Review Form 3

Journal Name:	Archives of Current Research International
Manuscript Number:	**Ms_ACRI_121048**
Title of the Manuscript:	**Analysis of Physicochemical Properties of corn starch based composite Biodegradable Cups Influenced by Ultrasonication Pretreatment of Casting Solutions**
Type of the Article	

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PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.		
Is the title of the article suitable? (If not please suggest an alternative title)		
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.		
Are subsections and structure of the manuscript appropriate?		
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**		
Optional/General comments	Review comments: This manuscript describes the analysis of the physicochemical properties of maize starch-based composite biodegradable cups as influenced by the ultrasonication pretreatment of casting solutions. The results are potentially good; however, there are several weaknesses in the logic and description. My comments for the revision are as below: 1. What is the exact percentage of carboxy methyl cellulose (CMC) and glycerol used in the casting solution? Please mention in the abstract. 2. Why were the specific amplitude levels (0%, 20%, 40%, and 60%) and time durations (0, 1, 2, 4, 8, and 16 minutes) chosen for the study? Are these values based on previous research or empirical observations? 3. Can authors provide more detail on how the decrease in viscosity with increased ultrasonication intensity impacts the overall performance and stability of the biodegradable cups? 4. Have the cups been tested for long-term performance, including degradation rates, strength retention, and interaction with different types of liquids over extended periods? 5. How do changes in viscosity and standability impact the cup's quality? Please mention. 6. How many times were the viscosity measurements performed for each sample? 7. What challenges are associated with "ghost" components in gelatinized starch suspensions? 8. What mechanisms are proposed for the reduction in viscosity due to ultrasonication? 9. What is the range of thickness observed for ultrasonicated samples? 10. What film properties are influenced by the thickness of the biodegradable cup? 11. What does Figure 4(c) show about the relationship between amplitude, time, and the thickness of the biodegradable cup? 12. What was the density of the non-ultrasonicated (control) sample? 13. How do ultrasonic vibrations affect the density of the composite material? 14. What role does the interaction between whey protein concentrate (WPC) and glycerol play in density changes? 15. Why is water solubility important for starch-based films in some applications? 16. How does the oxidation process affect the solubility of starch granules? 17. What information does Figure 3(b) provide about the solubility percentages for	

	different amplitude levels and time durations? 18. What was the minimum opacity value achieved and under what conditions? 19. How does the transparency of the ultrasonic-treated cup sample compare to that of native corn starch film? 20. Please note that the text contains a few grammatical, spelling, and typographical errors that require careful re-checking and correction. References should follow the journal format.	

PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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