

Accepted Manuscript

Improving microbiological safety and quality characteristics of wheat and barley by high voltage atmospheric cold plasma closed processing

Agata Los, Dana Ziuzina, Simen Akkermans, Daniela Boehm, Patrick J. Cullen, Jan Van Impe, Paula Bourke

PII: S0963-9969(18)30009-7
DOI: <https://doi.org/10.1016/j.foodres.2018.01.009>
Reference: FRIN 7297
To appear in: *Food Research International*
Received date: 3 August 2017
Revised date: 1 December 2017
Accepted date: 7 January 2018

Please cite this article as: Agata Los, Dana Ziuzina, Simen Akkermans, Daniela Boehm, Patrick J. Cullen, Jan Van Impe, Paula Bourke, Improving microbiological safety and quality characteristics of wheat and barley by high voltage atmospheric cold plasma closed processing. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. *Food Res Int* (2017), <https://doi.org/10.1016/j.foodres.2018.01.009>

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.



Improving microbiological safety and quality characteristics of wheat and barley by high voltage atmospheric cold plasma closed processing

Agata Los^a, Dana Ziuzina^a, Simen Akkermans^b, Daniela Boehm^a, Patrick J. Cullen^{a,c}, Jan Van Impe^b, Paula Bourke^{a*}

^a *Plasma Research Group, School of Food Science and Environmental Health, Dublin Institute of Technology, Dublin 1, Ireland*

^b *Chemical and Biochemical Process Technology and Control (BioTeC), Department of Chemical Engineering, KU Leuven, Ghent, Belgium*

^c *Department of Chemical and Environmental Engineering, University of Nottingham, Nottingham, NG7 2RD*

*Corresponding author:

Dr. Paula Bourke
Tel: +353 1 402 7594
Fax: +353 1 878 8978
E-mail: paula.bourke@dit.ie

Abstract

Contamination of cereal grains as a key global food resource with insects or microorganisms is a persistent concern for the grain industry due to irreversible damage to quality and safety characteristics and economic losses. Atmospheric cold plasma presents an alternative to conventional grain decontamination methods owing to the high antimicrobial potential of reactive species generated during the treatment, but effects against product specific microflora are required to understand how to optimally develop this approach for grains. This work investigated the influence of ACP processing parameters for both cereal grain decontamination and grain quality as important criteria for grain or seed use. A high voltage

Download English Version:

<https://daneshyari.com/en/article/8889454>

Download Persian Version:

<https://daneshyari.com/article/8889454>

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