



Fermented Flours of Babassu and Brazil Nut

Innovation, food safety, and income generation for communities in the Amazon region.

With the support of The Good Food Institute Brasil, Dr. Ruann Janser De Castro, from the State University of Campinas - UNICAMP, evaluated the effect of **fermentation** on the techno-functional properties and antioxidant and antidiabetic properties of babassu pulp flour and Brazil nut flour.

These flours had their techno-functional properties analyzed to understand their impact on sensory aspects relevant to developing plant-based products, such as **softness, juiciness, and texture**.

In addition, the **antioxidant and antidiabetic properties were also tested**. The marketing potential of using these ingredients is vast, as it meets the trends in the search for products of natural origin to replace current synthetic compounds.

The fermentation process used the commercial yeast *Saccharomyces boulardii* to evaluate its impact on the flour's bioactive and techno-functional properties. Additionally, ingredients that act as carriers of probiotics were obtained, which have an additional beneficial effect on the consumer's health.

Flours:

- Brazil nut flour, with **33% proteins and 45% lipids**, stands out for its balanced and nutritionally rich composition;
- Babassu flour, made up of 95% carbohydrates, demonstrates good gelling capacity and **promising antidiabetic properties**.

The effect of fermentation on flour:

- **Improvement in techno-functional properties**, both in **water absorption** capacity, with an increase of 10% for babassu flour and 40% for Brazil nut flour, and in **oil absorption** capacity, with a rise of 16% for babassu flour and 208% for Brazil nut flour;
- Fermented babassu flour was able to **form a gel** at 0.06 g mL⁻¹, a lower concentration than unfermented flour at 0.08 g mL⁻¹;
- An **increase in protein content** in fermented flour was observed due to microbial biomass growth.

Invest in the project

Continued research promises significant advances, driving improvements in outcomes and opening new opportunities for innovation. The following steps include:

- Improving fermented flour's sensory characteristics and expanding the process scale;
- These improved flours will then be employed to the formulation of meat-like burgers;
- In addition, an exchange is planned to exchange knowledge between local communities;
- The estimated total investment for this next research phase is **186,000 BRL**.

Interested?

Then, find out more details about the research:

Access ↗

To support and invest in the continuity of the project, contact our team by e-mail:

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Presented by:

