CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY

Journal home page: **http://chimie-biologie.ubm.ro/carpathian_journal/index.html**

DIFFERENCES OF THE PHYSICOCHEMICAL INDICATORS OF BEVERAGES WILD ELDERFLOWER (*SAMBUCUS NIGRA*) FROM TELEAJEN VALLEY, ROMANIA, ACCORDING TO THE USED TECHNOLOGY

Maria Lidia Iancu[1]

[1] *"Lucian Blaga" University of Sibiu, Faculty of Agricultural Sciences, Food Industry and Environmental Protection, 5-7, Ion Raţiu Street, Sibiu, 550012, Romania*
✉*maria.iancu@ulbsibiu.ro*

https://doi.org/10.34302/crpjfst/2020.12.3.16

Article history:
Received:
28 March 2020
Accepted:
25 August 2020

Keywords: *Romania, Juice elderflower, Wilde elder, Physico-chemical indicators, Compote technology.*

ABSTRACT

Elderflowers beverages have a hydrating effect and a chemical composition that influences the sensory characteristics and the values of the main quality indicators. This paper focused on evaluating the modifications of 15 physicochemical quality indicators for 4 samples, elderflower beverages, which differ from one another by the applied technology, the parameters of operations and processes and the recipe. Fresh elderflowers, water, sugar and lemon were used for preparing the samples which is the classic technology of making "*socata*" and an original combination of obtaining a new product, namely "*the elderflower compote*". The analysis methods used were quantitative methods for determining the reducing sugar, the volatile components which give the volatile acidity, the fixed acidity, the physical methods based on different principles and modern equipment. Changes in all the quality indicators were reported as follows: the production yield of the liquid fraction 90-98 w/w %, density 1.0343-1.0590 g/cm^3, the kinematic viscosity 1.30087-1.8390 m^{2}s^{-1}, content values of the total soluble solids (TSS) 9.5-15.4 ^{o}Brix, with a correlation coefficient below 50 %, depending on the used method. Total sugar/acid ratio is 47.74-140.85 and total sugar 10.2-14.96 %. The new product, the compote, has values of the indicators that fall within the range of the elderflower beverages. Thus, it is characterized by the highest value of the production yield 98 w/w %, of the TS/TA ratio (140.85), of the density 1.0590 g/cm^3, of the kinematic viscosity 1.83902 m^{2}s^{-1}, of the TSS = 15.4 ^{o}Brix, of the TS 14.96 % and the lowest of the SDR- 4.5 % (direct reducing sugars).