## Accepted Manuscript

Title: Structural and physicochemical changes in guar gum by alcohol–acid treatment

Authors: Dandan Li, Na Yang, Yao Zhang, Lunan Guo,

Shangyuan Sang, Zhengyu Jin, Xueming Xu

PII: S0144-8617(17)31090-1

DOI: http://dx.doi.org/10.1016/j.carbpol.2017.09.057

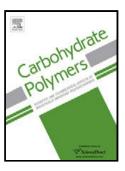
Reference: CARP 12802

To appear in:

Received date: 28-2-2017 Revised date: 12-9-2017 Accepted date: 15-9-2017

Please cite this article as: Li, Dandan., Yang, Na., Zhang, Yao., Guo, Lunan., Sang, Shangyuan., Jin, Zhengyu., & Xu, Xueming., Structural and physicochemical changes in guar gum by alcohol–acid treatment. *Carbohydrate Polymers* http://dx.doi.org/10.1016/j.carbpol.2017.09.057

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.



### ACCEPTED MANUSCRIPT

#### Structural and physicochemical changes in guar gum by alcohol-acid treatment

Dandan Li <sup>1,2</sup>, Na Yang <sup>1,2</sup>, Yao Zhang <sup>1,2</sup>, Lunan Guo <sup>1,2</sup>, Shangyuan Sang <sup>1,2</sup>, Zhengyu Jin <sup>1,2</sup>,

<sup>3</sup>, Xueming Xu <sup>1, 2, 3\*</sup>

<sup>1</sup> State Key laboratory of Food Science and Technology, Jiangnan University, Wuxi 214122,

Jiangsu Province, China

<sup>2</sup> School of Food Science and Technology, Jiangnan University, Wuxi 214122, Jiangsu

Province, China

<sup>3</sup> Synergetic Innovation Center of Food Safety and Nutrition, Jiangnan University, Wuxi

214122, China

\*Corresponding author

Xueming Xu

Tel./Fax: +86-510-85917100

E-mail address: xmxu@jiangnan.edu.cn

#### Highlights

- Alcohol-acid treatment could degrade guar gum in large quantities
- Alcohol-acid degradation of guar gum followed first-order kinetics
- Increase in the number of alcohol carbon atom and acid content enhanced degradation
- Alcohol-acid degradation had no significant effect on guar structure
- Degraded guar had decreased viscosity, reduced thermo-stability, and browned color

#### Download English Version:

# https://daneshyari.com/en/article/5156388

Download Persian Version:

https://daneshyari.com/article/5156388

<u>Daneshyari.com</u>