

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

Carolina Astudillo Castro

Publicaciones (2016- presente)

1. Valencia P, 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. *Catalyst*, 10: 853. Q2.
2. **Astudillo-Castro C**, Cordova A, Oyanedel-Craver V, Soto-Maldonado C, Valencia P, Henriquez P, Jimenez-Flores 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.
3. Córdova A, Astudillo-Castro C, Ruby-Figueroa R, Valencia P, Soto C. 2020. Recent advances and perspectives of ultrasound assisted membrane food processing. *Food Research International* 133: 109163. Q1.
4. 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.
5. 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.
6. Córdova A, Saavedra J, Mondaca V, Vidal J, **Astudillo-Castro C**. 2018. Quality assessment and multivariate calibration of 5-Hydroxymethylfurfural during a concentration process for clarified apple juice. *Food Control* 95: 106-114. Q1.
7. Faghihzadeh F, Anaya N, **Astudillo-Castro C**, Oyanedel-Craver V. 2018. Kinetic, metabolic and macromolecular response of bacteria to chronic nanoparticle exposure in continuous culture. *Environmental Science: Nano*. 10.1039/C8EN00325D. Q1.
8. Valencia P, **Astudillo C**, Gajardo D, Flores S. 2017. Application of the median method to estimate the kinetic constants of the substrate uncompetitive inhibition equation. *Journal of Theoretical Biology* 418:122-128. Q1.
9. Saavedra J, Córdova A, Navarro R, Díaz-Calderón P, Fuentealba C, **Astudillo-Castro C**, Toledo L, Enrione J, Galvez L. 2017. Industrial avocado waste: Functional compounds preservation by convective drying process. *Journal of Food Engineering* 198:81-90. Q1.
10. Navarro-Lisboa R, Herrera C, Zúñiga R, Enrione J, Guzmán F, Matiacevich S, **Astudillo-Castro C**. 2017. Quinoa proteins (*Chenopodium quinoa* Willd.) fractionated by ultrafiltration using ceramic membranes: The role of pH on physicochemical and conformational properties. *Food and Bioproducts Processing* 102:20-30. Q1.

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11. Córdova A, **Astudillo C**, Santibañez L, Cassano A, Ruby-Figueroa R, Illanes A. 2017. Purification of galacto-oligosaccharides (GOS) by three-stage serial nanofiltration units under critical transmembrane pressure conditions. *Chemical Engineering Research and Design* 117:488-499. Q2.
12. Cordova A, **Astudillo C**, Guerrero C, Vera, Illanes A. 2016. Performance of an ultrafiltration membrane bioreactor (UF-MBR) as a processing strategy for the synthesis of galacto-oligosaccharides at high substrate concentrations. *Journal of Biotechnology* 223:26-35. Q1.
13. Cordova A, **Astudillo C**, Giorno L, Guerrero C, Conidi C, Illanes A, Cassano A. 2016. Nanofiltration potential for the purification of highly concentrated enzymatically produced oligosaccharides. *Food and Bioproducts Processing* 98 :50-61. Q2.
14. Cordova A, **Astudillo C**, Guerrero C, Vera C, Illanes A. 2016. Assessment of the fouling mechanisms of an ultrafiltration membrane bioreactor during synthesis of galacto-oligosaccharides: Effect of the operation variables. *Desalination* 393: 79-89. Q1.

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

1. NUNA, Snacks Saludables Inclusivos para niños y adultos.
Financiamiento: 17PRAE-82653
Rol: Investigador Responsable
Duración: 2017-2018
Año adjudicación: 2017
2. Determinación de parámetros de operación para la extensión de vida útil de productos de pastelería en base a legumbres, libres de gluten, de lácteos y sin azúcar agregada. Empresa NUNA HEALTHY FOOD E.I.R.L.
Financiamiento: Voucher Corfo 16VIP71541
Rol: Investigador Responsable
Duración: 2017
Año Adjudicación: 2017
3. Plataforma online para el diseño de recetas para cervezas artesanales
Financiamiento: Fondef VIU15E0036
Rol: Co-Director.
Duración: 2016-2017
Año adjudicación: 2016
4. Plataforma online para el diseño de recetas para cervezas artesanales
Financiamiento: Fondef VIU15P0036
Rol: Profesor Patrocinante
Duración: 2016
Año Adjudicación: 2016



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5. Enzymatic membrane reactor for the hydrolysis of fish by-product proteins
Financiamiento: Fondecyt Regular 1161293
Rol: Co-Investigador
Duración: 2016-2018
Año adjudicación: 2016