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TAL 797 – Seminário

**Data: 25/10/2023**

## **USE OF CO-PRODUCTS FROM THE FOOD INDUSTRIES WITH THE POTENTIAL FOR USE IN THE PREPARATION OF NUTRITIVE FOODS**

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The generation of waste and co-products by food industries can cause significant environmental problems. However, a strategy that has proven effective in mitigating these problems is the valorization and use of these co-products, being a way of creating a more sustainable food system and minimizing the environmental problems caused by these industries. Many of these co-products can become interesting sources of raw materials that can be used in the preparation of food products. Studies have shown how the use of co-products has great potential for use due to the high nutritional value provided by macronutrients such as proteins, carbohydrates, fiber and lipids, micronutrients such as vitamins and minerals and bioactive compounds, such as antioxidants. Whey has attracted great attention due to its technological features and excellent biological activity. Co-products from meat processing, such as blood, bones and offal, are rich in proteins and can be used in different food products. Fruit peels and seeds have been used in the preparation of formulations for jellies, yogurts, sweets, cakes, cereal bars, among other products. Brazil nut and baru nut co-products have potential for use in the production of nutritional bars. The elaboration of different formulations of therapeutic foods has also been developed in order to find alternatives for using co-products from the food industries suitable for the region where they will be produced, considering aspects related to food safety. Recent research has shown the bioactive potential of apple, peach, cucumber and red pepper co-products in the treatment of some diseases, enabling their use as natural additives in foods and as ingredients in the food

industry. Thus, research and development of food product formulations using co-products from the food industry represents a promising area of scientific and technological development.

## REFERENCES

- ARMINI, V.; MIELE, N.A.; ALBERO, M.; SACCHI, R.; CAVELLA, S. Formula optimization approach for an alternative Ready-to-Use Therapeutic Food. **LWT**, V. 98, p. 148-153, December 2018.
- LIMA, D. S.; EGEEA, M. B.; CABASSA, I. C. C.; ALMEIDA, A. B.; SOUSA, T. L.; LIMA, T. M.; LOSS, R. A.; VOLP, A. C. P.; VASCONCELOS, L. G.; DALL’OGLIO, E. L.; HERNANDES, T.; TAKEUCHI, K. P. Technological quality and sensory acceptability of nutritive bars produced with Brasil nut and baru almond coproducts. **LWT**, v. 137, 110467, February 2021.
- KONG, F.; KANG, S.; ZHANG, J. JIANG, L. LIU, Y.; YANG, M.; CAO, X.; AHENG, Y. SHAO, J. XIGING, Y. The non-covalente interactions between whey protein and various food functional ingredients. **Food Chemistry**, v. 394, 133455, 2022.
- KOWALSKA, H.; CZAJKOWSKA, K. CICHOWSKA, J.; LENART, A. What’s new in biopotential of fruit and vegetable by-products Applied in the food processing industry. **Trends in Food Science & Technology**, v. 67, p. 150-159, September 2017.
- MÁRMOL, I.; QUERO, J.; IBARZ, R.; SANTOS, P. F.; TEIXEIRA, J. A.; ROCHA, C. M. R.; PÉREZ-FERNANDEZ, M.; GARCÍA-JUIZ. S.; OSADA, J.; MARTÍN-BELLOSO, O.; RODRÍGUEZ-YOLDI, M. J. Valorization of agro-food by-products and their potential therapeutic applications. **Food and Bioproducts Processing**, n. 128, p; 247-258, 2021.
- SACAS-RODRÍGUEZ, B. ÁLVAREZ-RIVERA, G. VALDÉS, A.; IBÁÑEZ, E.; CIFUENTES, A. Food by-products and food wastes: are they safe enough for their valorization? **Trends in Food Science & Technology**, v. 114, p. 133-147, August 2021.

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