UNIVERSIDADE FEDERAL DE VIÇOSA
CENTRO DE CIÊNCIAS EXATAS E TECNOLÓGICAS
DEPARTAMENTO DE TECNOLOGIA DE ALIMENTOS
Secretaria da Pós-Graduação em Ciência e Tecnologia de Alimentos

Campus Universitário – Viçosa, MG – 36570-900 – Telefone (31)3612-6705/6760 – E-mail: tca@ufv.br

TAL 797 – Seminário

30/10/2024

BIOTRANSFORMATION OF ANTHOCYANINS BY MICROORGANISMS: A TECHNOLOGICAL ALTERNATIVE FOR STABILIZING SENSORY CHARACTERISTICS IN WINES

Pós-graduando: Philippe Defáveri Bieler

Orientador: Pedro Henrique Campelo Felix (Departamento de Tecnologia de Alimentos)

Nível: (X) MS ( ) DS

Phenolic compounds are organic substances that have bioactive properties such as antioxidant, anti-inflammatory and anticancer activity. Among phenolic compounds, flavonoids such as anthocyanins (water-soluble pigments) stand out for acting as antioxidants and natural colorants capable of modulating the sensory characteristics of food products. Despite their bioactive and techno-functional potential, anthocyanins are thermolabile, photosensitive and oxidizable substances and can be degraded, which limits their application in the food and nutraceutical industries. In this sense, some studies have demonstrated that wine fermentation processes conducted by yeast and lactic acid bacteria have the potential to biotransform anthocyanins. Thus, the application and modulation of the fermentation of substrates with a high content of these molecules can lead to the formation of derivatives with greater stability to variations in pH, temperature and light. This approach may be promising for expanding the industrial applicability of anthocyanins both in the functional foods and food coloring sector and in the nutraceutical sector as supplements.

Referências Bibliográficas:

Devi, A., Konerira Aiyappaa, A.-A. and Waterhouse, A.L. (2020), Adsorption and biotransformation of anthocyanin glucosides and quercetin glycosides by *Oenococcus oeni* and *Lactobacillus plantarum* in model wine solution. **J Sci Food Agric**, 100: 2110-2120. https://doi.org/10.1002/jsfa.10234

Li Y, Chen Y, Chen Y, Liu J, Zhang B, Zhu B, et al. Lactiplantibacillus plantarum inoculation enhanced the color stabilization and aroma quality of blueberry wine. LWT. 15 de setembro de 2024; 208:116750. https://doi.org/10.1016/j.lwt.2024.116750

Zhang P, Ma W, Meng Y, Zhang Y, Jin G, Fang Z. Wine phenolic profile altered by yeast: Mechanisms and influences**. Compr Rev Food Sci Food Saf.** 2021; 20: 3579−3619**.** https://doi.org/10.1111/1541-4337.12788

Zhou J, Tang C, Zou S, Lei L, Wu Y, Yang W, et al. Enhancement of pyranoanthocyanin formation in blueberry wine with non-Saccharomyces yeasts. Food Chemistry. 2024; 438:137956. https://doi.org/10.1016/j.foodchem.2023.137956

Documento assinado digitalmente
gov.br
PEDRO HENRIQUE CAMPELO FELIX
Data: 22/10/2024 21:13:22-0300
Verifique em https://validar.iti.gov.br

Documento assinado digitalmente
gov.br
PHILIPPE DEFAVERI BIELER
Data: 22/10/2024 22:05:02-0300
Verifique em https://validar.iti.gov.br

Orientador(a)

Orientado(a)