



International Probiotics and Antimicrobial Proteins Conference

November 6-8, 2017 Barcelona, Spain

Wine Lees based Functional Beverage as a New Source of Probiotics with Possible *in situ* Oenological Valorising

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Food industry by-products represent important alternative sources of probiotics. Wine lees containing strains of *Saccharomyces cerevisiae*, are commonly used as probiotic supplements in animal feed and recently in human nutrition. They contain many proteins, carbohydrates and vitamin B complex. One of the most important probiotic properties of yeast is their capability to control the pathogenic microorganisms, by creating equilibrium in intestinal microflora. So, it is understandable the last decade trend to valorise this winery by-product into a functional value-added product. This study assessed the adaptation of wine yeast strains from wine lees to gastrointestinal conditions by using an emerging technique - encapsulation. The most frequent way wine lees are used is in solid functional products. We aimed both the valorising the wine lees into a novel functional beverage, and testing its probiotic effect into simulated gastrointestinal conditions. Three different testing variants were performed: encapsulation by spray-drying, lyophilized and raw material collected from the bottom of the tank, when fermentation process ended. Spray-drying and lyophilisation variants proved to be suitable for the probiotic protection, thus these technologies are widening the utilisation of winery valuable by-products in food industry.

Keywords: Wine lees, probiotic, functional beverage