

Accepted Manuscript

Phenolic compounds recovered from agro-food by-products using membrane technologies: An overview

Roberto Castro-Muñoz, Jorge Yáñez-Fernández, Vlastimil Fíla

PII: S0308-8146(16)31052-4
DOI: <http://dx.doi.org/10.1016/j.foodchem.2016.07.030>
Reference: FOCH 19491

To appear in: *Food Chemistry*

Received Date: 21 December 2015
Revised Date: 26 May 2016
Accepted Date: 5 July 2016



Please cite this article as: Castro-Muñoz, R., Yáñez-Fernández, J., Fíla, V., Phenolic compounds recovered from agro-food by-products using membrane technologies: An overview, *Food Chemistry* (2016), doi: <http://dx.doi.org/10.1016/j.foodchem.2016.07.030>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

“Phenolic compounds recovered from agro-food by-products using membrane technologies: An overview”

Roberto Castro-Muñoz^{ab★}, Jorge Yáñez-Fernández^b, Vlastimil Fíla^a.

*CORRESPONDING AUTHOR

Affiliations:

^(a) University of Chemistry and Technology Prague

Technická 5, 166 28 Prague 6, Czech Republic.

Phone: +420 220 444 018.

E-mail: food.biotechnology88@gmail.com ; castromr@vscht.cz

^(b) Laboratorio de Biotecnología Alimentaria

Unidad Profesional Interdisciplinaria de Biotecnología, Instituto Politécnico Nacional.

Av. Acueducto S/N Col. Barrio La Laguna, Ticoman.

Mexico, D.F., CP 07340. Mexico

Phone: +52 55 57296300 ext. 56477

Abstract

Typically, the various agro-food by-products of the food industry are treated by standard membrane processes, such as microfiltration, ultrafiltration and nanofiltration, in order to prepare them for final disposal. Recently, however, new membrane technologies have been developed. The recovery, separation and fractionation of high-added-value compounds, such as phenolic compounds from food processing waste, are major current research challenges.

The goal of this paper is to provide a critical review of the main agro-food by-products treated by membrane technologies for the recovery of nutraceuticals. State-of-the-art of developments in the field are described. Particular attention is paid to experimental results reported for the recovery of polyphenols and their derivatives of different molecular weight. The literature data are analyzed and discussed in relation to separation processes, molecule properties, membrane characteristics and other interesting phenomena that occur during their recovery.

Keywords

High added value compounds; nutraceuticals; wastes; recovery; membrane technology.

Download English Version:

<https://daneshyari.com/en/article/7587096>

Download Persian Version:

<https://daneshyari.com/article/7587096>

[Daneshyari.com](https://daneshyari.com)