



BOOK OF ABSTRACTS

**XXIII European Conference
on Food Chemistry**

EUROFOODCHEM XXIII

June 11 – 13, 2025, Bratislava, Slovakia

BOOK OF ABSTRACTS

XXIII European Conference on Food Chemistry

EUROFOODCHEM XXIII

June 11 – 13, 2025, Bratislava, Slovakia

ORGANIZED BY:

European Chemical Society, Division of Food Chemistry

Slovak Chemical Society

National Agricultural and Food Centre, Food Research Institute in Bratislava

Faculty of Chemical and Food Technology of the Slovak University of Technology in Bratislava

EDITED BY:

Zuzana Ciesarová, Lukáš Kolarič, Irena Vovk, Karel Cejpek

PUBLISHED BY:

National Agricultural and Food Centre, Lužianky, Slovakia, 2025

Location of e-print: <https://eurofoodchem2025.schems.sk/>

Slovak National Library

ISBN 978-80-89162-96-3

EAN 9788089162963

©2025

All rights reserved.

Any copying and other reproduction of a book without the prior consent of the publisher constitutes a violation of its rights.

Disclaimer: The editors state that the content of scientific abstracts is of the responsibility of their respective authors.

PP-W19**Nutritional valorization of fermented melon by-products: novel sustainable ingredients?**

Mariana Santos Domingues^{1,2}, Mafalda Alexandra Silva^{1,3}, José M. Pestana^{2,4}, Helena S. Costa^{1,3}, Tânia Gonçalves Alburquerque^{1,3}

¹*Department of Food and Nutrition, National Institute of Health Dr. Ricardo Jorge, Lisbon, Portugal;*

²*Escola Superior de Hotelaria e Turismo do Estoril, Estoril, Portugal;*

³*Faculdade de Farmácia da Universidade do Porto/REQUIMTE-LAQV, Porto, Portugal;*

⁴*Centro de Investigação, Desenvolvimento e Inovação em Turismo/CITUR, Estoril, Portugal*

Although often disregarded as by-products of melon processing, both the peel and seeds contain valuable nutrients and bioactive compounds, making them promising candidates for fermentation studies. To investigate the feasibility and effectiveness of lactic and alcoholic fermentation applied to melon peel, seeds, and by-products, with the goal of evaluating their potential for developing value-added products and promoting sustainability in melon processing.

During 2023, melon by-products, seeds and peels were collected in a hotel in the Lisbon region. After adding 2% salt (lactic fermentation) or 2% sucrose (alcoholic fermentation) of the total weight of melon by-products/seeds or peels, bags were sealed under vacuum and maintained for 7 days at 27 °C ± 1 °C. Samples were homogenized in a blender, dehydrated (55 °C; 12h), homogenized and sieved to obtain flour. The energy and carbohydrates content were calculated after the determination of the nutritional composition (moisture, ash, total protein and fat, dietary fibre and salt) of the fermented products. Six products were obtained: lactic/alcoholic fermented melon by-products flour, lactic/alcoholic fermented melon peel flour, and lactic/alcoholic fermented melon seed flour. According to Regulation (EU) No. 1924/2006, all products (100%) are rich in dietary fiber (>6 g/100 g), and 83% are high in protein (>20% of energy value). Additionally, lactic/alcoholic fermented melon peel flour has a low-fat content. This study emphasizes that cost-effective processes, such as fermentation, can simultaneously reduce waste and generate value-added products, promoting sustainability in melon processing and the development of innovative functional food ingredients.