

Valorization of food waste as a source of bioactive compounds

DOI: COFAC/ILIND/BIORG/2/2025

Project Reference: <https://doi.org/10.62658/COFAC/ILIND/BIORG/2/2025>

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01/01/2026 – 30/06/2027
Project Duration



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Abstract:

Food waste represents a major environmental and economic challenge across Europe. According to the European Environment Agency, over 89 million tonnes of food are wasted annually. These wastes are often discarded without any valorization, contributing to soil and water pollution and posing significant sustainability concerns. Addressing this issue is essential to achieve the United Nations Sustainable Development Goals for 2030, particularly in promoting resource efficiency and circular economy practices. Research indicates that such waste can contain diverse compounds with untapped value, yet these remain largely unexamined. This project explores strategies to convert food waste into environmentally and economically valuable bioproducts. By developing processes that allow for the repurposing of food by-products, the project aims to minimize environmental impact, promote sustainable resource use, and demonstrate the broader

potential of circular approaches within institutional food systems. The outcomes are expected to contribute to community and industrial applications, while fostering awareness and practices aligned with sustainability objectives.

