



Cupuaçu

Transforming its by-products into protein concentrate and fibrous ingredients with high added value for the plant-based industry.

With the support of The Good Food Institute Brasil, Dr. Otniel Freitas-Silva from EMBRAPA Food Technology developed a **protein concentrate** from the by-product of extracting cupuaçu almond oil and a **fibrous ingredient** from the by-product of obtaining the concentrate. They have great potential for use in the plant-based food industry.

Cupuaçu is already well known in the Brazilian market, where it is consumed mainly in juice, cream, and various sweets. Its current economic value lies in the commercialization of the pulp, which makes up 35% of the fruit. The industry still discards the rest of the fruit, 45% shell and 20% almonds. The study developed alternatives **to using the cupuaçu almond** in its entirety, adding value to the by-products.

Full use of almonds:

- Cupuaçu almonds are processed to produce cupuaçu butter and cupulate, a product similar to chocolate;
- The resulting by-product is the partially defatted cake, which was used to develop the protein concentrate;
- The by-product derived from obtaining the protein concentrate generated a **fiber-rich ingredient**, which was used in developing **vegetable kibbeh** for testing culinary applications.

Results:

- The protein concentrate obtained has **44.38% protein** and also a **higher water solubility and oil absorption** index than commercial soy protein concentrate;
- The fibrous ingredient had **56.49% fiber**. When incorporated into the kibbeh formulation at up to 5%, it showed good sensory acceptance;
- These innovative ingredients offer the **potential to improve nutritional and functional** characteristics of plant-based products, meeting consumer demands.

Invest in the project

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

- Developing new formulations using the protein concentrate;
- To this end, protein deodorization and digestibility studies and the developed products sensory, shelf life, and economic viability tests will be carried out;
- Finally, establishing partnerships with companies is essential to facilitate the use and commercialization of new formulations.

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:

