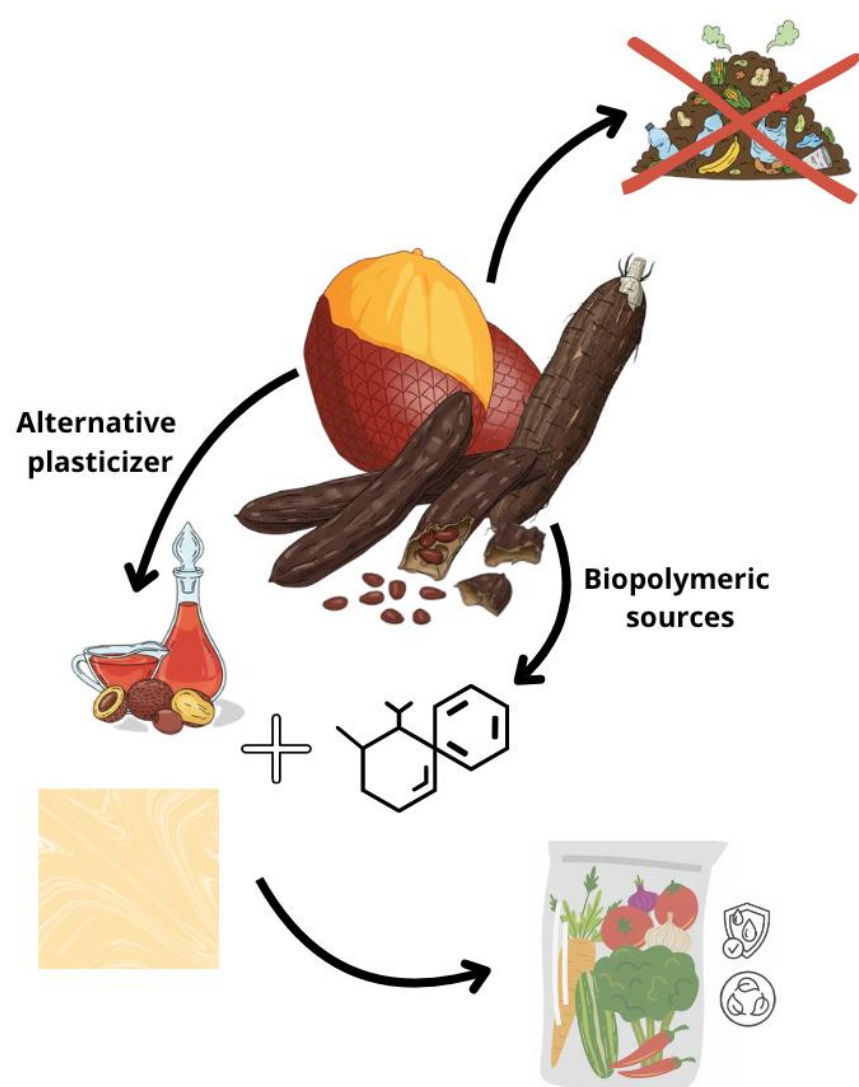


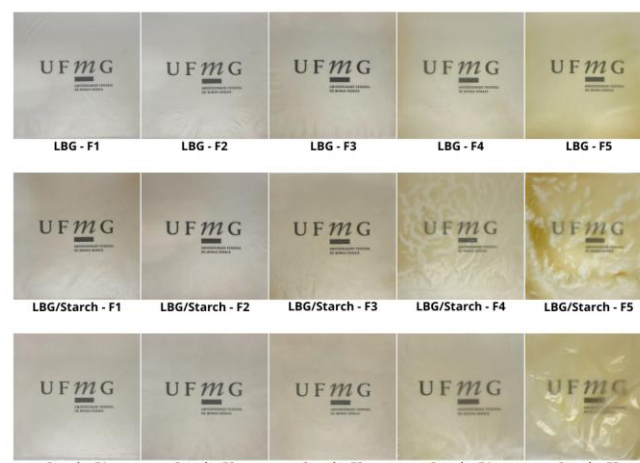
Buriti oil as an additive in carbohydrate-based biodegradable films: towards sustainable food packaging systems

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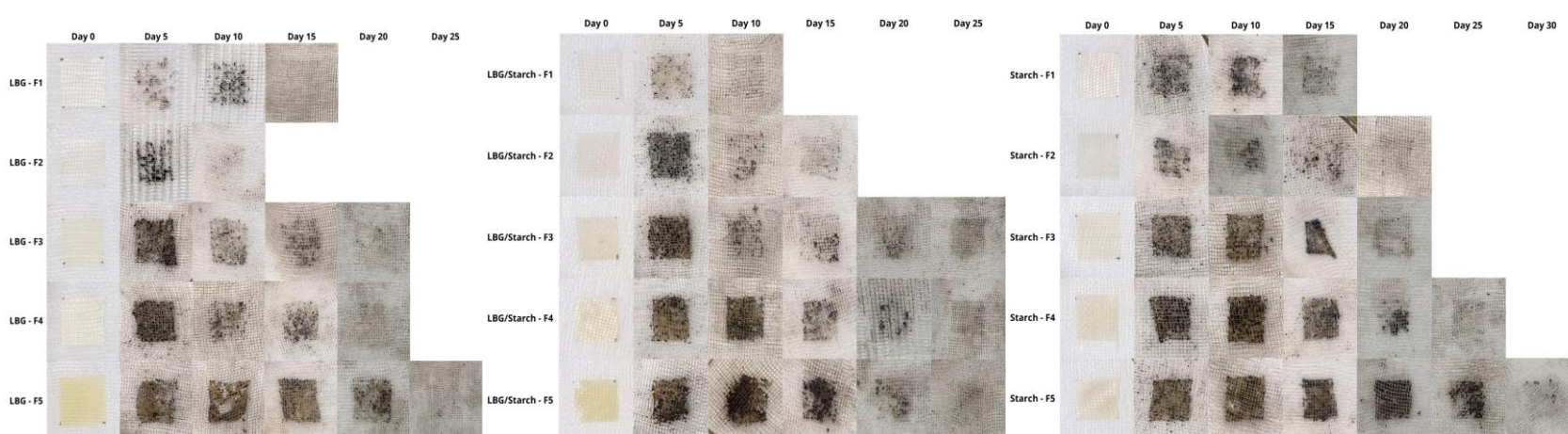
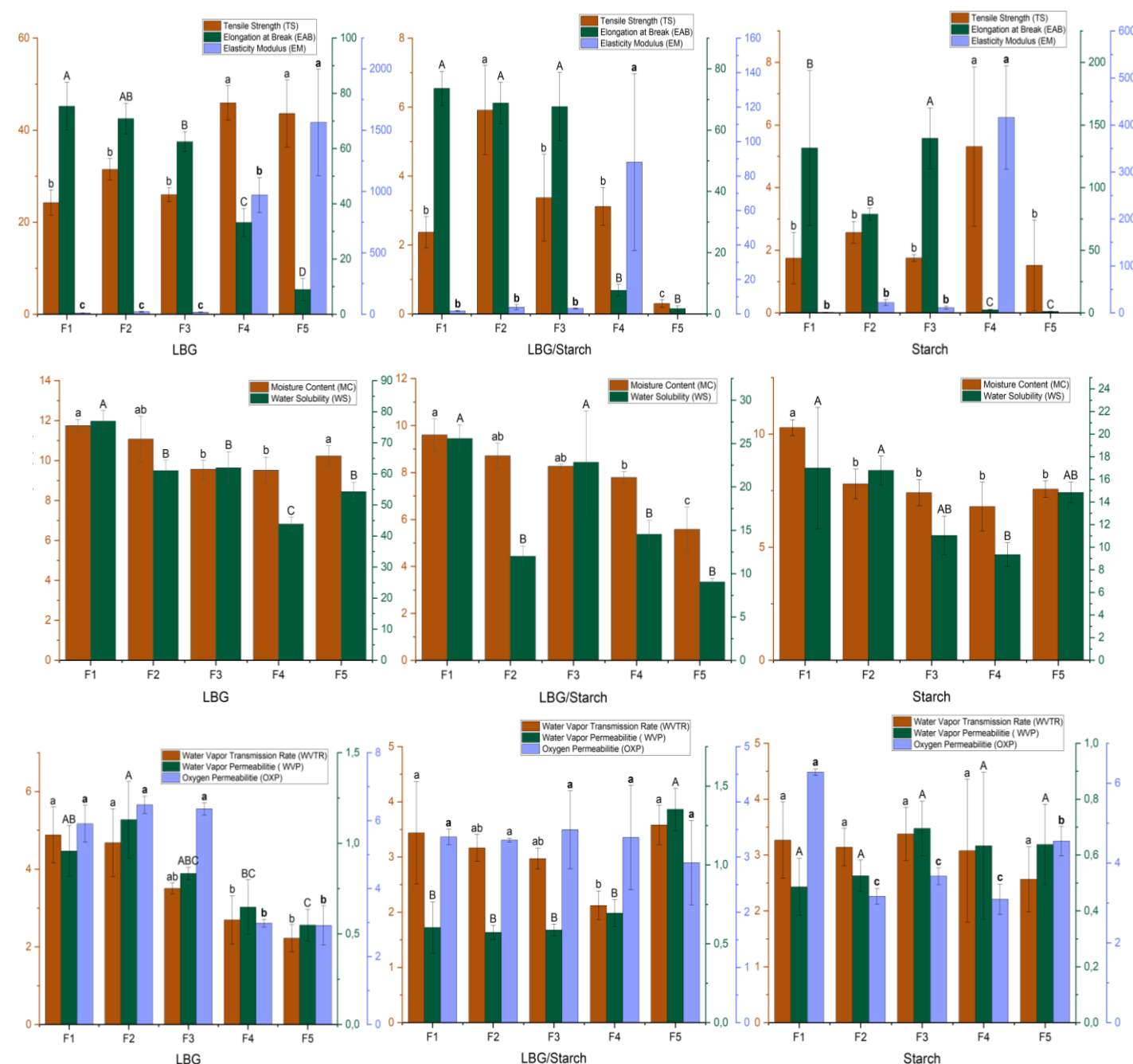
INTRODUCTION



RESULTS & DISCUSSION



- **Improved Barrier Performance:** Significant reduction in oxygen and water permeability (particularly in LBG films).
- **Appearance:** Increased luminosity in all films.
- **Biodegradability:** Positively affected, extending shelf life without compromising natural decomposition.
- **Crucial Limitation:** Buriti oil cannot completely replace glycerol due to a resulting loss of flexibility and increased film fragility.



CONCLUSION

Buriti oil can be a alternative as an additive or a partial substitute for glycerol in biopolymer films, bringing improvements in some properties of these films, such as barrier capability, without compromising the film's tensile strength and flexibility. This makes it a promising option in the development of biodegradable films.

ACKNOWLEDGEMENTS

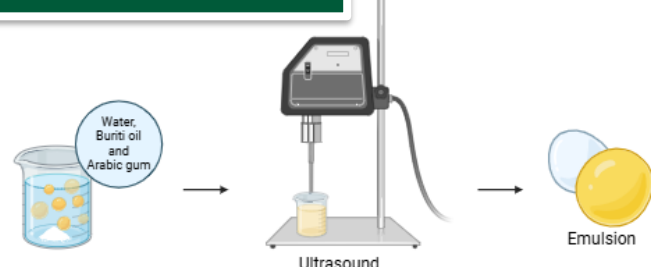
We thank the Cooperativa Grande Sertão for kindly providing the oil sample used in this study. This research was funded by Brazilian Government Agencies: CAPES, CNPq and FAPEMIG. This work was also funded by Universidade Federal de Minas Gerais, Brazil (Chamada PRPq 03/2025).

METHOD

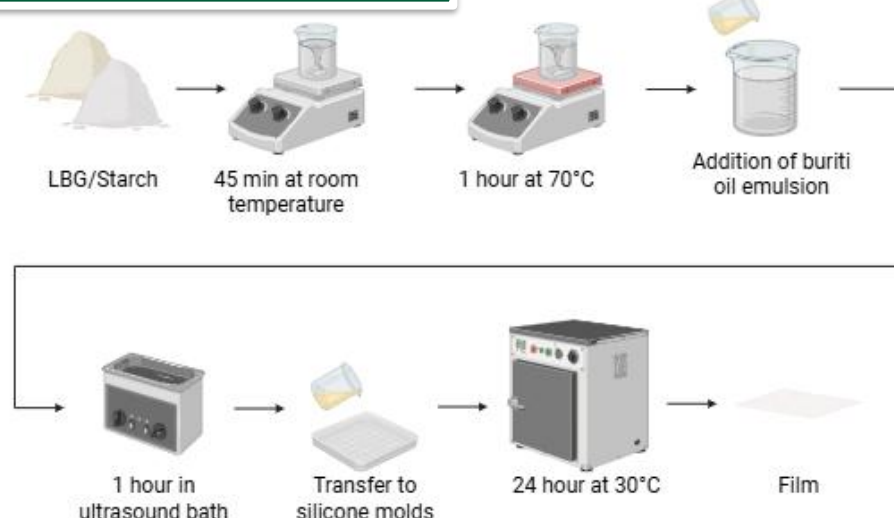
Starch Extraction:



Buriti oil Emulsion:



Film Preparation:



Characterization:

