

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

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**Publicaciones (2019 – presente)**

1. Rieiro, R.M.M.G.P., Picão, B.W., Gonçalves, D.O., Scontri, M., Mazziere, V.T., Mussagy, C.U., Raghavan, V., **Astudillo-Castro, C.**, Córdova, A., Cerri, M.O., et al. 2023. Synergistic Effects of Stirring and Aeration Rate on Carotenoid Production in Yeast *Rhodotorula toruloides* CCT 7815 Envisioning Their Application as Soap Additives. *Fermentation*, 9(9), 828. Q2.
2. Córdova, A., **Astudillo-Castro, C.**, Henríquez, P., Manríquez, N., Nuñez, H., Guerrero, C., Álvarez, D., Aburto, C., Carrasco, V., Oñate, S. Lehedé, L. 2023. Ultrasound-assisted enzymatic synthesis of galacto-oligosaccharides using native whey with two commercial  $\beta$ -galactosidases: *Aspergillus oryzae* and *Kluyveromyces var lactis*. *Food Chemistry*, 426: 136256. Q1.
3. Arancibia-Díaz, A., **Astudillo-Castro, C.**, Altamirano, C., Soto-Maldonado, C., Vergara-Castro, M., Córdova, A., Zuñiga-Hansen, M.E. 2023. Development of solid-state fermentation process of spent coffee grounds for the differentiated obtaining of chlorogenic, quinic, and caffeic acids. *Journal of the Science of Food and Agriculture*. 103: 420-427. Q1.
4. Córdova, A., Henríquez, P., Nuñez, H., Rico-Rodríguez, Guerrero, C., **Astudillo-Castro, C.**, Illanes, A. 2022. Recent Advances in the application of Enzyme processing assisted by ultrasound in agri-foods: a review. *Catalysts*. 12: 107. Q2.
5. Valencia, P., Espinoza, K., **Astudillo-Castro, C.**, Salazar, F. 2022. Modeling tool for studying the influence of operating conditions on the enzymatic hydrolysis of milk proteins. *Foods*, 11: 480. Q1.
6. **Astudillo, C.**, Córdova, A., Oyanedel, V., Soto, C., Valencia, P., Henríquez, P., Jimenez, R. 2020. Prediction of the Limiting Flux and Its Correlation with the Reynolds Number during the Microfiltration of Skim Milk Using an Improved Model. *Foods*, 9: 1621. Q1.
7. Córdova A, **Astudillo, C.**, Ruby, R., Valencia P, Soto C. 2020. Recent advances and perspectives of ultrasound assisted membrane food processing. *Food Research International* 133: 109163. Q1.
8. Valencia, P.L., Sepúlveda, B., Gajardo, D., **Astudillo-Castro, C.** 2020. Estimating the Product Inhibition Constant from Enzyme Kinetic Equations Using the Direct Linear Plot Method in One-Stage Treatment. *Catalysts*, 10: 853. Q2.
9. Santibañez, L., Córdova A, **Astudillo, C.**, Illanes, A. 2019. Effect of the lactose hydrolysis on galacto-oligosaccharides mixtures subjected to nanofiltration: a detailed fractionation analysis. *Separation and Purification Technology*, 222: 342-353. Q1.
10. Córdova A, Saavedra, J., Mondaca, V., Vida, J., **Astudillo, C.** 2019. Quality assessment and multivariate calibration of 5-HMF during a concentration process for clarified apple juice. *Food Control* 95: 106-111. Q1.

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11. Valencia, P., Solis, T., Rojas, P., Ibañez, F., **Astudillo-Castro, C.**, Pinto, M., Almonacid, S. 2019. Proteolytic susceptibility of food by-product proteins: An evaluation by means of a quantitative index. *Process Biochemistry* 77, 63-69. Q2.

### Proyectos con financiamiento externo últimos 5 años (adjudicado y/o ejecutado)

1. Hydrocolloid based edible coatings as strategy to produce healthier French fries options.  
Financiamiento: FONDECYT REGULAR N° 1211551, ANID  
Rol: Investigador responsable  
Duración: 2021-2024  
Año adjudicación: 2021
2. Servicios de Terceros para la separación del colorante concentrado libre de almidón desde clones de papas de INIA en el marco del “Polo territorial para el desarrollo de colorantes y antioxidantes de alto valor para la industria de alimentos a partir de materias primas altamente dedicadas y producidas en la zona centro sur de Chile (PCYA).  
Financiamiento: Código INIA 502600-10. 2018-2020. FIA PYT-2017-0488  
Rol: Investigador Responsable  
Duración: 2018-2020  
Año adjudicación: 2018