

**Supplementary Material for**  
**Establishment of a QuEChERS-UPLC-MS/MS method for**  
**simultaneously detecting tolfenpyrad and its metabolites in tea**

Zihan Wang <sup>1,#</sup>, Xinru Wang<sup>1,2,#</sup>, Min Wang <sup>1,3</sup>, Ziqiang Li <sup>1,4</sup>, Xinzhang Zhang <sup>1,2</sup>, Li Zhou <sup>1,2</sup>, Hezhi Sun <sup>1,2</sup>, Mei Yang <sup>1,2</sup>, Zhengyun Lou <sup>1,2</sup>, Zongmao Chen <sup>1,2</sup>, Fengjian Luo<sup>1,2,\*</sup>

1 c, Hangzhou 310008, China

2 Key Laboratory of Biology, Genetics and Breeding of Special Economic Animals and Plants,  
Ministry of Agriculture and Rural Affairs, Hangzhou 310008, China

3 College of Horticulture and Landscape, Tianjin Agricultural University, Tianjin 300384, China

4 College of plant protection, Jilin Agricultural University, Jilin 130000, China

# Both Zihan Wang and Xinru Wang are co-first author.

\* Corresponding author

E-mail address: lfj@tricaas.com (Fengjian Luo);

Mei-Ling South Road, Hangzhou 310008

Fax: +86 571 86650331

Tel: +86 571 86650624

**Captions:**

**Figure S1** The response of TFP and its metabolites under different cone voltages

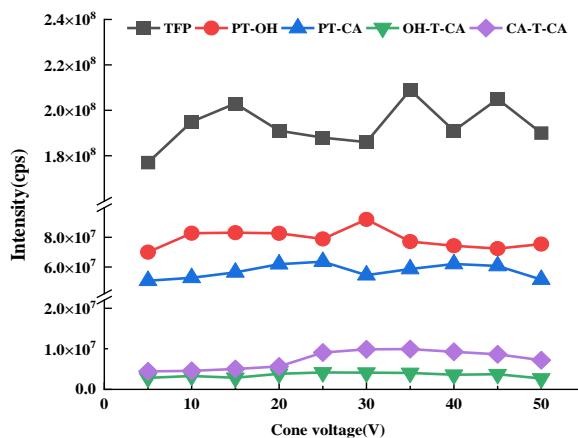
**Figure S2** The response of parent and daughter ions of TFP and its metabolites under different collision energies

**Figure S3** The response of TFP and its metabolites in different mobile phases (A+B)

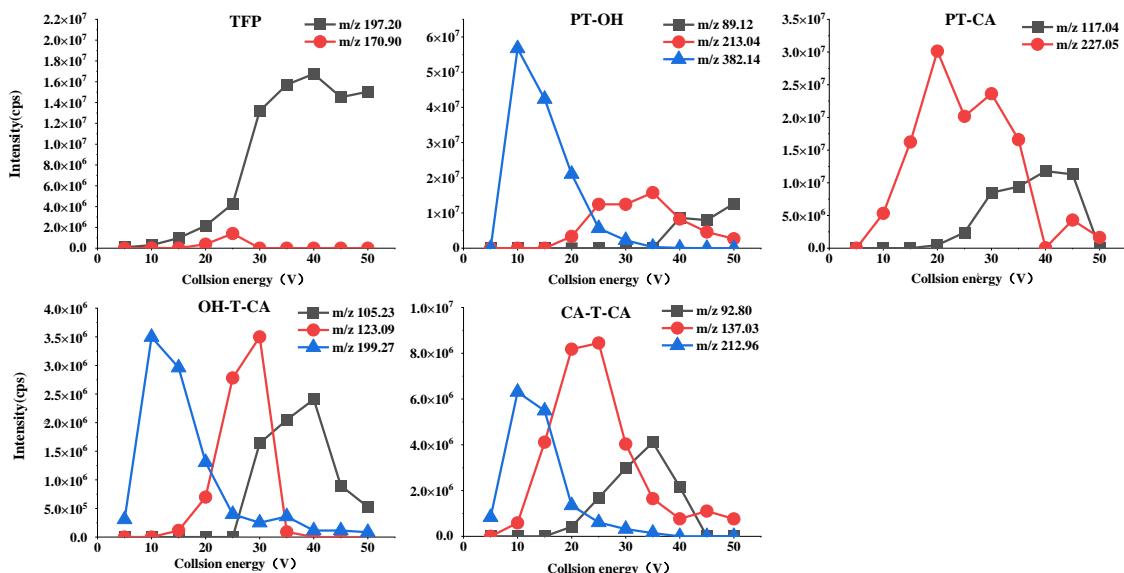
**Figure S4** The recoveries of TFP and its metabolites in different soaking solvents

**Figure S5** The recoveries of TFP and its metabolites under different types and quantities of purification adsorbents

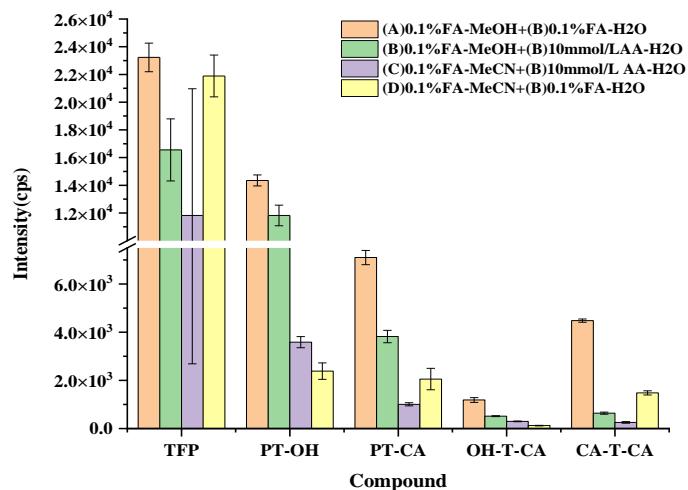
**Figure S6** The samples after pretreatment (vial 1: green tea sample without purifying; vial 2: green tea sample with purifying by 50 mg C<sub>18</sub> + 50 mgMgSO<sub>4</sub>; vial 3:green tea sample with purifying by 50 mg C<sub>18</sub> + 50 mgMgSO<sub>4</sub> + 20 mg GCB + 20 mg C<sub>NT-OH</sub>;vial 4: green tea infusion sample without purifying.)



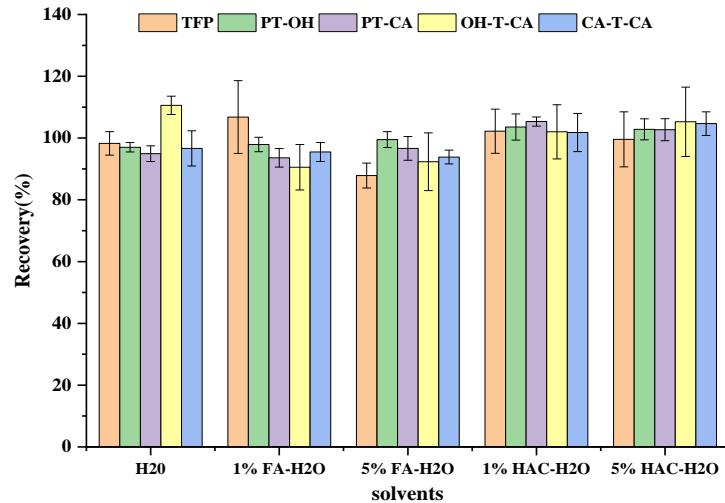
**Figure S1** The intensity of TFP and its metabolites under different cone voltages



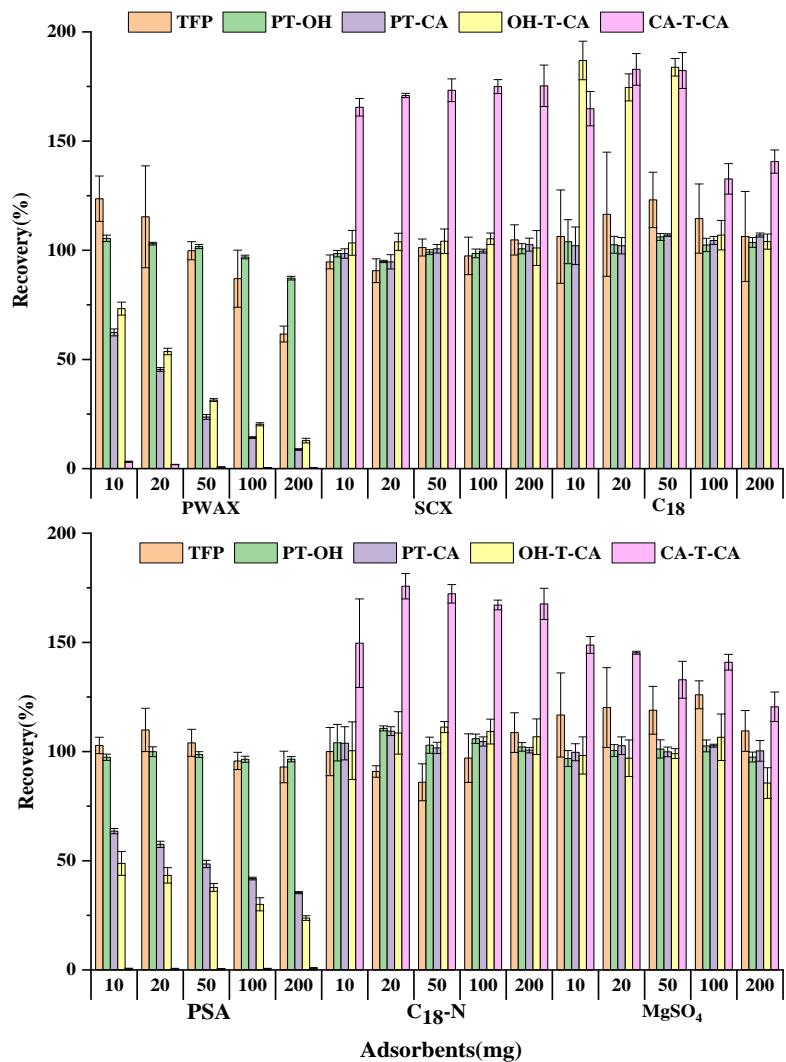
**Figure S2** The intensity of parent and daughter ions of TFP and its metabolites under different collision energies



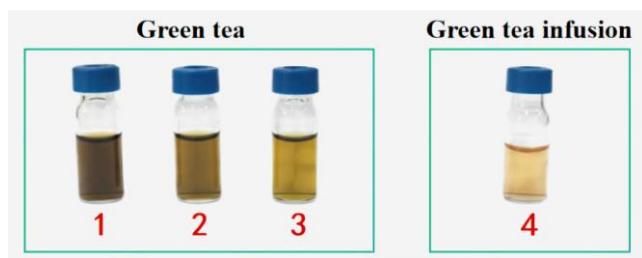
**Figure S3** The intensity of TFP and its metabolites in different mobile phases (A+B)



**Figure S4** The recoveries of TFP and its metabolites in different soaking solvents



**Figure S5** The recoveries of TFP and its metabolites under different types and quantities of purification adsorbents



**Figure S6** The samples after pretreatment (vial 1: green tea sample without purifying; vial 2: green tea sample with purifying by 50 mg C<sub>18</sub> + 50 mgMgSO<sub>4</sub>; vial 3:green tea sample with purifying by 50 mg C<sub>18</sub> + 50 mgMgSO<sub>4</sub> + 20 mg GCB + 20 mg C<sub>NT-OH</sub>;vial 4: green tea infusion sample without purifying.)