

Review Form 3

Journal Name:	Archives of Current Research International
Manuscript Number:	Ms_ACRI_129776
Title of the Manuscript:	Effect Of Membrane Fouling On Clarification Of Pomegranate Juice
Type of the Article	

PART 1: 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. A minimum of 3-4 sentences may be required for this part.	Clarifying pomegranate juice using membrane technology has several advantages: improved clarity, enhanced flavor, extended shelf life, retention of nutrients, efficiency, versatility for various beverages, and reduced use of additives. With these interpretations, the article is a relatively good one.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title of the article is suitable.	
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.	<p>Revised Abstract: The present study investigates membrane fouling during the clarification of pomegranate juice after pretreatment with egg albumin. Pomegranate (<i>Punica granatum</i> L., Punicaceae) is a popular tropical non-citrus fruit known for its attractive aroma, refreshing flavor, and favorable Brix/acid ratio. This juice is commonly used in fruit-based beverages, either alone or mixed with other fruit juices. Pomegranates of the (cv. Ganesh) variety, sourced from the local market in Bapatla, Guntur District, Andhra Pradesh, were chosen for their high juice yield preferred by many juice processors and vendors.</p> <p>Hermia's empirical models were applied to evaluate the fouling phenomena in microfiltration (MF) and ultrafiltration (UF) of both pineapple and pomegranate juices. The flux data was fitted into existing fouling models to elucidate the fouling mechanisms during membrane processing. The coefficient of determination (R^2) values for the gel layer model ranged from 0.804 to 0.977 for the 0.2 μm pore size membrane when filtering pomegranate juice. These R^2 values suggest intermediate pore blocking followed by gel layer formation.</p> <p>Keywords: Pomegranate, anthocyanins, lipoprotein, tannins This revised abstract maintains the original content's scientific accuracy while enhancing its readability and flow.</p>	
Is the manuscript scientifically, correct? Please write here.	The manuscript is scientifically sound but can improve by comparing more pretreatment agents, discussing generalizability, and analyzing long-term stability.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The referencing in the text is weak. The referencing in the text is poor, the references in the article are outdated.	

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<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The article generally works well for scholarly communication, utilizing appropriate technical terms related to pomegranate juice clarification and membrane processing. It explains the methodology and results clearly, follows a logical structure, and offers comprehensive information. However, it has some grammatical errors, inconsistent term usage, and punctuation issues that need improvement.</p>	
<p>Optional/General comments</p>	<p>Overall, I have to mention the following about this article:</p> <p>Strengths: This study addresses an important topic in the beverage industry, focusing on pomegranate juice clarification. It provides detailed data on juice properties and sedimentation effects, uses Hermia models for evaluation, has practical implications for juice processors, and provides a comprehensive introduction.</p> <p>Weaknesses: This study is limited by its focus on egg albumin as a pretreatment, lacks geographical diversity, may introduce bias by selecting a single species, does not analyze long-term juice quality, and presents data in a complex manner that may not be easily understood by all readers.</p> <p>The study examines membrane fouling during the clarification of pomegranate juice that has been pretreated with egg albumin. Pomegranate juice is valued for its pleasant taste and is popular in beverages. The research specifically uses pomegranates from the Ganesh variety due to their high juice yield, sourced from Bapatla in India.</p> <p>Empirical models from Hermia were used to assess fouling in microfiltration and ultrafiltration of pomegranate juice. The results indicated that the gel layer model showed good fit with R² values between 0.804 and 0.977 when filtering through a 0.2 μm membrane, suggesting the presence of intermediate pore blocking and gel layer formation.</p> <p>The article highlights strengths such as detailed juice property data and practical applications for juice processors. However, it also notes weaknesses like the limited focus on egg albumin as a pretreatment, outdated references, and grammatical issues that could affect clarity and understanding.</p> <p>Based on the provided manuscript of the manuscript, there don't appear to be any overt ethical issues.</p>	

PART 2:

	<p>Reviewer's comment</p>	<p>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)</p>
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

Reviewer Details:

<p>Name:</p>	<p>Farshad Akbarnejad</p>
<p>Department, University & Country</p>	<p>Iran</p>