

Electronic Supplementary Information

Nanocarrier-pesticide delivery system with promising benefits in a case of dinotefuran: strikingly enhanced bioactivity and reduced pesticide residue

Qinhong Jiang,^a Yonghui Xie,^b Min Peng,^c Zhijiang Wang,^b Tianjiao Li,^d Meizhen Yin,^c Jie Shen,^{*a} and
Shuo Yan^{*a}

^a *Department of Plant Biosecurity and MOA Key Laboratory of Pest Monitoring and Green Management,
College of Plant Protection, China Agricultural University, Beijing 100193, P.R. China*

^b *Kunming Branch of Yunnan Provincial Tobacco Company, Kunming 650051, P.R. China*

^c *State Key Laboratory of Chemical Resource Engineering, Beijing Lab of Biomedical Materials, Beijing
University of Chemical Technology, Beijing 100029, P.R. China*

^d *National Agricultural Technology Extension and Service Center, Beijing 100125, P.R. China*

^{*} *Corresponding author. E-mail address: yanshuo2011@foxmail.com or shenjie@cau.edu.cn*

Qinhong Jiang and Yonghui Xie have contributed equally to this work

Fig. S1 Loading capacity of SPc toward dinotefuran. (A) Absorbance spectrum of dinotefuran with various concentrations, which was repeated 3 times. (B) Standard calibration curve of dinotefuran. (C) Absorbance spectrum of dinotefuran/SPc complex and SPc.

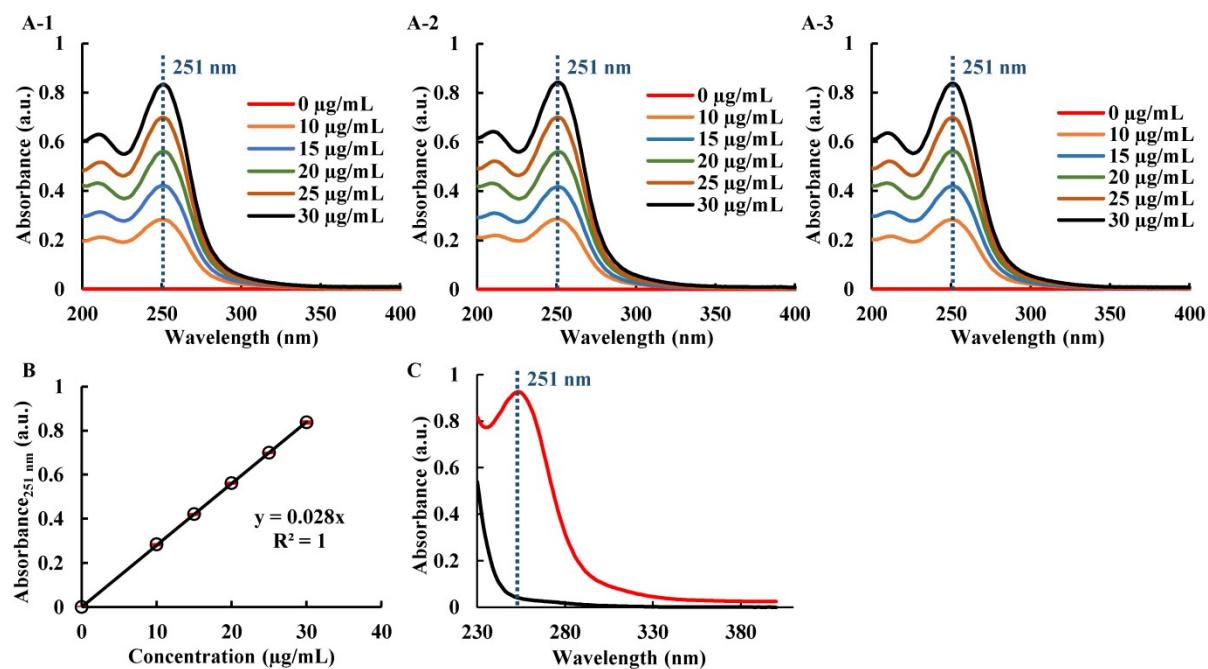


Fig. S2 ITC titration of SPc into dinotefuran solution for three times.

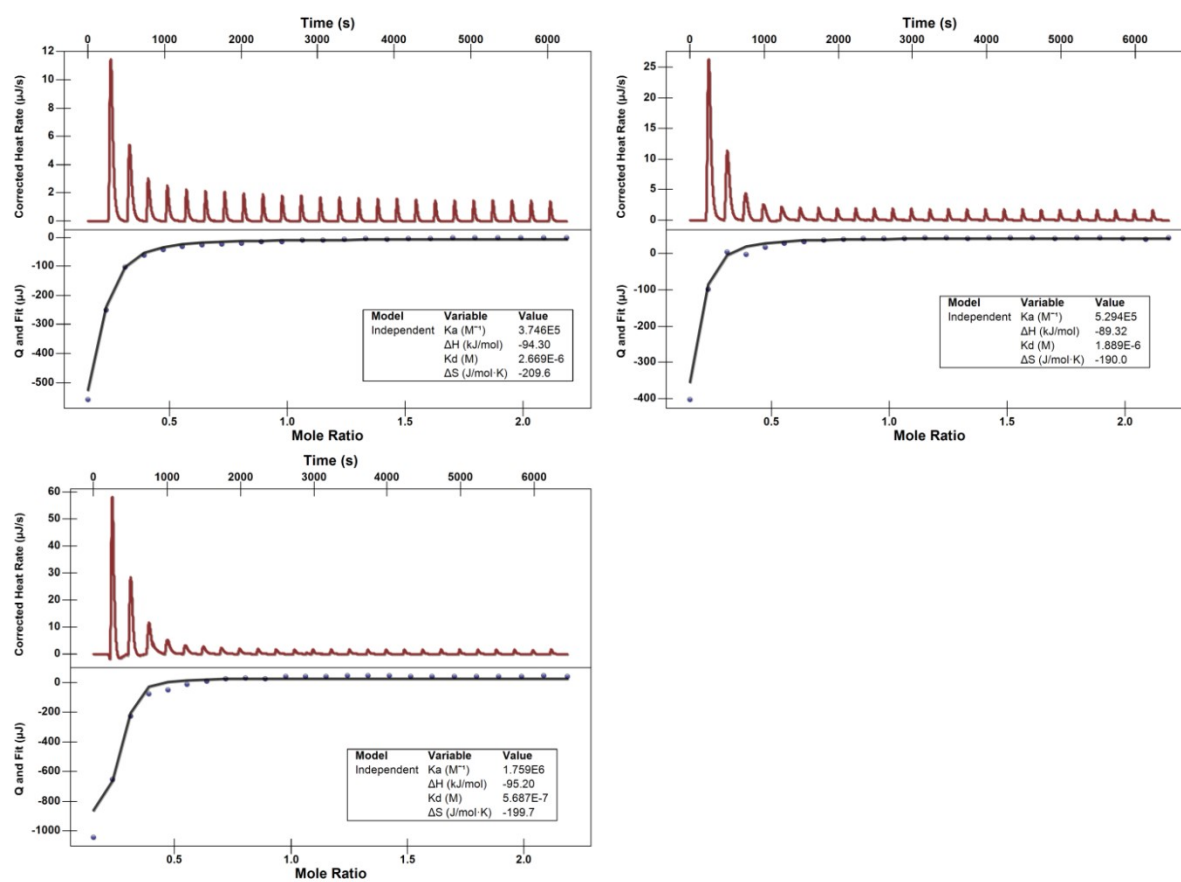


Fig. S3 Standard calibration curve of dinotefuran for liquid chromatography-tandem mass spectrometry.

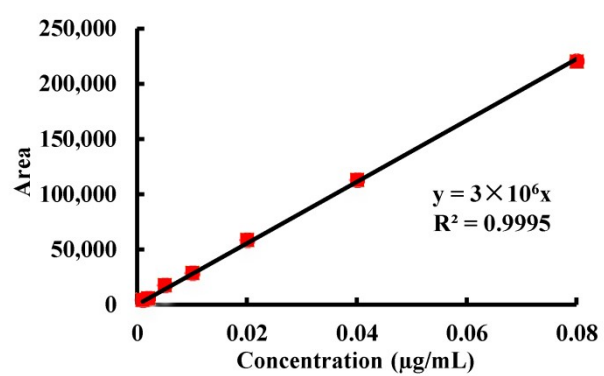


Fig. S4 Original spectrum of liquid chromatography-tandem mass spectrometry data for determining dinotefuran content in oilseed rapese at 6 (A) and 12 h (B) after the treatment.

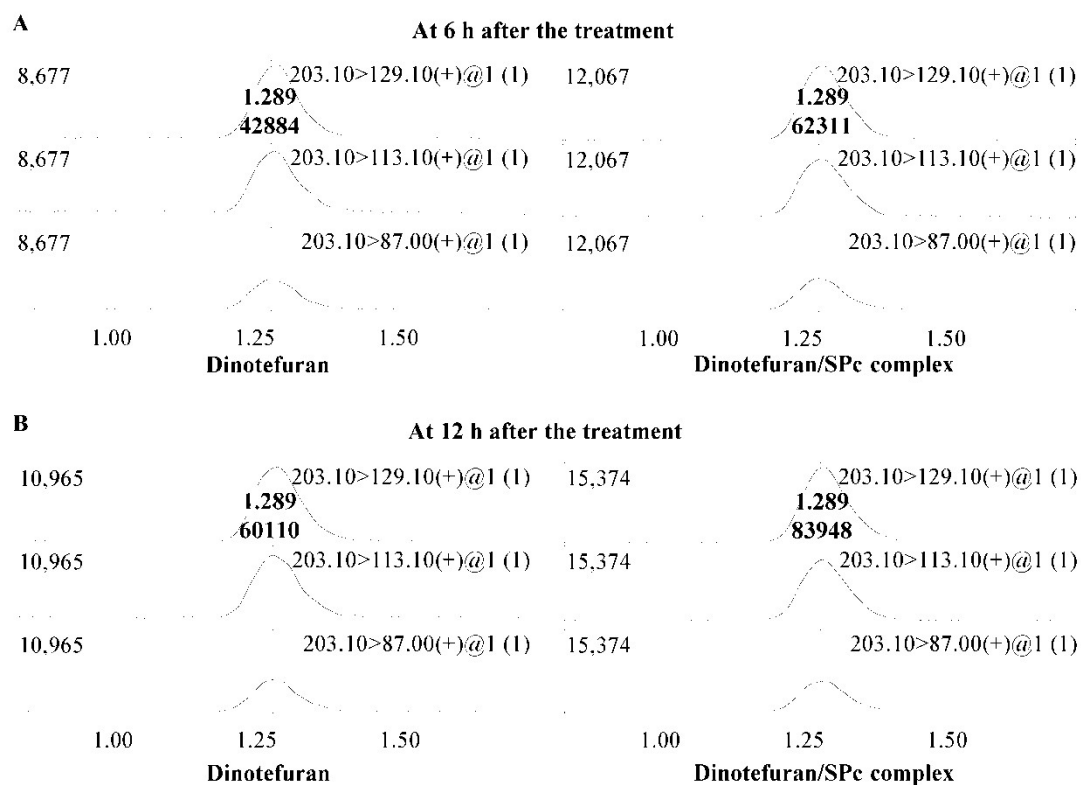


Fig. S5 Original spectrum of liquid chromatography-tandem mass spectrometry data for determining dinotefuran residue in oilseed rapes on 3 (A), 5 (B) and 7 d (C) after the treatment.

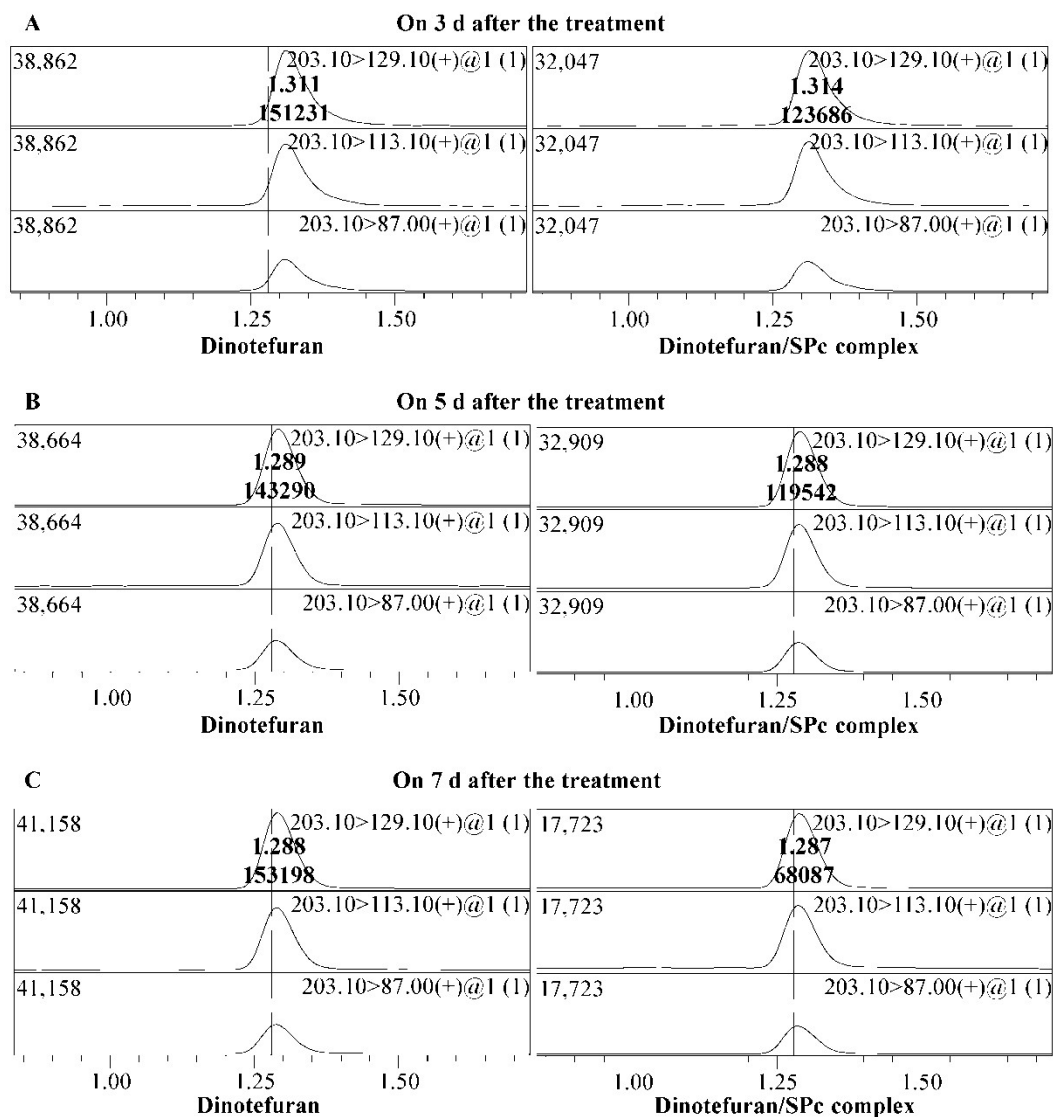


Fig. S6 Effects of dinotefuran/SPc complex on agronomic traits of oilseed rapes on 7 d after the treatment.

Each treatment contained 4 oilseed rapes, which was repeated 4 times. The “ns” indicates no significant difference according to the independent *t* test ($P > 0.05$).

