

## Accepted Manuscript

Title: The enhanced inhibition of water extract of black tea under baking treatment on  $\alpha$ -amylase and  $\alpha$ -glucosidase

Authors: Da-Peng Tong, Ke-Xue Zhu, Xiao-Na Guo, Wei Peng, Hui-Ming Zhou



PII: S0141-8130(17)30206-4  
DOI: <http://dx.doi.org/10.1016/j.ijbiomac.2017.08.152>  
Reference: BIOMAC 8145

To appear in: *International Journal of Biological Macromolecules*

Received date: 15-1-2017  
Revised date: 27-8-2017  
Accepted date: 28-8-2017

Please cite this article as: Da-Peng Tong, Ke-Xue Zhu, Xiao-Na Guo, Wei Peng, Hui-Ming Zhou, The enhanced inhibition of water extract of black tea under baking treatment on  $\alpha$ -amylase and  $\alpha$ -glucosidase, *International Journal of Biological Macromolecules* <http://dx.doi.org/10.1016/j.ijbiomac.2017.08.152>

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.

**The enhanced inhibition of water extract of black tea under baking treatment on  $\alpha$ -amylase and  $\alpha$ -glucosidase**

Da-Peng Tong<sup>a,b</sup>, Ke-Xue Zhu<sup>a,b</sup>, Xiao-Na Guo<sup>a,b</sup>, Wei Peng<sup>a,b</sup>, Hui-Ming Zhou<sup>a,b\*</sup>

a. State Key Laboratory of Food Science and Technology, Jiangnan University, Wuxi 214122, Jiangsu Province, People's Republic of China

b. School of Food Science and Technology, Jiangnan University, Wuxi 214122, Jiangsu Province, People's Republic of China

\* Corresponding author

Hui-Ming Zhou

Address: School of Food Science and Technology, Jiangnan University, 1800 Lihu Avenue, Wuxi 214122, Jiangsu Province, People's Republic of China. Tel: +86 510 85809610; Fax: +86 510 85809610. E-mail: hmzhou@jiangnan.edu.cn

**Highlights**

- Baking enhanced the ability of black tea extract inhibiting  $\alpha$ -amylase activity
- Baking enhanced the ability of black tea extract inhibiting  $\alpha$ -glucosidase activity
- Thermal process increased the content of tea polyphenols with low polarity
- Baking reinforced the interaction between black tea extract and tryptophan residues
- Water extract of black tea further increased the  $\alpha$ -helix content of  $\alpha$ -amylase

**Abstract**

This paper studied the inhibition of water extract of natural or baked black tea on

Download English Version:

<https://daneshyari.com/en/article/8328788>

Download Persian Version:

<https://daneshyari.com/article/8328788>

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