

PROF. LUIS ANTONIO MINIM



Full Professor - UFV

DSc. in Chemical Engineering - UNICAMP - Brazil

M.Sc. Degree in Food Engineering - UNICAMP - Brazil

Research Area: Process in the Food Industry

Research Interest

Advances in food technology have resulted in new ingredients added to foods to: 1. Maintain and improve safety and freshness; 2. Enhance nutritional value and 3. Improve taste texture and appearance. Our researches are devoted to develop new bioseparation technologies to produce traditional and new food ingredients using preparative chromatography and aqueous two-phases extraction. We are developing bioseparation processes to purify valuable food-grade proteins using:

- Affinity, ion exchanger and hydrophobic adsorbents;
- Membrane separation process;
- Aqueous two-phases extraction process.

Current projects

- Supermacroporous cryogel monolithic columns for purification of egg white and whey proteins;
- Fabrication of macroporous cryogels bioreactor;
- Aqueous two-phase liquid extraction for partitioning of whey proteins;
- Techno-functionality of whey proteins and polysaccharides (gelation, emulsion and foam capacity).

Selected Publication

- Veríssimo, L.A.A.; do Nascimento, K.S.; Mourão, C.A.; Minim, V.P.R.; Minim, L.A. Aqueous two-phase poly(ethylene glycol)–sodium polyacrylate system for amyloglucosidase purification: Equilibrium diagrams and partitioning studies. *Separation and Purification Technology*, v. 118, 888–894, 2013.
- Miranda, L.D.L.; Bellato, C.R.; Fontews, M.P.F.; De Almeida, M.F.; Milagres, J.L.; Minim, L.A.. Preparation and evaluation of hydrotalcite-iron oxide magnetic organocomposite intercalated with surfactants for cationic methylene blue dye removal. *Chemical Engineering Journal* (1996), v. 254, p. 88-97, 2014.
- da Silva, A.N.; Perez, R.; Minim, V.P.R.; Minim, L.A. Integrated production of whey protein concentrate and lactose derivatives: What is the best combination? *Food Research International*, v. 73, 62–74, 2015.
- Faria, J.T.; Oliveira, E.B.; Minim, V.P.R.; Minim, L.A. Performance of Quillaja bark saponin and b-lactoglobulin mixtures on emulsion formation and stability. *Food Hydrocolloids*, v. 67, 178-188, 2017.
- Mol, P.C.G.; Veríssimo, L.A.A.; Eller, M.R.; Minim, V.P.R.; Minim, L.A. Development of an affinity cryogel for one step purification of lysozyme from chicken egg white. *Journal of Chromatography B*, v.1044–1045, 17–23, 2017.