一般講演 | D 食品工学、加工、保蔵、バイオテクノロジー (Food Engineering, Process, Storage, and Biotechnology)

2025年8月28日(木) 15:00 ~ 17:45 I会場(4F 141)

[2Ip01-11] その他の食品工学、鮮度保持、衛生、殺菌、抗菌

座長:安田 みどり（西九州大学）、藤井 智幸、安藤 正史（近畿大学）

17:30 ~ 17:45

[2Ip11] Evaluation of Storage Methods on the Quality and Nutritional Stability of Sprouted Brown Rice

*AI ZHENGQI[1], Kokawa Mito[2], Kitamura Yutaka[2] (1. University of Tsukuba・Biological Resources, 2. University of Tsukuba・Department of Life and Environmental Sciences)

キーワード：スプラウト玄米、保存条件、栄養品質、真空包装

[Purpose]Sprouted brown rice (SBR) is produced by germinating brown rice until sprout form and is rich in functional components such as GABA and vitamins. However, nutrient degradation and microbial growth during storage can limit its shelf life and nutritional value. This study aimed to evaluate how different storage temperatures and packaging methods affect the physical properties, nutritional quality, and microbial growth of sprouted brown rice (SBR).
[Methods]SBR was prepared under optimized germination conditions and stored for one week under various temperatures (4°C, 20°C, and −18°C) and packaging conditions (vacuum and conventional plastic bag). Nutritional components (vitamin C, β-carotene, and GABA), physical properties (color and texture), and microbial counts (total bacteria and E. coli) were monitored daily to assess changes in overall quality during the storage period.
[Results]Color stability was highest under frozen vacuum storage, while vitamin C tended to be better retained under low temperature vacuum conditions. GABA content also showed an increasing trend under vacuum storage. Overall, lower temperatures and vacuum packaging appeared more effective in preserving the quality of SBR. However, further experiments are needed to confirm these trends and clarify the underlying mechanisms.