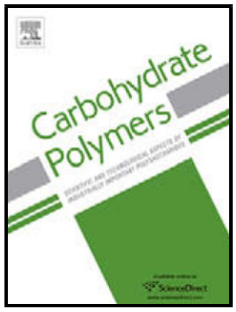

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Impact of physical and enzymatic cell wall opening on the release of pre-gelatinized starch and viscosity forming potential of potato flakes

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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 ($r = -$