



SDI Review Form 1.6

PART 1:

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	2013_IJBcRR_3797
Title of the Manuscript:	The Effect of COD:N Ratios and pH Control to Biogas Production from Vinasse

General guideline for Peer Review process is available in this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	The manuscript is presented haphazardly. In fact, the whole manuscript is confusing. The parameters, taken into account, are not sufficient for systematic analysis. The authors are kindly requested to repeat the experiments and rewrite the manuscript scientifically. In the Introduction section, the authors have mentioned 35°C is the favourable temp. for mesophilic AD. Why did you perform your experiments at room temp. ? In the text, the authors have mentioned that experiments have been done at room temp. But the digesters are inside water bath in the figure. Did the authors use only one cylinder to measure the gas from 3 Anaerobic Digesters. It was mentioned that NaOH of 10 N has been used to control pH. Again, it is presented that NaOH of 2N had been used to make the substrate neutral. What is the meaning of Table 2 for fermentation process? How many reactors did the authors use for conducting the experiments? Did the authors measure VFAs, C/N ratio, VS ...etc? Urea was added to maintain COD:N ratios. Did the authors determine ammonia nitrogen and free ammonia during the experimental period? To sum up, the authors should present the methodology clearly.	- Ok, thanks for your advice, In the previous research, biogas production held well at mesophilic temperature. Mesophilic temperature has range 26-35 degree celcius, whereas room temperature has range 26-30 degree celcius. So, we think that is no problem. - Ok, revised - Ok, revised (line 80-83) - Ok, revised (line 105 and line 111-115) - This experiment consisted of 10 variables, for process of fermentation and how to analyse, we explained in 2.3.1; 2.3.2; 2.3.3 - Ok, revised (line 80-83) - No, we just measured COD, N, pH - No, - Ok, revised. Please point out which part is still wrong. - Ok revised (line 117-124 and line 271-292) - Ok, revised (line 257-269) - We wanted to know when biogas discharged completely at non-ctrlled pH and at controlled pH. (line 131-133). Please point out if we made the wrong writing. - No, - Acid former-bacteria was more resistant to acidic conditions than methane former-bacteria. Gas formed



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	10. It is not needed to define COD in results section. 11. It is not required to present literature reviews in the results section but it is necessary to compare your results with previous researches. 12. Once we've mentioned the retention time was 30 days. Why did you take 30 days? Again, we've presented 90 days as retention time. How did you compare your results? 13. Did you determine methane, hydrogen and carbon dioxide in biogas ? 14. In the figure, pH is less than 4.0 from 5days to end of the digestion. In such condition, it is not possible to evolve biogas from any substrates. 15. It is mentioned that pH was controlled. Did you maintain pH only initially or throughout the digestion period? 16. You've mentioned that biogas was evolving after 90 days. Why did you stop the digestion? 17. Did you note any values (COD, N, TS, VS, VFAs, ammonia nitrogen, free ammonia..... etc.) for digestion? 18. I could not understand 'what do you want to investigate ?'	at pH less than 4.0 might be dominated by CO₂ 15. We had 2 pH condition, first=non-controlled pH (pH initial 7), second=controlled pH (pH initial 7 and during fermentation, pH was maintained always 7) 16. In this experiment, we wanted to know the results and the phenomena. At controlled pH, we stopped the process but we explained that biogas might be produced till organic materials in the substrates discharged completely (line 245-250). 90 days was enough to explain the influence of controlled pH to biogas production and COD removal. 17. We just note COD, N, TS, Ph 18. We wanted to know the influence of COD:N ratio (urea addition) and pH control neutral during fermentation process. We did this experiment because other authors have not studied that.
<u>Minor</u> REVISION comments	1. Please mention units for each parameter in Table 1. 2. Vinasse is liquid. You got its TS about 28%. Please check it. 3. Many grammatical errors. 4. Many sentences are repeated.	1. COD, carbohydrat, protein, TS, pH, N, COD:N 2. Yes, vinasse used in this experiment is by-product of ethanol industry which produce ethanol from molasses. So vinasse has high viscosity. Other authors also state that solid content of vinase is high. 3. Ok, revised 4. Ok, revised
<u>Optional/General</u> comments		