

Accepted Manuscript

Enrichment of white chocolate with blackberry juice encapsulate: Impact on physical properties, sensory characteristics and polyphenol content

Ivana Lončarević, Biljana Pajin, Aleksandar Fišteš, Vesna Tumbas Šaponjac, Jovana Petrović, Petar Jovanović, Jelena Vulić, Danica Zarić



PII: S0023-6438(18)30217-2

DOI: [10.1016/j.lwt.2018.03.002](https://doi.org/10.1016/j.lwt.2018.03.002)

Reference: YFSTL 6931

To appear in: *LWT - Food Science and Technology*

Received Date: 30 October 2017

Revised Date: 23 February 2018

Accepted Date: 1 March 2018

Please cite this article as: Lončarević, I., Pajin, B., Fišteš, A., Tumbas Šaponjac, V., Petrović, J., Jovanović, P., Vulić, J., Zarić, D., Enrichment of white chocolate with blackberry juice encapsulate: Impact on physical properties, sensory characteristics and polyphenol content, *LWT - Food Science and Technology* (2018), doi: 10.1016/j.lwt.2018.03.002.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1 **ENRICHMENT OF WHITE CHOCOLATE WITH BLACKBERRY JUICE ENCAPSULATE: IMPACT**
2 **ON PHYSICAL PROPERTIES, SENSORY CHARACTERISTICS AND POLYPHENOL CONTENT**

3 Ivana Lončarević^a, Biljana Pajin^a, Aleksandar Fišteš^a, Vesna Tumbas Šaponjac^a, Jovana Petrović^{a*}, Petar
4 Jovanović^{a,b}, Jelena Vulić^a, Danica Zarić^c

5 ^aFaculty of Technology, University of Novi Sad, Bulevar cara Lazara 1, 21000 Novi Sad, Serbia

6 ^bEugen Chocolate d.o.o., Veljka Vlahovića 109, 21412, Gložan, Serbia

7 ^cTHIS Techno Experts d.o.o., Research Development Center, 11000 Belgrade, Serbia

8
9 **Abstract**

10 White chocolate does not contain fat-free cocoa solids and thus lacks bioactive components. In the present study,
11 white chocolate was enriched with encapsulated blackberry juice in concentrations: 60 g kg⁻¹, 80 g kg⁻¹, and 100 g
12 kg⁻¹. The results showed an increase of volume weighted mean in enriched chocolates with increasing the
13 concentration of encapsulate from 13.06 μm in white chocolate to 18.05 μm in chocolate with 100 g kg⁻¹ of
14 encapsulate. Casson viscosity of chocolate mass increased at the same time (from 0.63 Pas in white chocolate to
15 1.22 Pas in chocolate with a maximum concentration of encapsulate) due to an increase of specific surfaces of solid
16 particles in chocolate. Internal structure and surface gloss in chocolate with 100 g kg⁻¹ of encapsulate are also
17 affected where the lack of free fat phase caused mat color on the surface. However, the addition of encapsulated
18 blackberry juice to white chocolate led to the creation of new type of enriched chocolate with attractive color and
19 blackberry taste. Total polyphenol content (mg GAE/100 g) of white chocolate is increased from 40.75 to 75.06,
20 145.86, and 153.95 in chocolates with 60 g kg⁻¹, 80 g kg⁻¹, and 100 g kg⁻¹ of encapsulate, respectively.

21 **Keywords:** white chocolate, blackberry juice encapsulate, physical properties, sensory characteristics, polyphenol
22 content

23 **Introduction**

Corresponding author: Jovana Petrović, Faculty of Technology, Carbohydrate Food Engineering, University of Novi Sad, Bul. cara Lazara 1, 21000 Novi Sad, Serbia.

e-mail addresses: ivana.radujko@tf.uns.ac.rs (I. Lončarević); pajinb@tf.uns.ac.rs (B. Pajin); fistes@uns.ac.rs (A. Fišteš); vesnat@uns.ac.rs (V. Tumbas Šaponjac); jovana@tf.uns.ac.rs (J. Petrović); petar.jovanovic@eugenchocolate.com (P. Jovanović); jvulic@uns.ac.rs (J. Vulić); danica.zaric@ihis-nutricionizam.rs (D. Zarić).

Download English Version:

<https://daneshyari.com/en/article/8891359>

Download Persian Version:

<https://daneshyari.com/article/8891359>

[Daneshyari.com](https://daneshyari.com)