

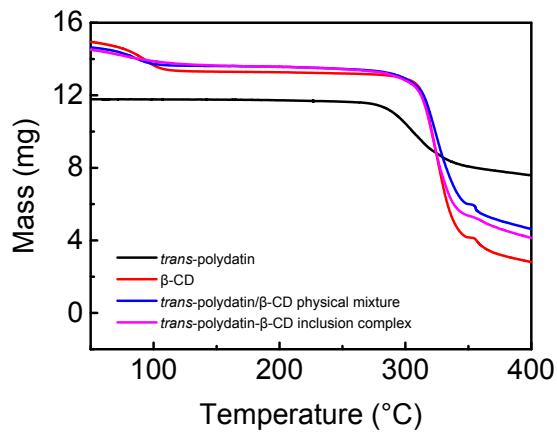
## Supplementary Data

### Photostability and antioxidant activities studies on the inclusion complexes of *trans*-polydatin with $\beta$ -cyclodextrin and derivatives

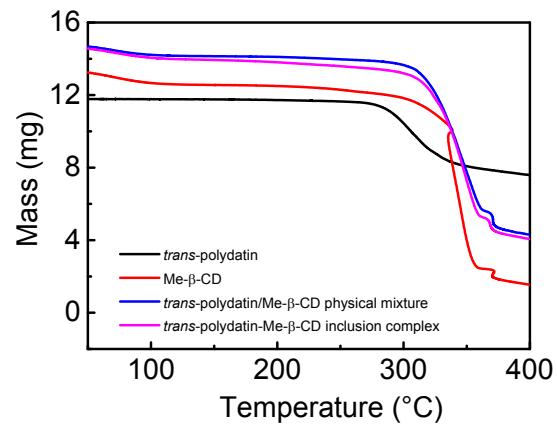
Shujing Li<sup>1, 2, \*</sup>, Li Yuan<sup>1, 2</sup>, Bing Zhang<sup>3, \*</sup>, Wei Zhou<sup>1, 2</sup>, Xinrui Wang<sup>1, 2</sup>, Dongsheng Bai<sup>1, 2</sup>

1. Beijing Advanced Innovation Center for Food Nutrition and Human Health, Beijing Technology and Business University, Beijing 100048, PR China;
2. Department of Chemistry, School of Science, Beijing Technology and Business University, Beijing 100048, China;
3. Technical Institute of Physics and Chemistry, Chinese Academy of Science, Beijing 100190, PR China.

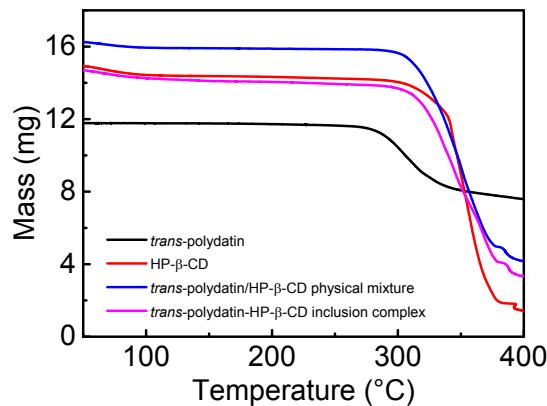
\*Corresponding author, E-mail: [lishujing@th.btbu.edu.cn](mailto:lishujing@th.btbu.edu.cn), [zhangbing@mail.ipc.ac.cn](mailto:zhangbing@mail.ipc.ac.cn)



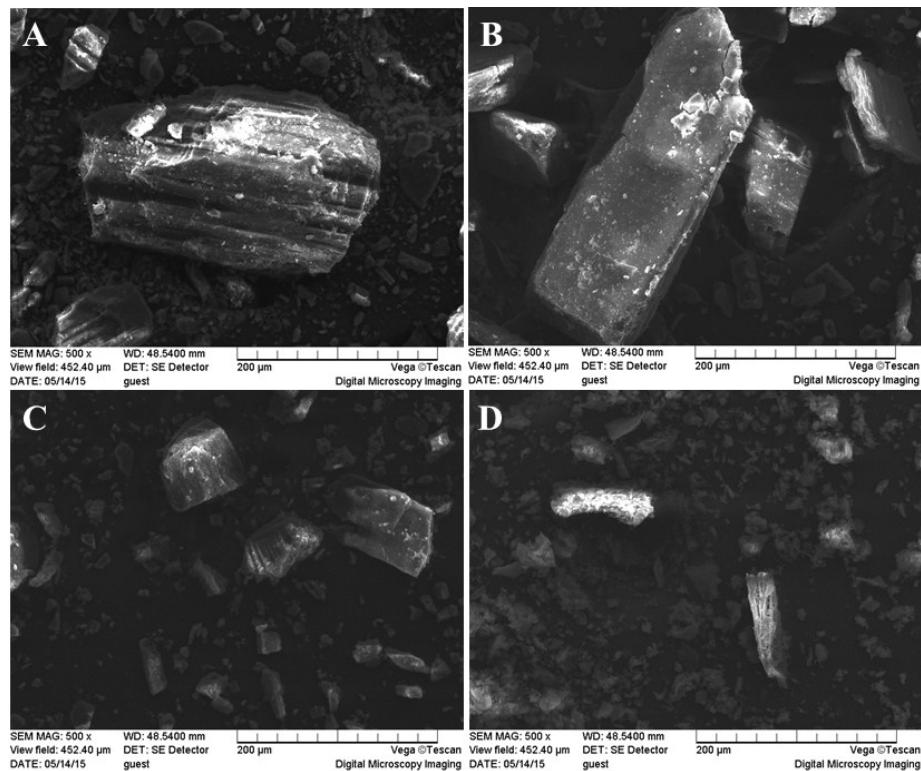
**Figure S1** TG curve of *trans*-polydatin, β-CD, *trans*-polydatin and β-CD physical mixture, and *trans*-polydatin-β-CD inclusion complex



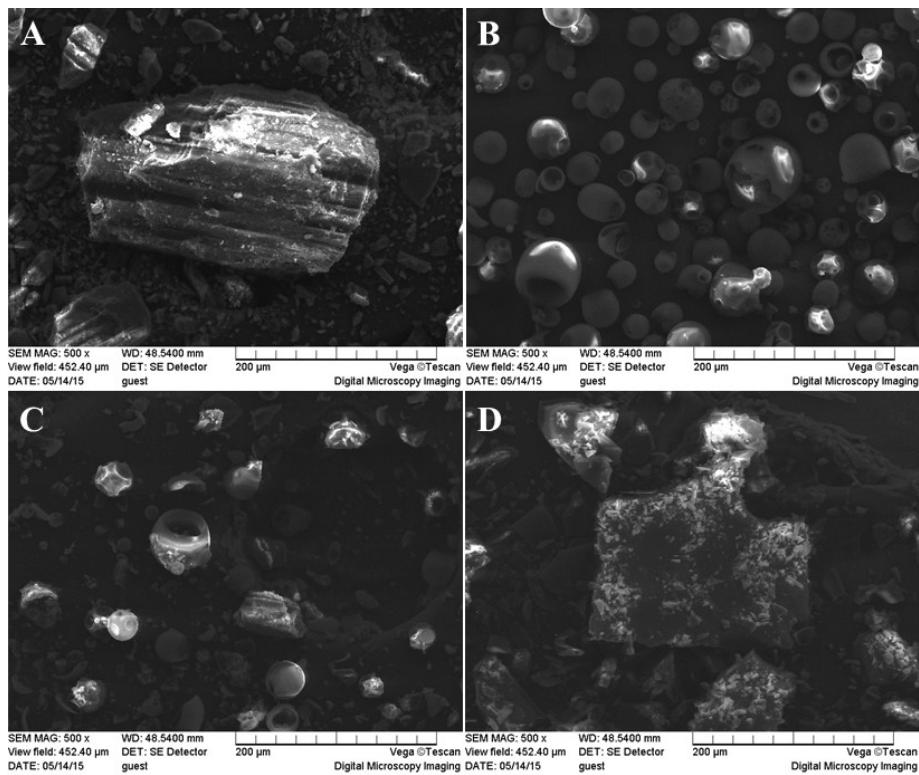
**Figure S2** TG curve of *trans*-polydatin, Me-β-CD, *trans*-polydatin and Me-β-CD physical mixture, and *trans*-polydatin-Me-β-CD inclusion complex



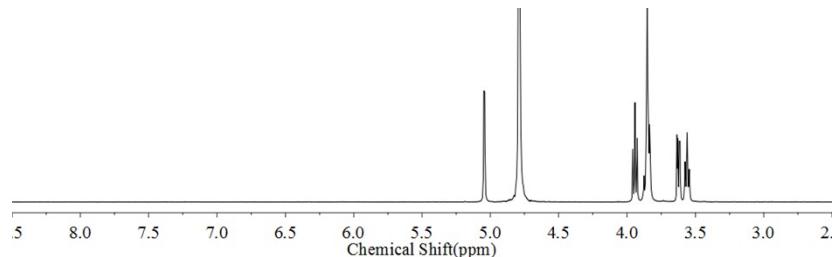
**Figure S3** TG curve of *trans*-polydatin, HP- $\beta$ -CD, *trans*-polydatin and HP- $\beta$ -CD physical mixture, *trans*-polydatin-HP- $\beta$ -CD inclusion complex



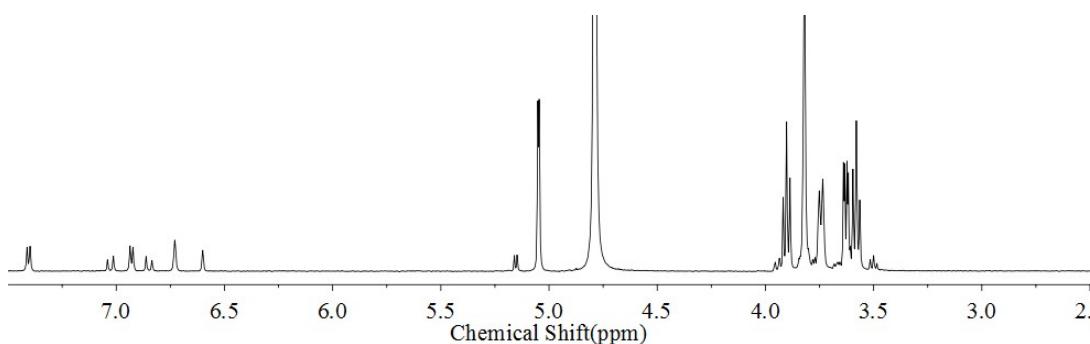
**Figure S4** Scanning electron microphotographs: (A) *trans*-polydatin, (B)  $\beta$ -CD, (C) *trans*-polydatin and  $\beta$ -CD physical mixture, (D) *trans*-polydatin- $\beta$ -CD inclusion complex



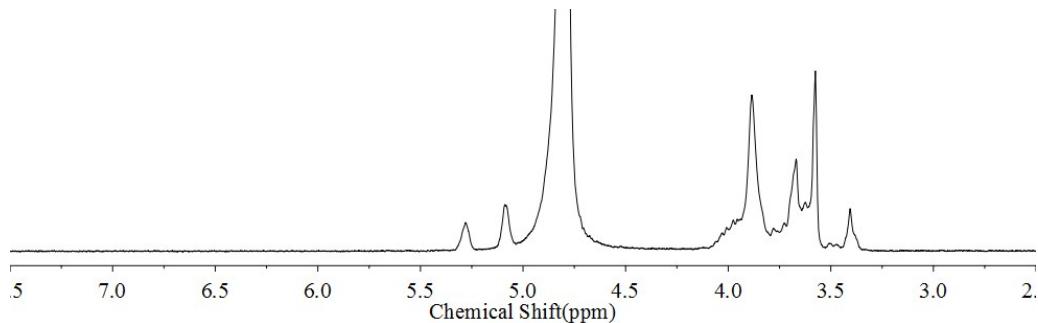
**Figure S5** Scanning electron microphotographs: (A) polydatin, (B) Me- $\beta$ -CD, (C) polydatin and Me- $\beta$ -CD physical mixture, (D) polydatin-Me- $\beta$ -CD inclusion complex



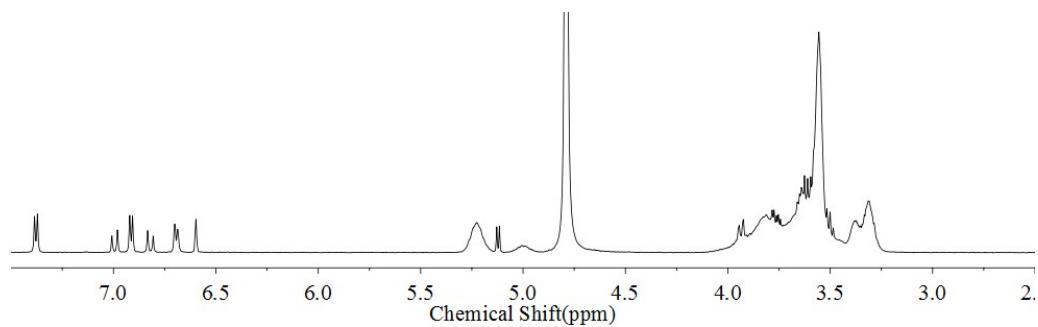
**Figure S6**  $^1\text{H}$  NMR spectra of  $\beta$ -CD in  $\text{D}_2\text{O}$  at  $25^\circ\text{C}$



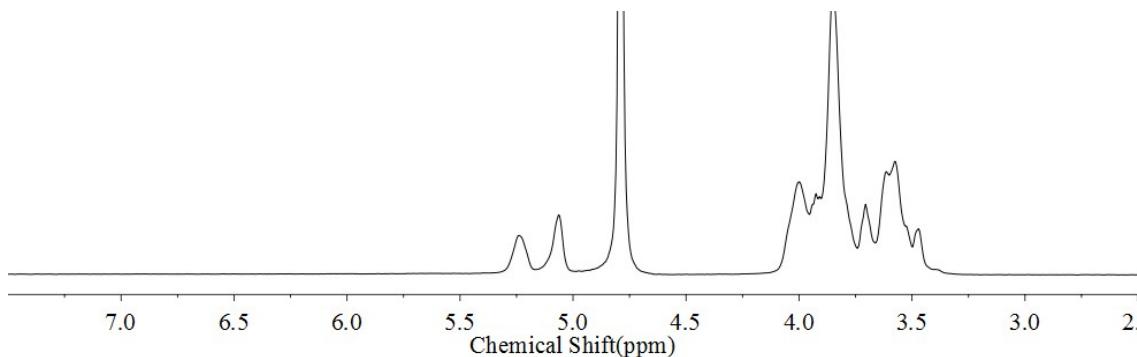
**Figure S7**  $^1\text{H}$  NMR spectra of *trans*-polydatin- $\beta$ -CD inclusion complex in  $\text{D}_2\text{O}$  at  $25^\circ\text{C}$



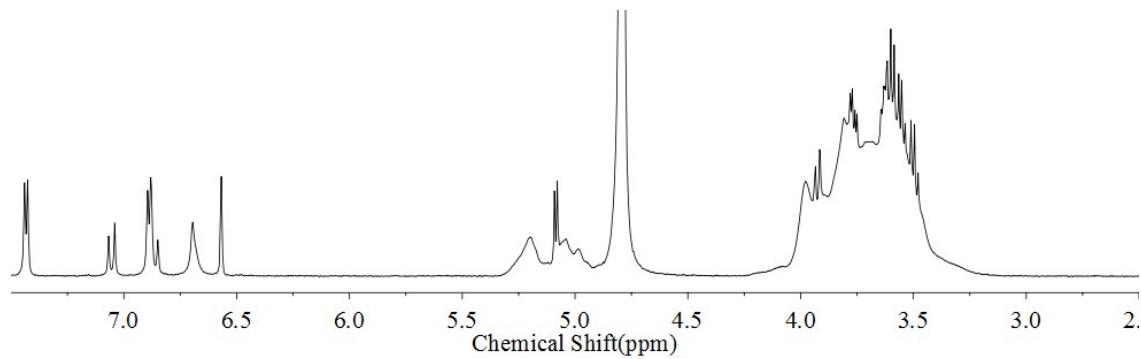
**Figure S8** <sup>1</sup>H NMR spectra of Me- $\beta$ -CD in  $D_2O$  at 25 °C



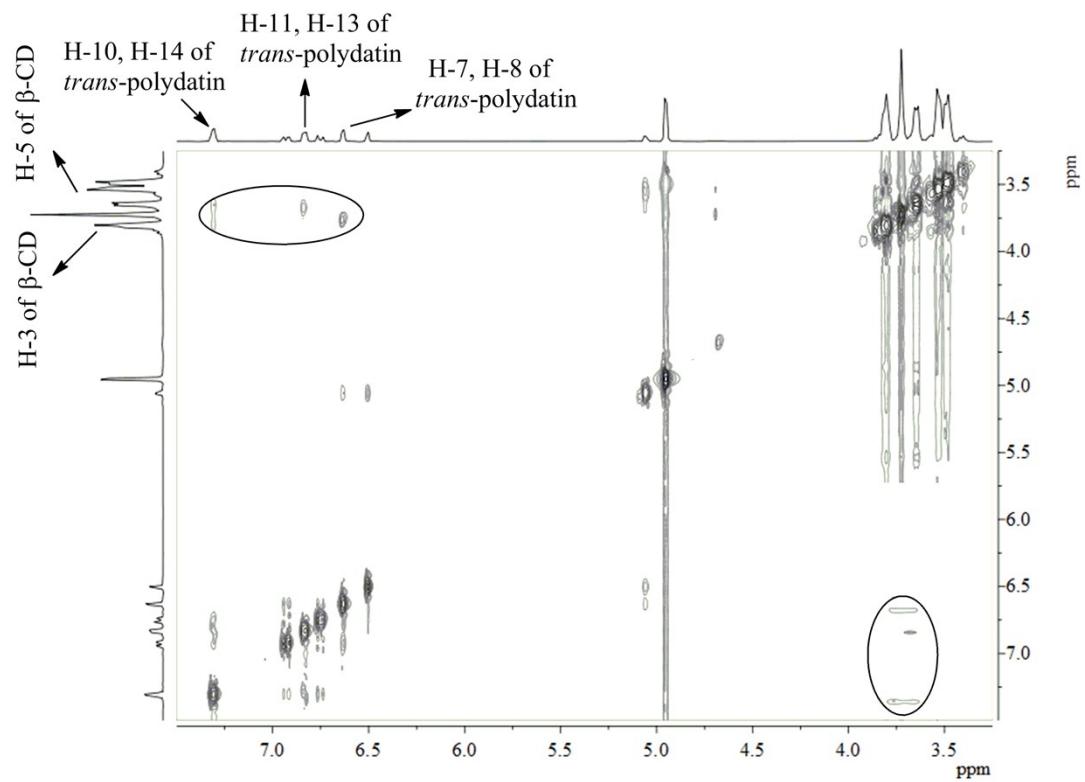
**Figure S9** <sup>1</sup>H NMR spectra of *trans*-polydatin-Me- $\beta$ -CD inclusion complex in  $D_2O$  at 25 °C



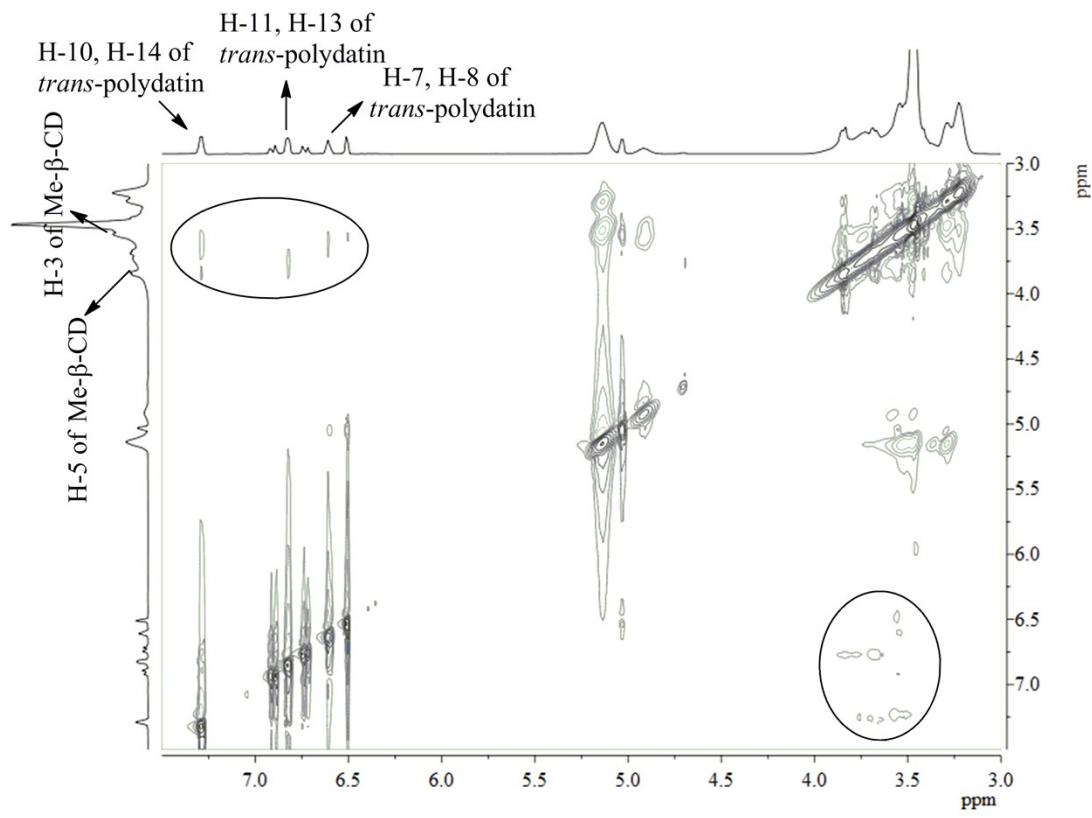
**Figure S10** <sup>1</sup>H NMR spectra of HP- $\beta$ -CD in  $D_2O$  at 25 °C



**Figure S11**  $^1\text{H}$  NMR spectra of *trans*-polydatin-HP- $\beta$ -CD inclusion complex in  $\text{D}_2\text{O}$  at 25 °C



**Figure S12** ROESY spectrum of the *trans*-polydatin- $\beta$ -CD inclusion complex in  $\text{D}_2\text{O}$  at 25 °C



**Figure S13** ROESY spectrum of the *trans*-polydatin-Me- $\beta$ -CD inclusion complex in  $D_2O$  at 25 °C