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Authors: S. Reyniers, N. De Brier, S. Matthijs, K. Brijs, J.A. Delcour

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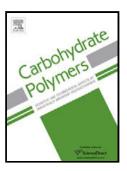
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ACCEPTED MANUSCRIPT

Impact of physical and enzymatic cell wall opening on the release of pre-gelatinized starch and viscosity forming potential of potato flakes

S. Reyniers^{1,*}, N. De Brier¹, S. Matthijs², K. Brijs¹ and J. A. Delcour¹

¹Laboratory of Food Chemistry and Biochemistry, and Leuven Food Science and Nutrition Research Centre (LFoRCe), KU Leuven, Kasteelpark Arenberg 20, B-3001 Leuven, Belgium.

²Kellogg Company, Bio-Incubator 2, Gaston Geenslaan 2, B-3001 Leuven, Belgium.

E-mail addresses: stijn.reyniers@kuleuven.be (S. Reyniers), niels.debrier@kuleuven.be (N. De Brier), stefaan.matthijs@kellogg.com (S. Matthijs), kristof.brijs@kuleuven.be (K. Brijs), jan.delcour@kuleuven.be (J.A. Delcour).

*Corresponding author. Phone: (+32)-16-374237. Fax: (+32)-16-321997.

Highlights

- Potato flakes (PFs) are used as ingredient in different food systems.
- Swelling power and mean particle size determine PF instant viscosity development.
- Short extracellular amylose molecules improve PF gelation upon cooling.
- Physical or enzymatic cell wall opening enhance PF swelling and release of starch.
- Cell wall opening improves the PF instant viscosity development and gelation.

ABSTRACT

Potato flakes (PFs) are used in instant foods. They contain pre-gelatinized starch which readily develops viscosity upon hydration. We here provide the first report on factors influencing their viscosifying potential. Swelling power (SP) (r = 0.719, p < 0.01) and mean particle size (r = -

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