

Supplementary Material

Extraction, Radical Scavenging Activities, and Chemical Composition Identification of Flavonoids from Sunflower (*Helianthus annuus* L.) Receptacles

Zian Qiao^{1,2,‡}, Lu Han^{1,3,‡}, Xinsheng Liu^{1,3}, Huining Dai¹, Changmin Liu¹, Min Yan¹, Wannan Li¹, Weiwei Han^{1,4}, XinLu Li¹, Silu Huang¹ and Bo Gao^{1,2,*}

¹ School of Life Sciences, Jilin University, Changchun 130012, China; qiaoza18@mails.jlu.edu.cn (Z.-A.Q.); luhuan@jlu.edu.cn (L.H.); liuxs18@mails.jlu.edu.cn (X.-S.L.); daihn18@mails.jlu.edu.cn (H.-N.D.); liucz19@mails.jlu.edu.cn (C.-M.L.); xinlu19@mails.jlu.edu.cn (X.-L.L.); liwanan@jlu.edu.cn (W.-N.L.); yanmin19@mails.jlu.edu.cn (M.Y.); slhuang18@mails.jlu.edu.cn (S.-L.H.); weiweihan@jlu.edu.cn (W.-W.H.);

² Third-Level Laboratory of National Administration of Traditional Chinese Medicine, Jilin University, Changchun 130012, China

³ Key Laboratory for Evolution of Past Life and Environment in Northeast Asia, Jilin University, Ministry of Education, Changchun 130012, China

⁴ Key Laboratory for Molecular Enzymology and Engineering, Jilin University, Ministry of Education, Changchun 130012, China

* Correspondence: gaobo@jlu.edu.cn; Tel.: +86-131-3443-5290; Fax: +86-431-85155127

‡ These authors contributed equally to this work.

Table of contents

Figure A1. The chromatogram of fraction B (a) and isoquercetin standard sample (b).

Figure A2. The mass spectrum of fraction B (a) and isoquercetin standard sample (b).

Figure A3. The chromatogram of fraction B (a) and daidzein standard sample (b).

Figure A4. The mass spectrum of fraction B (a) and daidzein standard sample (b).

Figure A5. The MS1 diagrams of six compounds.

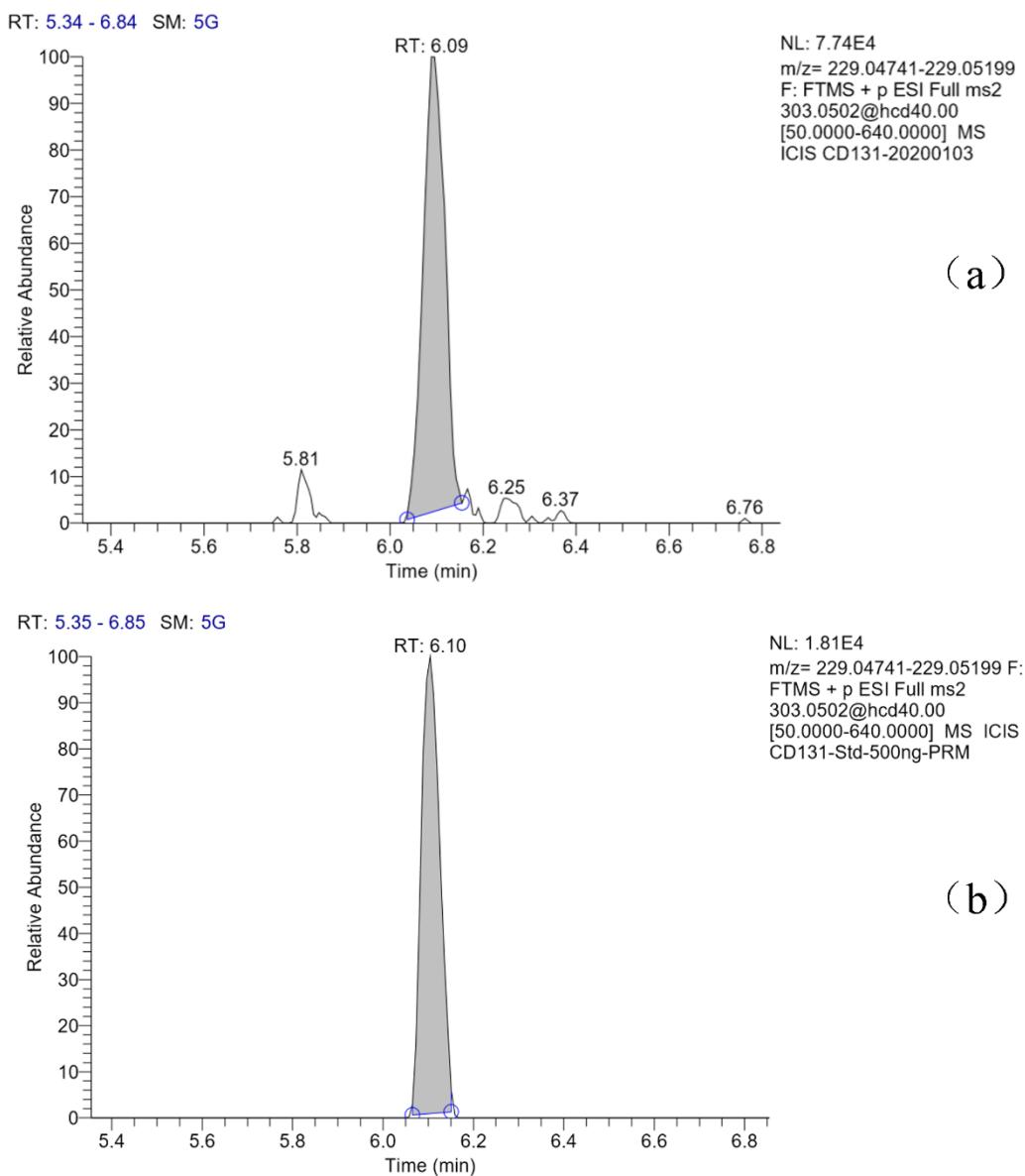
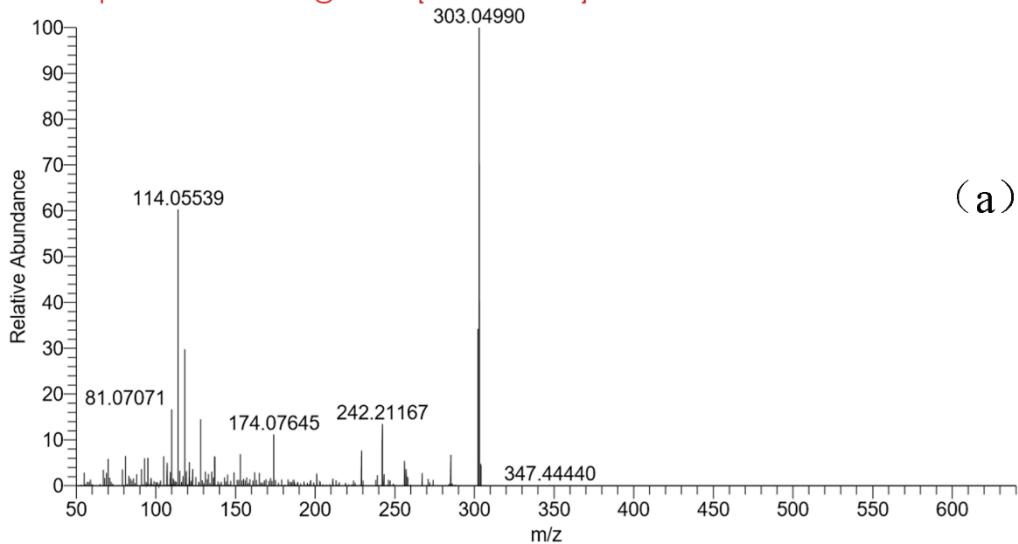


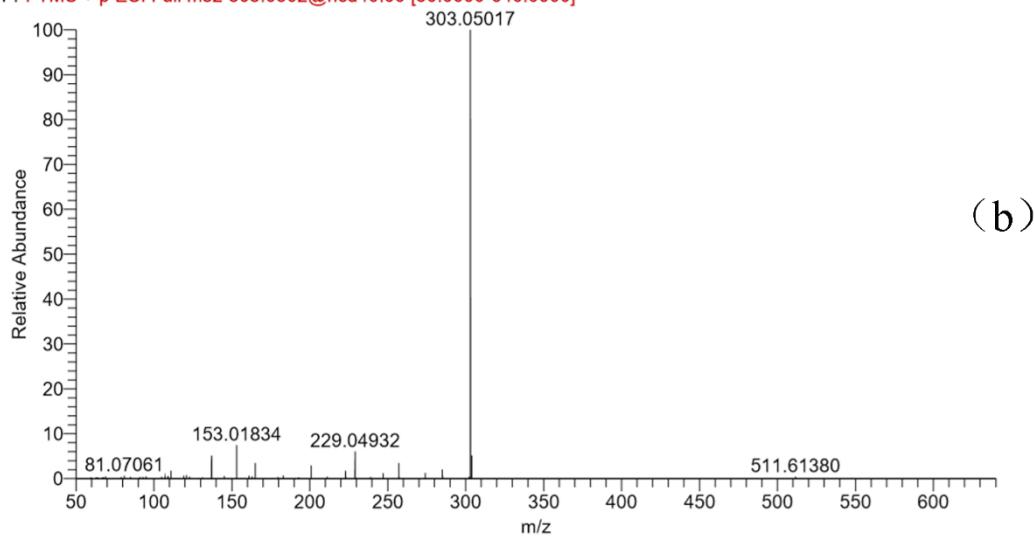
Figure A1. The chromatogram of fraction B (a) and isoquercetin standard sample (b).

CD131-20200103 #2428 RT: 6.09 AV: 1 NL: 1.10E6
F: FTMS + p ESI Full ms2 303.0502@hcd40.00 [50.0000-640.0000]



(a)

CD131-Std-500ng-PRM #2347 RT: 6.10 AV: 1 NL: 3.12E5
F: FTMS + p ESI Full ms2 303.0502@hcd40.00 [50.0000-640.0000]



(b)

Figure A2. The mass spectrum of fraction B (a) and isoquercetin standard sample (b).

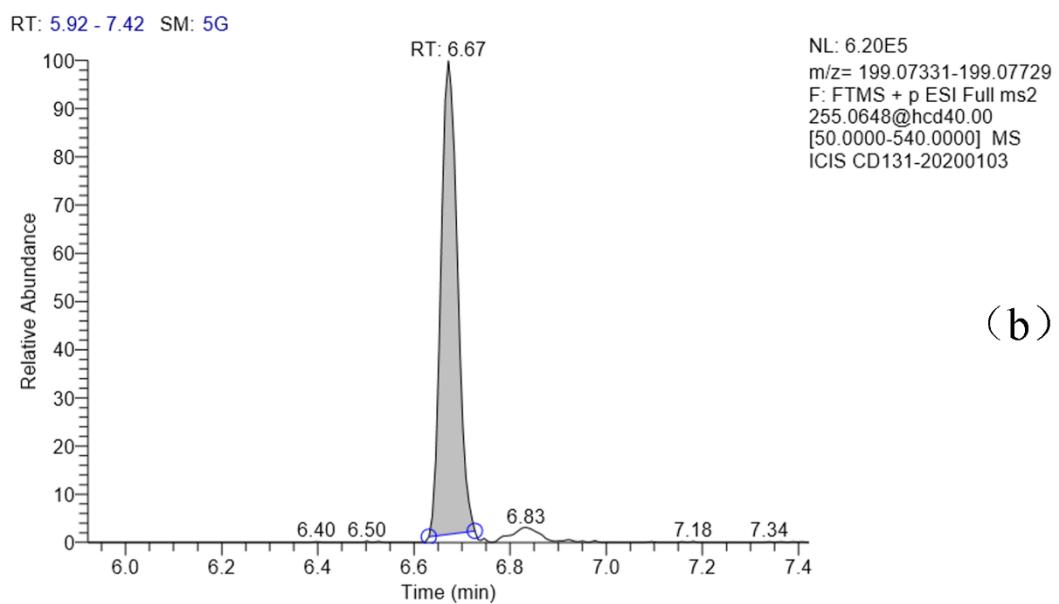
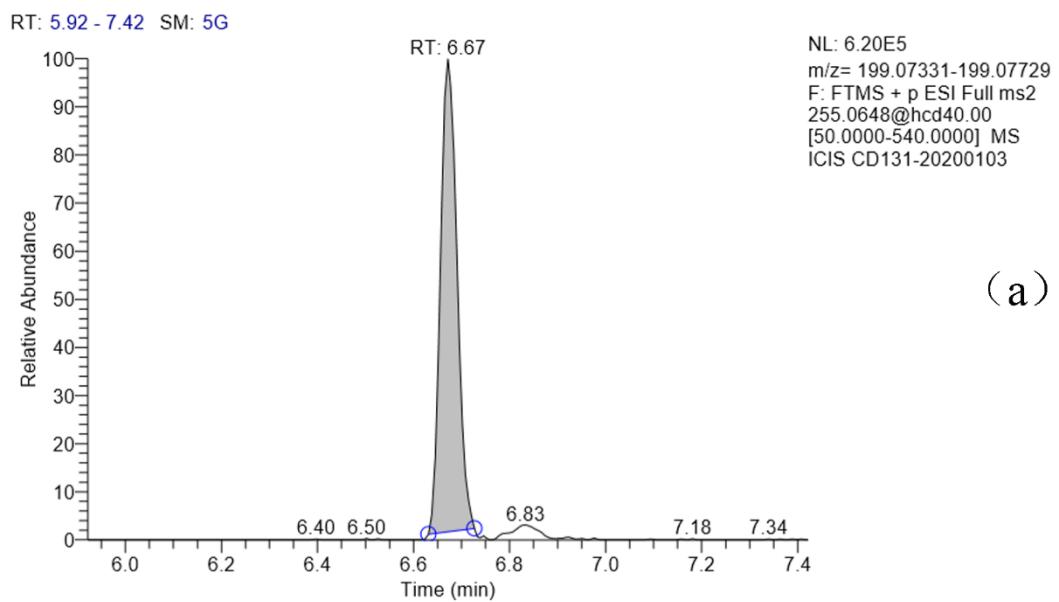
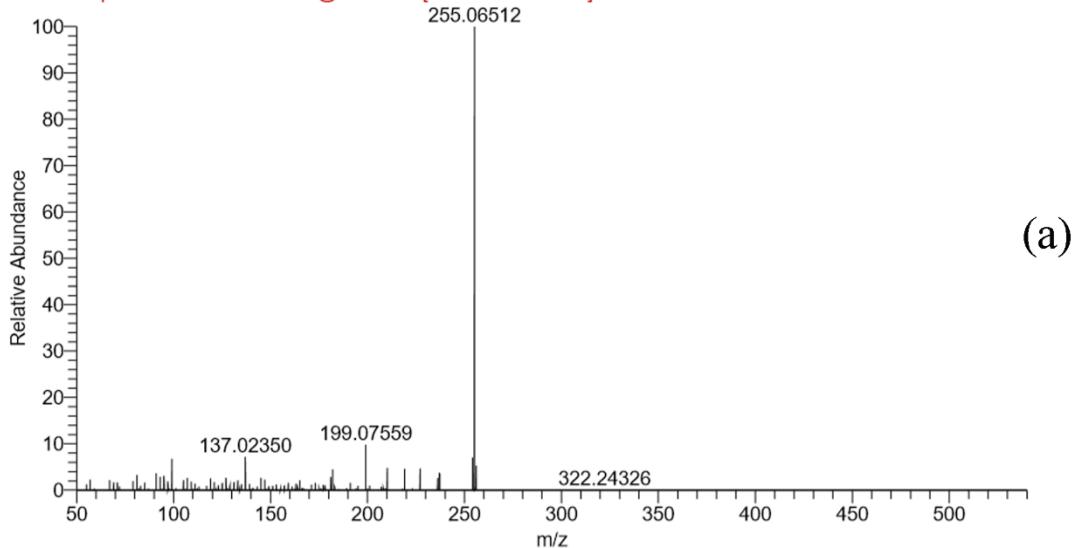


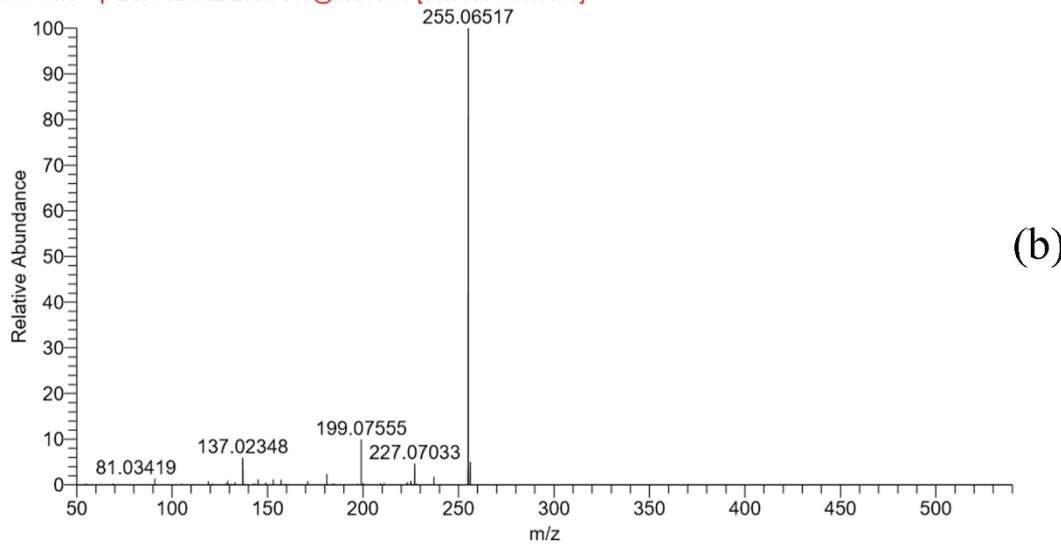
Figure A3. The chromatogram of fraction B (a) and daidzein standard sample (b).

CD131-20200103 #2699 RT: 6.67 AV: 1 NL: 6.33E6
F: FTMS + p ESI Full ms2 255.0648@hcd40.00 [50.0000-540.0000]



(a)

CD131-Std-500ng-PRM #2567 RT: 6.67 AV: 1 NL: 7.75E6
F: FTMS + p ESI Full ms2 255.0648@hcd40.00 [50.0000-540.0000]



(b)

Figure A4. The mass spectrum of fraction B (a) and daidzein standard sample (b).

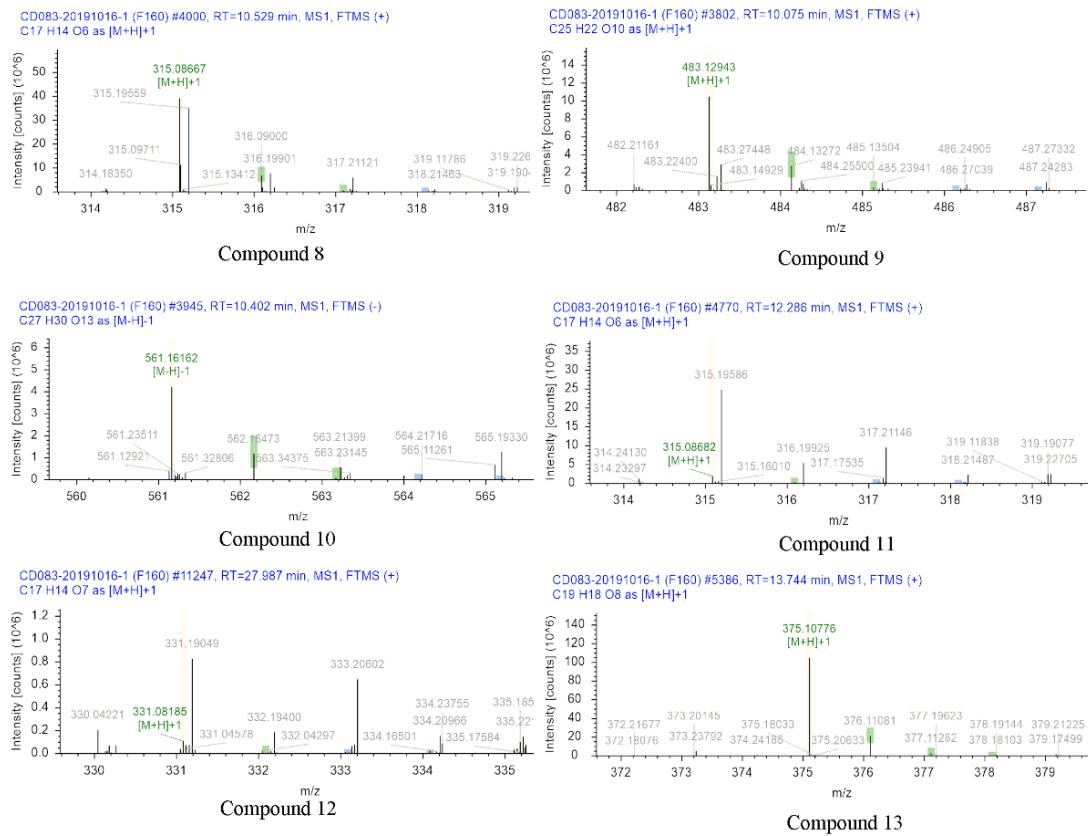


Figure A5. The MS1 diagrams of six compounds.