

Review of: "Analyzing the Science of Apple Juice: Insights Into Production, Preservation, and Health Effects"

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Potential competing interests: No potential competing interests to declare.

The core theme of this manuscript by Saira Sattar et al. is to present an analysis of the science of apple juice from the perspective of production, preservation, and its health effects. However, after reading the whole manuscript, I have a perception that this draft was prepared as if different subsections of the write-up were written by different authors altogether, and no effective communication occurred in between authors, resulting in a very incoherent narrative. At its present condition, the content of this write-up does not wholly reflect the title, especially the SCIENCE aspect of apple juice making. Furthermore, for an article that promises an in-depth analysis of the processing of apple juice, what we get here is a piece of superficial information on the techniques involved, while the authors are too preoccupied with writing flowery prose, treating the manuscript not as a serious scientific review article but rather as creative writing done by an art major student. Therefore, this article is unfit to be published in its current condition and needs to be majorly revised to fit a scientific article. Some specific comments are:

1. The abstract is good, succinctly written as any scientific writing, and lays out the contents to be expected, but the main article text does not even follow what is promised.
2. See abstract statement "The aim is to provide insights into optimizing both the production process and the preservation methods for apple juice, ensuring a balance between sensory attributes and long-term storage stability." No detailed insight on the topic of how "optimization" is being applied during the production process and how preservation was found in the main text.
3. See abstract statement "It evaluates the effectiveness of natural additives and antioxidants in mitigating these issues, ..." So what are the natural additives or antioxidants being added to the apple juice during processing to mitigate browning or deterioration of flavor? Not a single mention in the text.
4. See abstract statement "The review also highlights recent innovations in packaging technology aimed at extending the shelf life of apple juice and reducing environmental impact." So where are the particulars about these novel innovations in packaging technology? None are found in the main text, only a mention of aseptic packaging, but no specific description whatsoever about the technologies.
5. All of Section 3 should emphasize more on describing advancing technologies that deal with visual inspection, washing, mashing, pressing, and filtration. Cut down on flowery prose and put more technical details.
6. Section 3.i Visual Inspection – rather than writing poetically about inspection of an apple, what technologies are implemented now to pick good apples from bad ones? Surely there are optical sensors involved for screening purposes when we talk about huge volumes of apples passing through the juice factory. The statement describes this

as if the task is lovingly done by manual labour only.

7. Section 3.ii Washing – How many cycles of water are involved? How long should the immersion/soaking be? Is there any specific food-grade washing liquid besides just water to remove dirt/soil from apple skin? Is the process under a continuous jet stream of water hosing apples on a moving conveyor belt, or is washing being carried out by soaking apples in stationary batches? Please describe the technologies.
8. What is the difference between 3.iv) press technology and 6.i) cold-pressed technology? Please describe the machinations so that we can differentiate between the two technologies.
9. Section 6 Emerging Trends in Apple Juice Production – every subsection is too superficially discussed. So short that it is written to be one citation per subsection. More elaboration is required since key points are mentioned in passing only and are too general. Remember, you are writing an analysis as your review title suggested.