc.

Response:
Thank you. We have added the references to the text (page 18 Line 441).
In references: page 30 Line 730 and 733

- Section 5.4 "This study confirmed that pH above 7.7…" The confirmation is very unclear. Which analysis were performed? What are the assumptions?

Response:
Thank you. We have revised the explanation. Page 20 Line 487-497.

6. Introduction. ".. is a dark-brown-color wastewater having very high Chemical Oxygen Demand (COD) level and low power Hydrogen (pH) level…" How high and how low? What are the average values? What is the environmental risk? Please, provide the reader with more

information to attract more attention from the very first sentences. Why COD should be removed? What are the current limits? Are they established?

Response:
Thank you. We have added information about value of COD and pH in vinasse and the environmental risk. Page 5 (Line 105-111).
The target COD concentration in effluent of EC reactor is around 75 kg/m^3 (page 5 Line 124-129).

7.   "EC is one of the potential methods…." What are other technologies currently available? Does commercial process exist?

Response:
Thank you. We have added some important information about that.
Page 5 Line 114-129.

8.   "Many authors have used empirical models…". For more references: Science of The Total Environment 2016, 557–558 , pp. 276-284, Journal of Water Process Engineering 2019, 32, 100929, etc. It is recommended to support you Introduction and Results and discussion part with more references and review of existing research.

Response:
Thank you. We have added the references to the text (page 7 Line 167 and 170)
In references: page 28 Line 692-695
We have compared the Model 2 with the empirical models (first order and second order kinetic models).
Methods: Section 3.5 (page 12-13 Line 291-303)
Results and discussions: section 5.7 (page 23 Line 555-569)

9.   In general, it is recommended providing a solid ground to emphasize the novelty. Is it only the case of volume? Obviously, there are more benefits of the presented approaches. Could you, please, focus on that.

Response:
Thank you.
The case of volume is one of important points. The others are floated sludge in which many other studies have not focused on it yet. Furthermore, the development of mechanistic models based on different configurations is important to figure out the detail COD removal mechanisms during EC of vinasse. Hopefully, the model can describe the COD removal during EC of the other wastewater. Comparison between the mechanistic model and empirical model (first and second order kinetic models) is also presented in this paper. Furthermore, the correlation between charge loading and COD removal efficiency is also estimated and discussed in the present paper.
Yes we could. We have revised the manuscript well. Thank you so much.

Minor comments:

1.   Recommend following SI units (minutes instead of second, etc.) throughout the text.

Response:

Thank you. We have used the SI units (kg, meter, Kelvin, second, Ampere). For volume unit, we have used m^3 because it has correlation with the length unit (meter). Detail in nomenclatures (page 3-4 Line 52-95)

2.   Recommend removing decimal part where they are not relevant (ex. Figures, anode weight, errors)

Response:
Thank you. We have revised them.
Page 1 Line 16-17
Page 5 Line 115, Line 117
Page 6 Line 140
Page 8 Line198
Page 13 Line 314 and 315
Page 22 Line 526 and 527
Page 23 Line 568
Page 24 Line 599

3.   Recommend drawing all the Charts using black and white scale with different markers, dash lines and pattern fillings. It makes it easier to follow when reading black and white version.

Response:
Thank you. We have revised them.
Page 46 Line 1241
Page 48 Line 1308
Page 49 Line 1319
Page 50 Line 1344
Page 51 Line 1369
Page 52 Line 1394
Page 53 Line 1430

4.   Recommend improving Fig. 9-11 by using only one legend, removing decimal part where not required

Response:
Thank you. We have revised Fig.9-11 to Fig. 7-10.
Fig. 7 (Page 48 Line 1308)
Fig. 8 (Page 49 Line 1319)
Fig. 9 (Page 50 Line 1344)
Fig. 10 (Page 51 Line 1369)

5.   Recommended to support text with Figures and Tables, it is very difficult to follow article when no supporting information is provided in the body of the text.

Response:
Thank you. We have revised them.
Page 17 Line 416
Page 18 Line 429-430 and Line 446-447
Page 19 Line 449-450

Page 21 Line 507-508, Line 516 and Line 518-519
Page 22 Line 529-530 and Line 529-530
Page 23 Line 557-560
Page 24 Line 581-582 and Line 583-584

6.   Recommend adding more information to the titles of the figures in a way that it is understandable what is the water source and what is the treatment method applied by only following the title of the figure.

Response:
Thank you. We have revised them
Page 42 Line 1123
Page 43 Line 1161
Page 44 Line 1199
Page 45 Line 1237
Page 46 Line 1241
Page 47 Line 1261
Page 48 Line 1308
Page 49 Line 1319
Page 50 Line 1344
Page 51 Line 1369
Page 52 Line 1394
Page 53 Line 1430

7.   Recommend following Elsevier guidelines to write the abstract and conclusion.

Response:
Thank you. We have revised the abstract (page 1-2 Line 14-29) and the conclusion (page 24-25 Line 598-614)

8.   Proof reading by a native English speaker is recommended.

Response:
Thank you. We have improved the English language on the text.
Revisions and improvements: Line 14-22, Line 24, Line 26-29, Line 55, Line 105-111, Line 114-119, Line 121, Line 124-135, Line 137-140, Line 142-143, Line 156, Line 158-161, Line 170-171, Line 175-177, Line 198-199, Line 102, Line 205-206, Line 210-215, Line 246-247, Line 287-289, Line 291-303, Line 307-308, Line 322-333, Line 335-408, Line 415-440, Line 446-452, Line 470-497, Line 499-501, Line 507-510, Line 518-520, Line 526-530, Line 532-534, Line 555-595, Line 598-606, Line 609-614, Line 803, Line 847, Line 891, Line 934, Line 976, Line 984, Line 1031, Line 1050, Line 1071, Line 1123, Line 1161, Line 1199, Line 1237, Line 1241, Line 1261, Line 1308, Line 1319, Line 1344, Line 1369, Line 1394, Line 1430.

Reviewer #5: This paper is well organised and it has a potential applications. However, the following issues must be addressed before this paper can be accepted for publication:

1- The English language of this paper requires minor revision.

Responce:
Thank you. We have improved the language.
Revisions and improvements: Line 14-22, Line 24, Line 26-29, Line 55, Line 105-111, Line 114-119, Line 121, Line 124-135, Line 137-140, Line 142-143, Line 156, Line 158-161, Line 170-171, Line 175-177, Line 198-199, Line 102, Line 205-206, Line 210-215, Line 246-247, Line 287-289, Line 291-303, Line 307-308, Line 322-333, Line 335-408, Line 415-440, Line 446-452, Line 470-497, Line 499-501, Line 507-510, Line 518-520, Line 526-530, Line 532-534, Line 555-595, Line 598-606, Line 609-614, Line 803, Line 847, Line 891, Line 934, Line 976, Line 984, Line 1031, Line 1050, Line 1071, Line 1123, Line 1161, Line 1199, Line 1237, Line 1241, Line 1261, Line 1308, Line 1319, Line 1344, Line 1369, Line 1394, Line 1430.

2- In the introduction, the first sentence was supported by 4 references, which is too much. One or two references are enough.

Responce:
Thank you. In this sentence, we need references for pH and COD value in vinasse. Each of them, we have two references. Please check page 5 Line 105-107.

3- The literature review shows some modelling trials for the behaviour of the EC method (from different aspects), it would be a good idea to mention few examples and compare your models with those models.

Response:
Thank you. We have added some empirical model (first and second order kinetics) (section 3.5, page 12-13 Line 291-303), Comparison between the mechanistic model 2 and the empirical models was shown in section 5.7 (page 23 Line 555-569).

4- The authors did not provide a definition for the electrocoagulation method.The definition could be found in the following references:
* Hashim, K.S., Shaw, A., Al Khaddar, R., Pedrola, M.O. and Phipps, D., 2017. Defluoridation of drinking water using a new flow column-electrocoagulation reactor (FCER)-Experimental, statistical, and economic approach. Journal of environmental management, 197, pp.80-88.
* Hashim, K.S., Hussein, A.H., Zubaidi, S.L., Kot, P., Kraidi, L., Alkhaddar, R., Shaw, A. and Alwash, R., 2019, September. Effect of initial pH value on the removal of reactive black dye from water by electrocoagulation (EC) method. In Journal of Physics: Conference Series (Vol. 1294, No. 7, p. 072017). IOP Publishing.

Response:
Thank you. We have added the references to the text.
Page 5 Line 121
Page 6 Line 135
In references:
Page 27 Line 667
Page 28 Line 679

5- The most important advantage of the EC method is dose not require chemical additives, which means it dose not produce intermediates. This advantage must be added and the

references for this point are:

* Hashim, K.S., AlKhaddar, R., Shaw, A., Kot, P., Al-Jumeily, D., Alwash, R. and Aljefery, M.H., 2020. Electrocoagulation as an eco-friendly River water treatment method. In Advances in Water Resources Engineering and Management (pp. 219-235). Springer, Singapore.
* Abdulhadi, B.A., Kot, P., Hashim, K.S., Shaw, A. and Al Khaddar, R., 2019, August. Influence of current density and electrodes spacing on reactive red 120 dye removal from dyed water using electrocoagulation/electroflotation (EC/EF) process. In IOP Conference Series: Materials Science and Engineering (Vol. 584, No. 1, p. 012035). IOP Publishing.
* Hashim, K.S., Al-Saati, N.H., Alquzweeni, S.S., Zubaidi, S.L., Kot, P., Kraidi, L., Hussein, A.H., Alkhaddar, R., Shaw, A. and Alwash, R., 2019, August. Decolourization of dye solutions by electrocoagulation: an investigation of the effect of operational parameters. In IOP Conference Series: Materials Science and Engineering (Vol. 584, No. 1, p. 012024). IOP Publishing.

Response:
Thank you. We have added the references to the text.
Page 5 Line 121, 123
Page 6 Line 132, 137, 139, 140
In references:
Page 27 Line 664, Line 671, Line 675

Korespondensi dengan *Editor* dan *Reviewer* ke 2

Editor

Thank you for submitting your manuscript to the Journal of Water Process Engineering. The scientific presentation will be acceptable after the further minor revision requested by reviewer #1 (see below). However, I regret to inform you that the level of English language throughout your manuscript still does not meet the journal's required standard, and it must be improved significantly before it can be accepted.

We request that you consult a professional language editing service, and provide evidence of this with your resubmission. For one possibility, please visit our Customer Service Site for more information about Elsevier's language editing services: http://webshop.elsevier.com/language services. You are not obliged to use this particular service, but you must make use of a similar English Language Service or the paper will have to be rejected on the grounds of unacceptable English language.

Response:
Thank you so much. We have revised the English language based on revisions from the native proofreading service (NPS). All revised words on the manuscript are highlighted with yellow color.
Lines 14-19, 21-28, 69-70, 105-143, 145-147, 150-152, 154-155, 157-167, 169-170, 172-193, 196, 199-202, 205, 207-208, 210-211, 213-214, 216-217, 219, 221, 226, 232, 239-240, 245-246, 248-251, 254-262, 266-267, 278, 288, 296, 300, 303-304, 307-308, 311-312, 315, 318-319, 331-332, 335-342, 345-348, 350-354, 356, 360, 362-364, 366-382, 386, 388-391, 393-397, 400-404, 406, 408-413, 417-418, 425, 427-428, 432, 435-441, 445, 447-456, 460-461,

463-475, 478-481, 483, 487, 491-493, 496, 498-499, 501, 503-522, 527-533, 536-541, 544-545, 547-558, 560-572, 575-588, 592-593, 596-599, 603-604, 606-608, 610-615, 618-635, 851, 895, 939, 982, 1024, 1032-1033, 1079, 1098, 1356-1357, 1367-1368, 1392-1393, 1417-1418.

The certificate from the NPS as an evidence could be seen below. Thank you.

billing@native-proofreading.com

RECEIPT

APRIL 14, 2020

NATIVE PROOFREADING SERVICE (NPS)
WWW.NATIVE-PROOFREADING.COM

BILL TO

Sarto Sarto
Department of Chemical Engineering
Faculty of Engineering
Universitas Gadjah Mada, Yogyakarta, Indonesia

ITEM DESCRIPTION	PRICE
• Mechanistic Models of Electrocoagulation Kinetics of Pollutant Removal in Vinasse Waste: Effect of Voltage	Rp. 1.422.500
TOTAL	Rp. 1.422.500

PAID

www.native-proofreading.com

THANK YOU

Reviewer #1

Comment 9: please mention the points about the novelty of your approach in the Introduction.

Response:
Thank you so much. We have mentioned the aims in Line 172-183 and the novelty in Line 184-193.

Date:	Apr 18, 2020
To:	"Sarto Sarto" sarto@ugm.ac.id
From:	"" ees.services.esch@elsevier.com
Subject:	Decision on submission to Journal of Water Process Engineering

Manuscript Number: JWPE_2019_1388R3

Mechanistic Models of Electrocoagulation Kinetics of Pollutant Removal in Vinasse Waste: Effect of Voltage

Dear Dr Sarto,

Thank you for submitting your manuscript to the Journal of Water Process Engineering.

I am pleased to inform you that your manuscript has been accepted for publication.

My comments, and any reviewer comments, are below.

Your accepted manuscript will now be transferred to our production department. We will create a proof which you will be asked to check, and you will also be asked to complete a number of online forms required for publication. If we need additional information from you during the production process, we will contact you directly.

We appreciate and value your contribution to Journal of Water Process Engineering. We regularly invite authors of recently published articles to participate in the peer review process. You are now part of the Journal of Water Process Engineering reviewer pool. We look forward to your continued participation in our journal, and we hope you will consider us again for future submissions.

Kind regards,
Nicholas Hankins
Co-Editor

Journal of Water Process Engineering

Editor comments:

Please note that the term 'power Hydrogen' on lines 105-106 is incorrect, and I have changed this to the correct term 'potential hydrogen'.

More information and support

FAQ: When and how will I receive the proofs of my article?
https://service.elsevier.com/app/answers/detail/a_id/6007/p/10592/supporthub/publishing/related/

You will find information relevant for you as an author on Elsevier's Author Hub: https://www.elsevier.com/authors.

FAQ: How can I reset a forgotten password?
    https://service.elsevier.com/app/answers/detail/a_id/28452/supporthub/publishing/kw/editorial+manager/

For further assistance, please visit our customer service site: https://service.elsevier.com/app/home/supporthub/publishing/. Here you can search for solutions on a range of topics, find answers to frequently asked questions, and learn more about Editorial Manager via interactive tutorials. You can also talk 24/7 to our customer support team by phone and 24/7 by live chat and email.

In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Use the following URL: https://www.editorialmanager.com/jwpe/login.asp?a=r). Please contact the publication office if you have any questions.