

Accepted Manuscript

Berry press residues as a valuable source of polyphenolics: Extraction optimisation and analysis

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PII: S0023-6438(18)30327-X

DOI: [10.1016/j.lwt.2018.04.021](https://doi.org/10.1016/j.lwt.2018.04.021)

Reference: YFSTL 7032

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

Received Date: 16 November 2017

Revised Date: 8 February 2018

Accepted Date: 7 April 2018

Please cite this article as: Klavins, L., Kviesis, J., Nakurte, I., Klavins, M., Berry press residues as a valuable source of polyphenolics: Extraction optimisation and analysis, *LWT - Food Science and Technology* (2018), doi: 10.1016/j.lwt.2018.04.021.

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1 **BERRY PRESS RESIDUES AS A VALUABLE SOURCE OF POLYPHENOLICS: EXTRACTION**
2 **OPTIMISATION AND ANALYSIS**

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8 Abstract

9 *Vaccinium* genus berries (bilberries, blueberries, lingonberries, cranberries) are gathered in
10 the wild as well as cultivated on an industrial scale for use in the food industry. Extraction of
11 juices from these berries produces press residues (pomace) as a waste product. Berry press
12 residues are an excellent source of phenolic compounds and have a potential of use as a
13 polyphenol-rich material. The aim of the present study was to optimise the method of
14 extraction of polyphenols (anthocyanins specifically) from berry press residues of American
15 cranberry using the response surface method and to validate the optimal
16 polyphenol/anthocyanin extraction conditions also for other *Vaccinium* berries and their
17 press residues. Comparison of whole berry and berry press residue extracts helps to
18 determine the potential berry source materials for further processing and production of
19 products with high antioxidant levels. The composition of anthocyanins was determined in
20 five different berry species of the *Vaccinium* genus (whole berries and press residues), the

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