

CONDENSED TANNIN BIODEGRADATION AS TOOL FOR VALORIZATION OF TANNIN-RICH FRUIT WASTE

Cristóbal Noé Aguilar¹

¹Universidad Autónoma de Coahuila, Food Research Department, Mexico.

Fruits one of the most consumed and commercialized foods globally; it has a high nutritional content and exceptional organoleptic characteristics. Fruit wastes have high functional, nutritional, and biotechnological potential, as well as important biological properties. However, in some of them, the presence of tannins limits its use. Considering the chemical composition and the functional and biological properties, tannin-rich fruit waste represents a excellent raw material for several bioprocesses. The food losses and by-products of coffee cherry can be valued using environmentally friendly technologies such as enzymatic and microbial technologies to revalorise them, however, the presence of anti-physiological components (tannins and caffeine) represent a serious scientific and technological challenges to detoxify it. Recent research has focused on the study of reduction of such undesirable components. In this contribution, we describe some research efforts to do it, under the concept of circular economy, valorisation has a high potential for obtaining functional and nutritional compounds, as well as significant business opportunities. New research on tannin biodegradation may continue to value other chemical structures such as polysaccharides and lipids and identify the profiles of the available phytochemicals of different varieties.

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Presenting author's email: cristobal.aguilar@uadec.edu.mx