

## Accepted Manuscript

Title: Characterization of amylose nanoparticles prepared via nanoprecipitation: Influence of chain length distribution

Authors: Yanjiao Chang, Jingde Yang, Lili Ren, Jiang Zhou

PII: S0144-8617(18)30368-0

DOI: <https://doi.org/10.1016/j.carbpol.2018.03.104>

Reference: CARP 13454



To appear in:

Received date: 28-12-2017

Revised date: 28-3-2018

Accepted date: 31-3-2018

Please cite this article as: Chang, Yanjiao., Yang, Jingde., Ren, Lili., & Zhou, Jiang., Characterization of amylose nanoparticles prepared via nanoprecipitation: Influence of chain length distribution. *Carbohydrate Polymers* <https://doi.org/10.1016/j.carbpol.2018.03.104>

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.

# Characterization of amylose nanoparticles prepared via nanoprecipitation: Influence of chain length distribution

Yanjiao Chang, Jingde Yang, Lili Ren, Jiang Zhou\*

Key Laboratory of Bionic Engineering (Ministry of Education), College of Biological and Agricultural Engineering, Jilin University, Changchun 130022, China

\*Corresponding Author: Tel.: +86 431 85095760 ext.414; Fax: +86 431 85095760 ext.888.

E-mail: jiang.zhou@jlu.edu.cn (J. Zhou)

## Abstract

The influence of chain length distribution of amylose on size and structure of the amylose nanoparticles (ANPs) prepared through nanoprecipitation was investigated. Amylose with different chain length distributions was obtained by  $\beta$ -amylase treating amylose paste for different times and measured by size exclusion chromatography (SEC) and fluorophore-assisted carbohydrate electrophoresis (FACE). ANPs prepared via precipitation were characterized by using dynamic light scattering (DLS), scanning electron microscopy (SEM) and X-ray diffraction (XRD). Results showed that the  $\beta$ -amylase treatments led to decrease in chain length of amylose, and it was

Download English Version:

<https://daneshyari.com/en/article/7782253>

Download Persian Version:

<https://daneshyari.com/article/7782253>

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