



REVIEWER'S REPORT

Manuscript No.: IJAR-56314

Title: Evaluation of *Manihot esculenta Crantz* (Cassava flour) as an alternative to Agarose Gel in Electrophoretic Lipoprotein Profiling in varying concentration

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		Good		
Techn. Quality	Excellent			
Clarity	Excellent			
Significance	Excellent			

Detailed Reviewer's Report

- Cassava flour is a gluten-free, grain-free, and nut-free flour made from the entire grated and dried root of the cassava plant (yuca). It is a popular, nutrient-dense alternative to wheat flour with a mild, neutral flavor and a fine texture suitable for baking, cooking, and thickening, often used as a 1:1 substitute.**
- Slalom chromatography is an analytical technique that provides separation selectivity to analyze large nucleic acids using pressure versus electrophoretic driven effects. This chromatographic approach provides an attractive alternative to the time-consuming use of conventional agarose gel electrophoresis.**
- Agarose has larger pore size what makes it suitable for DNA extraction while Polyacrylamide gel has smaller pores making it suitable for small nucleotides and proteins. Polyacrylamide gel is more precise and has high resolution.**
- Electrophoresis is a laboratory technique used to separate charged molecules—specifically DNA, RNA, or proteins—based on their size and electrical charge. By applying an electric current, molecules are forced to migrate through a gel matrix, with smaller molecules moving faster and farther than larger ones.**

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5. Sustainable laboratory materials are products and consumables designed to minimize environmental impact through reduced waste, lower carbon footprints, and sustainable sourcing. Key examples include biodegradable/bio-based plastics (like PLA), recyclable items, and reusable glassware, which replace single-use plastic, alongside eco-friendly packaging and energy-efficient equipment.
6. A starch-based gel is a 3D, hydrophilic network formed by heating starch in water and cooling it, causing granules to swell and rearrange into a viscous, firm, or elastic structure. These sustainable, biodegradable gels are widely used in food (sauces, puddings) as thickeners, and in biomedical applications (drug delivery, tissue engineering) due to their biocompatibility.
7. Key words are good with significant points.
8. Review part is given good with meaningful.
9. Result part is awesome with pictures.
10. But can be shown separately.
11. Summary points can be added.
12. After a small changes good to publish in your journal.