

# *In Vitro* and *In Silico* Study on Anti-inflammatory Properties of ‘Norabogori’ (*Prunus persica*) from Assam and Its Application in Food Model

## Salient features

- The norabogori fruit is rich in nutrients and phytochemical compounds.
- The microwave assisted extraction (MAE) of norabogori fruit is more efficient and better yielding than conventional cold maceration technique in terms of total phenolic content (TPC).
- Some prominent phytochemical compounds with therapeutic effects are kaempferol (211.09 mg/100g), rutin (83.06 mg/100g), ellagic acid (57.98 mg/100g), syringic acid etc found to be in quite high amount.
- The extract doesnot show any adverse cytotoxic effect
- The extract got effectively encapsulated by sodium alginate.
- The encapsulate incorporated norabogori fruit leather was accepted in both objective and sensory evaluations.

## Advantages

- ✓ The encapsulation is a proven efficient procedure to endure the sensitive phytochemical extract from environmental effects like heat, light, temperature etc. and metabolic factors like, pH, enzyme, digestion mechanism etc. It can directly transfer the compounds to its targeted absorption site.
- ✓ The leather includes freeze-dried norabogori powder enriched with encapsulated fruit extract and so it is aimed to deliver the essential therapeutic properties with high antioxidant properties to the target site.



Control (S0)



Guar gum (S1)



Pectin (S2)



Starch (S3)



Xanthan gum (S4)

## Process Technology developed by

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<i>More information</i>	<b>Status of commercialization / Patent / Publication</b> <ul style="list-style-type: none"><li>✓ Neog, U., Dhar, P., Kumari, T., Nickhil, C., Deka, S. C., &amp; Pandiselvam, R. (2023). Optimization of microwave-assisted process for extraction of phytochemicals from norabogori fruit (<i>Prunus persica</i> L. Batsch) and its application as fruit leather. <i>Biomass Conversion and Biorefinery</i>, 1-15.</li><li>✓ The technology of the product has been transferred to an industry partner named Quality Bakery. In the procedure, a “Material transfer agreement” and a ‘Licencing agreement’ has been signed between Tezpur University and the enterprise for the process and the enterprize agreed to pay 1% license fee as an annual royalty to the university.</li></ul>