UTILIZATION OF THE WINE INDUSTRY WASTES IN ORDER TO OBTAIN HIGH ADDED VALUE FOOD PRODUCTS AND INGREDIENTS

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The wine production results in a great amount of wastes, which are generally used as organic fertilizer or intended for animal feed. However, in recent years, these residues have been considered a cheap and abundant source of valuable phenolic compounds with recognized health benefits. In this sense, the extraction of phenolic compounds from grape pomace has been proposed as an alternative to obtain ingredients and products rich in bioactive compounds, with high added value. However, after the extraction of phenolic compounds, a large volume of solid waste still remains, which represents an economic and environmental problem. These residues contain a large amount of dietary fiber, which suggests that they can be useful as potential ingredients in the formulation of various types of food products. Dietary fiber has been highlighted by the benefits promoted to the maintenance, protection and recovery of human health, mainly related to the better functioning of the gastrointestinal tract. In addition to the grape pomace, seeds are also a waste with potential for exploitation, both because of their oil, rich in unsaturated fatty acids, as well as due to their fiber content. Therefore, considering the current growth of the wine industry sector in Brazil, this work aims to develop ingredients rich in fiber and/or phenolic compounds from the waste generated in the wine industry, as well as the application of these ingredients in the formulation of food products. More specifically, to obtain phenolic-rich extracts from the grape pomace using different extraction (alcoholic, enzymatic, assisted by ultrasound and by colloidal gas aphrom) and encapsulation (spray drying and ionic gelation) methods, to obtain soluble fiber-rich extracts by aqueous extraction of grape pomace and seed, to recover the grape seed oil by mechanical pressing, as well as to produce a “flour” directly from drying of the grape pomace.