Supporting Information

Phytochemicals profiling in single plant cell by High Performance

Liquid Chromatography-Mass Spectrometry

Fang Yuan^a, De-Wen Zhang^{b, c}, Jing-Xin Liu^d, Ying-Lin Zhou^{*a}, Xin-Xiang Zhang^{*a}

a. Beijing National Laboratory for Molecular Sciences (BNLMS), Key Laboratory of Bioorganic Chemistry and Molecular Engineering of Ministry of Education, College of Chemistry, Peking University, Beijing 100871, China.
Phone: +86-10-62754112 (Ying-Lin Zhou); +86-10-62754680 (Xin-Xiang Zhang).
Fax: +86-10-62754112 (Ying-Lin Zhou); +86-10-62754680 (Xin-Xiang Zhang).
E-mail: zhouyl@pku.edu.cn; zxx@pku.edu.cn.

b. School of Engineering and Materials Science, Queen Mary University of London, Mile End Road, London E1 4NS, United Kingdom.

c. China Academy of Engineering Physics, Mianyang, 621900, Sichuan, China.

d. Petrochina Research Institute, Petrochina Company Limited, A42, Xishantun Changping, Beijing, 1022056, China.

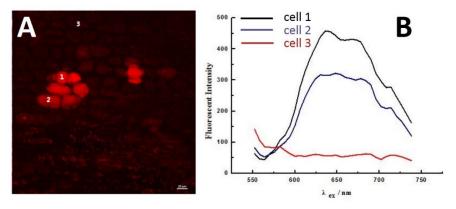


Figure S1 Fluorescent microscopic image of purple cells and colorless cells (A) and fluorescent emission spectrum of two purple cells (cell 1 and cell 2) and a colorless cell (cell 3) (B). The excitation wavelength was 514 nm.

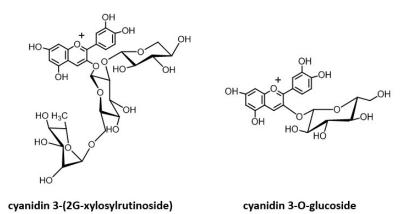


Figure S2 Structures of cyanidin 3-(2G-xylosylrutinoside) and cyanidin 3-O-glucoside.

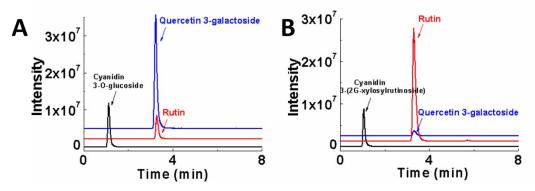


Figure S3 Multiple extracted ion chromatographs of the mixture of three standards (A) and purple cells extract (B). The HPLC-MS conditions were the same for both samples.

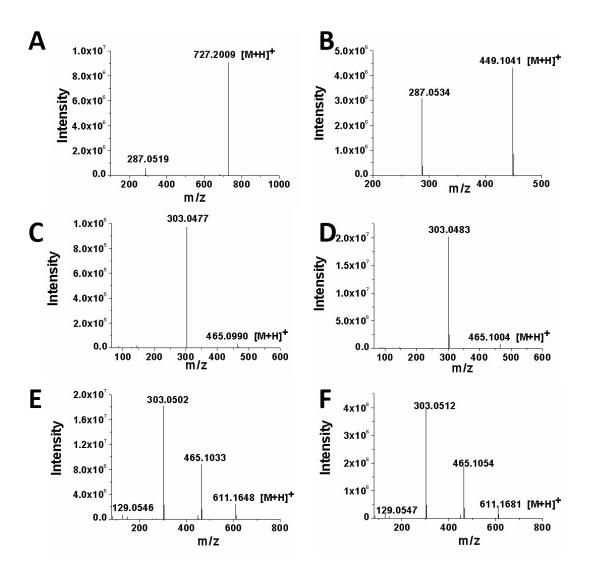


Figure S4 Product ion spectra of cyanidin 3-(2G-xylosylrutinoside) in purple cells (A), cyanidin 3-O-glucoside standard (B), quercetin 3-galactoside in purple cells (C), quercetin 3-galactoside standard (D), rutin in purple cells (E), and rutin standard (F).

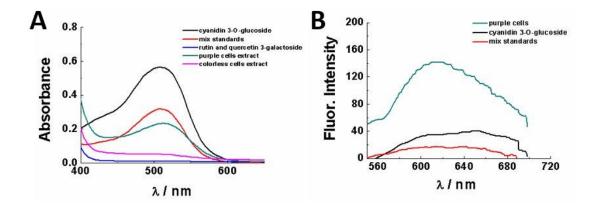


Figure S5 UV-Vis spectra (A) and fluorescence spectra (B) of purple cells and standard solutions of target phytochemicals. The fluorescence excitation wavelength was 515 nm.