

Silva, C. L. M. (2023). *Advancements in preservation technologies for clean label products: the case of free-from bakery industry*. Abstract from 37th EFFoST International Conference 2023 , Valencia, Spain.

**Aim:** Clean-label food technologies are essential in satisfying consumers' expectations for transparency, natural ingredients, and healthier choices. This work focuses on reviewing recent advancements in preservation technologies, highlighting their significance in preserving product integrity, prolonging shelf life, and meeting the increasing consumer demand for natural and minimally processed food options. Furthermore, the study delves into the specific case of the free-from bakery industry, considering the challenges posed by gluten, dairy, additives, and allergens. **Method:** An extensive literature review was carried out on the clean label applications of more classical food preservation methods, such as freezing, drying, fermentation, or use of organic salts, and more recent technologies, such as high-pressure, ultrasonication, cold plasma, electric fields, photohydroionization, or active packaging. A deeper exploitation was conducted on their application to the free-from bakery industry. **Results:** The clean-label application of a comprehensive range of preservation technologies was analyzed in relation to various food sectors, including dairy, fruits and vegetables, meat & fish, juices & beverages, plant proteins, and bakery. The study identified the potential benefits and challenges associated with implementing these technologies. Specifically focusing on the bakery industry, the research examined the effects of food processes on proteins and starch. **Conclusion:** This study underscores the significance of clean-label food technologies in meeting consumer expectations. The focus on the free-from bakery industry has shed light on the unique challenges of gluten, dairy, additives, and allergens while identifying potential avenues for future research. The findings emphasize the importance of implementing these preservation technologies across various food sectors, paving the way for enhanced product quality and consumer satisfaction.