

RESEARCHES REGARDING THE SUPERIOR VALORISATION OF BY-PRODUCTS FROM THE WINERY INDUSTRY, AND THE OBTAINING OF BAKERY PRODUCTS WITH FUNCTIONAL PROPERTIES

Liviu GACEU¹, Romulus GRUIA², Oana-Bianca OPREA³,

Abstract. *The paper presents in summary the great potential of the wine industry in Romania, as a supplier of by-products with special biochemical characteristics. From all of the by-products known, the most notable are the epicarp and grape seeds, which can be used directly in the bakery industry, and due to the high content of fiber, antioxidants and unsaturated fatty acids, represent a high functional potential. The undertaken studies aimed to introduce in the technological flow an optimal quantity of grape seed powder (GSP), respectively grape epicarp powder (GEP), in order to maximize the functional effect, and the sensory characteristics. For this purpose, the nutritional and rheological profile of mixtures of wheat flour and semi-degreased grape seeds and grape epicarp were first realized. Subsequently, the bakery products with additions of grape epicarp in a proportion of 5, 10, 12, 15% and respectively semi-degreased grape seeds in proportion of 3, 5, 7, 9% were made on an industrial technological flow. The obtained bakery products were analyzed from physical and sensorial point of view, the conclusions showing that the maximum percentage of by-products use is 12% for grape epicarp, and 7% for semi-degreased grape seeds respectively.*

Keywords: functional bakery products, grape seeds and epicarp

1. Introduction

1.1. The concept of functional food product

In the current socio-economic context, human nutrition leads to chronic imbalances characteristic of modern man, which is why healthy eating will become in the near future an important therapeutic means for maintaining or even regaining health. Nutritional improvements for a healthy diet have the effect of reducing the health costs that are today extremely expensive for chronic diseases caused mainly by unhealthy eating and sedentary lifestyle [10].

¹Prof., Eng. Hab. PhD. Transilvania University of Brasov, Faculty of Food and Tourism, Romania, Associate Member of the Academy of the Romanian Scientists, (e-mail: gaceul@unitbv.ro).

²Prof., Eng. PhD, Transilvania University of Brasov, Faculty of Food and Tourism, Romania, Corresponding Mmember of the Academy of the Romanian Scientists (e-mail: ecotec@unitbv.ro).

³PhD. Student, Transilvania University of Brasov, Faculty of Food and Tourism, Romania (e-mail: oprea.oana.bianca@unitbv.ro).