Accepted Manuscript

Title: Inhibition of gelatinized rice starch retrogradation by rice bran protein hydrolysates

Authors: Liya Niu, Leiyan Wu, Jianhui Xiao

PII: S0144-8617(17)30846-9

DOI: http://dx.doi.org/doi:10.1016/j.carbpol.2017.07.070

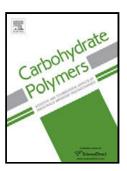
Reference: CARP 12587

To appear in:

Received date: 12-5-2017 Revised date: 17-7-2017 Accepted date: 24-7-2017

Please cite this article as: Niu, Liya., Wu, Leiyan., & Xiao, Jianhui., Inhibition of gelatinized rice starch retrogradation by rice bran protein hydrolysates. *Carbohydrate Polymers* http://dx.doi.org/10.1016/j.carbpol.2017.07.070

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.



Inhibition of gelatinized rice starch retrogradation by rice bran

protein hydrolysates

Liya Niu, Leiyan Wu and Jianhui Xiao*,a, b

^aSchool of Food Science and Engineering, Jiangxi Agricultural University, 1101 Zhimin Road,

Nanchang 330045, P.R. China

^bKey Laboratory of Crop Physiology, Ecology and Genetic Breeding, Ministry of Education,

Jiangxi Agricultural University, Nanchang, China

*Corresponding author: xiaojh666666@126.com

Telephone: +86-15083838985

Highlights

Protamex-hydrolyzed rice bran protein at 1 h (PRBPH-1) was released.

PRBPH-1 reduced significantly the short- and long-term retrogradation of gelatinized

rice starch.

The relative crystallinity of retrograded RS declined with the addition of PRBPH-1 in

DSC and XRD.

Formation of intra- and inter-particle hydrogen bonds and recrystallization were

weakened by PRBPH-1.

Abstract

The retrogradation of gelatinized rice starch (GRS) during the shelf life of a product is

1

Download English Version:

https://daneshyari.com/en/article/5156623

Download Persian Version:

https://daneshyari.com/article/5156623

Daneshyari.com