

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

Carolina Astudillo Castro

Publicaciones (2013- presente)

1. Córdova A, J Saavedra, V Mondaca, J Vidal & C Astudillo-Castro (2019) Quality assessment and multivariate calibration of 5-hydroxymethylfurfural during a concentration process for clarified apple juice. *Food Control*, 95, 106-114.
2. Faghihzadeh F, NM Anaya, C. Astudillo-Castro & V Oyanedel-Craver (2018) Kinetic, metabolic and macromolecular response of bacteria to chronic nanoparticle exposure in continuous culture. *Environmental Science: Nano*, 5, 1386-1396.
3. Valencia PL, C Astudillo, D Gajardo & S Flores (2017) Application of the median method to estimate the kinetic constants of the substrate uncompetitive inhibition equation. *Journal of Theoretical Biology*, 418,122-128.
4. Saavedra J, A Córdova, R Navarro, P Díaz-Calderón, C Fuentealba, C Astudillo-Castro, L Toledo, J Enrione & L Galvez (2017) Industrial avocado waste: Functional compounds preservation by convective drying process. *Journal of Food Engineering*, 198, 81-90.
5. Navarro-Lisboa, R, C Herrera, R Zúñiga, J Enrione, F Guzmán; S Matiacevich & C Astudillo-Castro (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.
6. Córdova A, C Astudillo, L Santibañez, A Cassano, R Ruby-Figueroa & A Illanes (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.
7. Cordova A, C Astudillo, C Guerrero, C Vera & A Illanes (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.
8. Cordova A, C Astudillo C, L Giorno, C Guerrero, C Conidi, A Illanes & A Cassano (2016) Nanofiltration potential for the purification of highly concentrated enzymatically produced oligosaccharides. *Food and Bioproducts. Processing Official journal of the European Federation of Chemical Engineering: Part C*, 98, 50-61.

DOCTORADO EN CIENCIAS AGROALIMENTARIAS

9. Cordova A, C Astudillo, C Guerrero, C Vera & A Illanes (2016) Assessment of the fouling mechanisms of an ultrafiltration membrane bioreactor during synthesis of galactooligosaccharides: Effect of the operation variables. *Desalination*, 393, 79-89.
10. Astudillo-Castro C (2015) Limiting flux and critical transmembrane pressure determination using an exponential model: The effect of concentration factor, temperature and cross-flow velocity during casein micelle concentration by microfiltration. *Industrial & Chemical Engineering Research*, 54, 414-425.
11. Cifuentes-Araya N, C Astudillo-Castro & L Bazinet (2014) Mechanisms of mineral membrane fouling growth modulated by pulsed modes of current during electro dialysis: Evidences of water splitting implications in the appearance of the amorphous phases of magnesium hydroxide and calcium carbonate. *Journal of Colloid and Interface Science*, 426, 221-234.

Proyectos con financiamiento externo (2013-presente)

1. 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.
Financiamiento: Voucher Corfo N° 16VIP71541
Rol: Investigador Responsable
Duración: 2017-2019
Año adjudicación: 2017
Tipo de investigación: Aplicada
2. Plataforma online para el diseño de recetas para cervezas artesanales.
Financiamiento: Fondef VIU N° VIU15P0036
Rol: Co-Director
Duración: 2016-2017
Año adjudicación: 2016
Tipo de investigación: Aplicada
3. Enzymatic membrane reactor for the hydrolysis of fish by-product proteins.
Financiamiento: Fondecyt Regular N° 1161293
Rol: Co-Investigador
Duración: 2016-2018
Año adjudicación: 2016
Tipo de investigación: Aplicada
4. Obtención de hidrolizados de proteínas lácteas para la elaboración de fórmulas infantiles.
Financiamiento: Proyecto de la Fundación Empresarial Comunidad Europea-Chile (EuroChile).

FACULTAD DE
CIENCIAS AGRONÓMICAS
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