Impact of fermentation on plant secondary metabolites

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Chapter 1

Impact of fermentation on plant secondary metabolites: a review

Abstract

Plant secondary metabolites have historically been an important source of new pharmaceutical compounds, agrochemicals, flavor and fragrance ingredients, food additives, and pesticides. These compounds are very reactive to food processing treatments. Fermentation is an ancient technique of food processing and preservation. It is considered a simple, natural, and valuable biotechnological process for maintaining and/or improving the safety, nutritional, sensory and shelf-life properties of plant-food products. However, little is known the impact of fermentation on plant secondary metabolites. This chapter provides an updated overview and the most significant contributions regarding the work of fermentation effects on plant secondary metabolites and their related antioxidant activities. The plant secondary metabolites and their changing due to fermentation processes, in particular, lactic acid bacteria fermentation, are presented and discussed.

Keywords: *antioxidant activity, glucosinolates, phenolic compounds, flavonoids, flavonols, anthocyanins, betalains, and phenolic acids.*