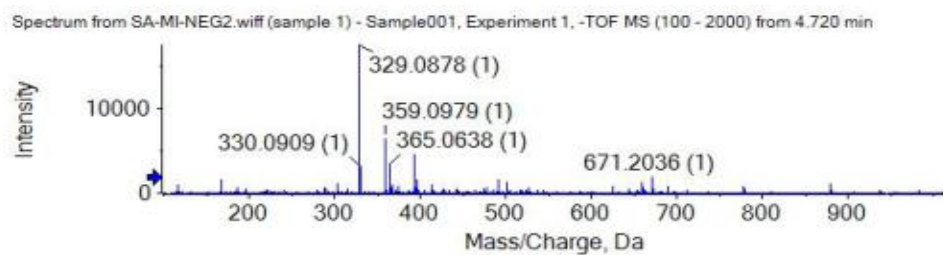
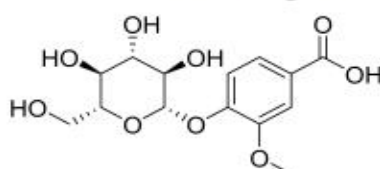
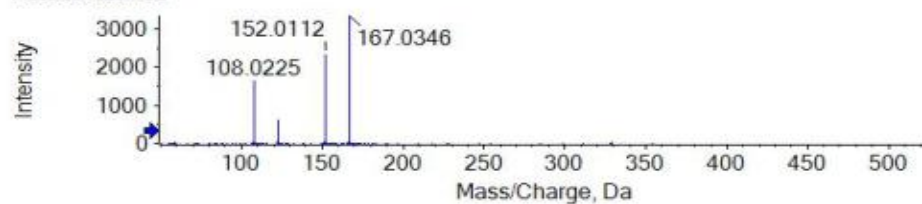


**Figure S1.** The total ion current chromatogram of BPIS.

(1) vanillic acid 4-O- $\beta$ -D-glucopyranoside



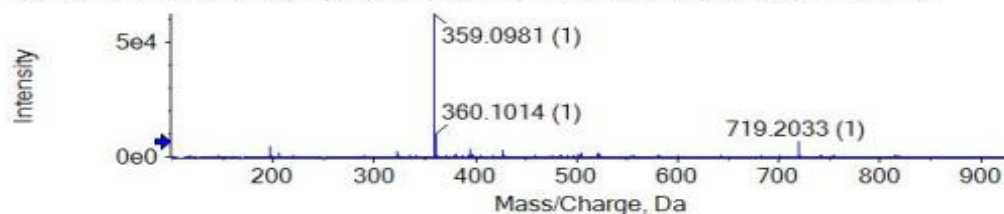
Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 3, -TOF MS<sup>2</sup> (50 - 2000) from 4.763 min  
Precursor: 329.1 Da



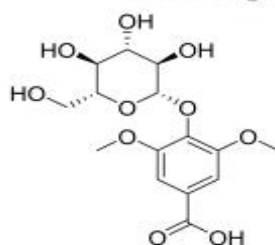
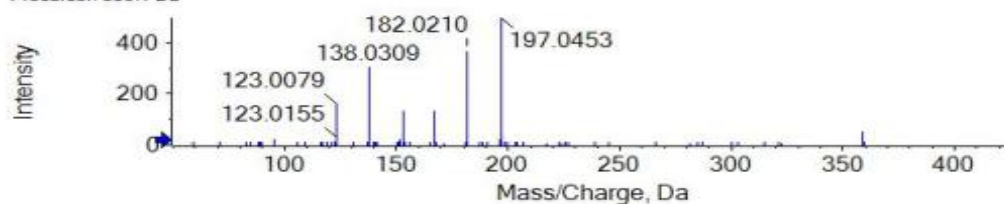
Chemical Formula: C<sub>14</sub>H<sub>18</sub>O<sub>9</sub>  
Exact Mass: 330.09508

(2) glucosyringic acid

Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 5.568 min



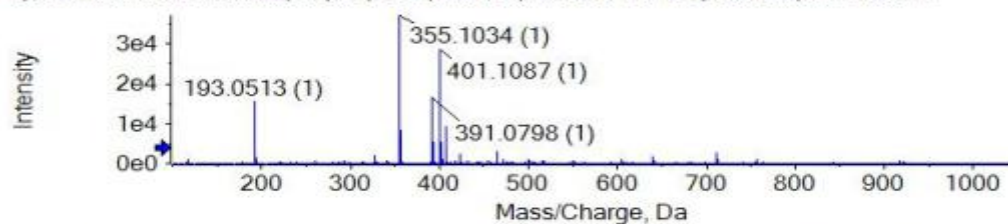
Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 8, -TOF MS<sup>2</sup> (50 - 2000) from 5.504 min  
Precursor: 359.1 Da



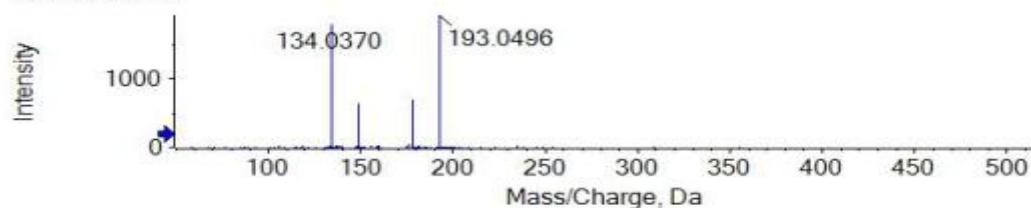
Chemical Formula: C<sub>15</sub>H<sub>20</sub>O<sub>10</sub>  
Exact Mass: 360.10565

(3) ferulic acid 4-O- $\beta$ -D-glucopyranoside

Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 7.003 min

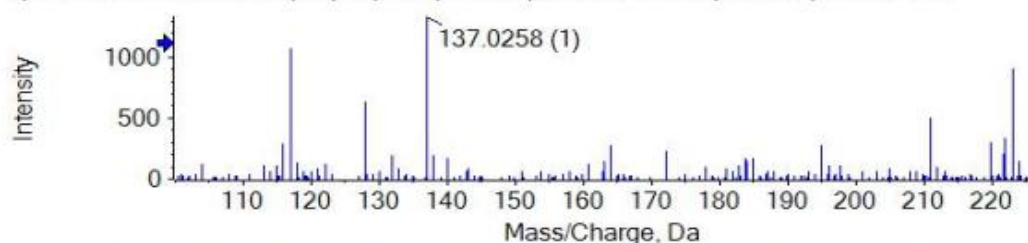


Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 3, -TOF MS<sup>2</sup> (50 - 2000) from 7.008 min  
Precursor: 355.1 Da

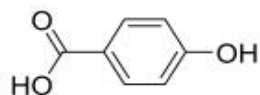
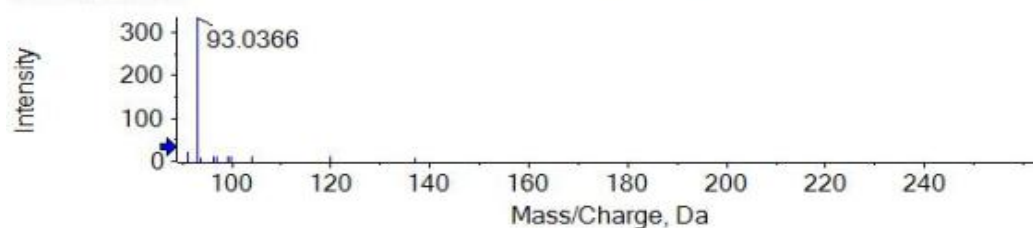


(4) 4-Hydroxybenzoic acid

Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 7.428 min

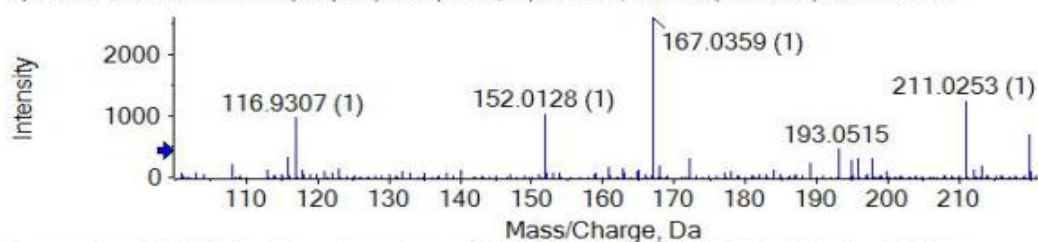


Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 2, -TOF MS<sup>2</sup> (50 - 2000) from 7.431 min  
Precursor: 137.0 Da

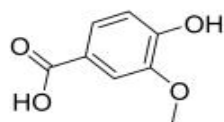
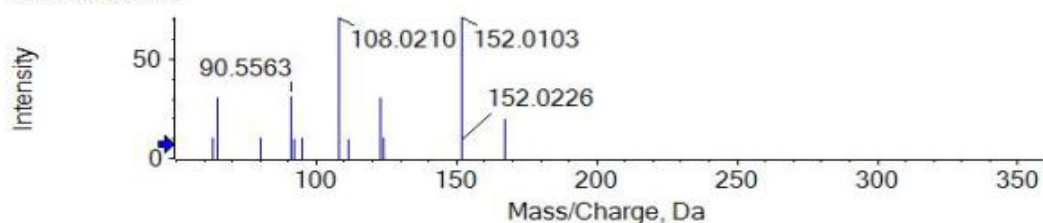


(5) Vanillic acid

Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 8.523 min



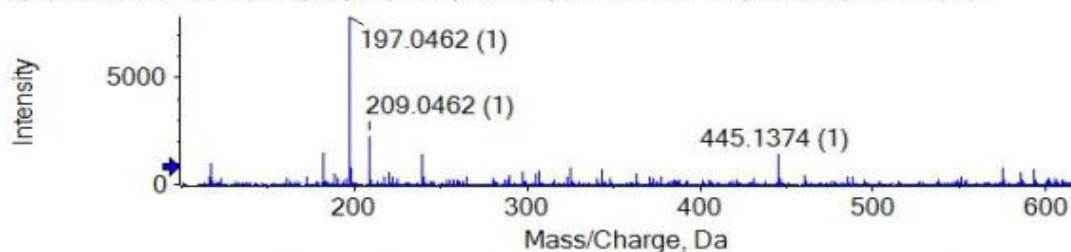
Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 3, -TOF MS<sup>2</sup> (50 - 2000) from 8.508 min  
Precursor: 167.0 Da



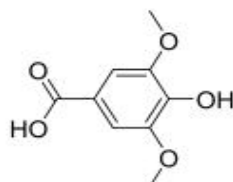
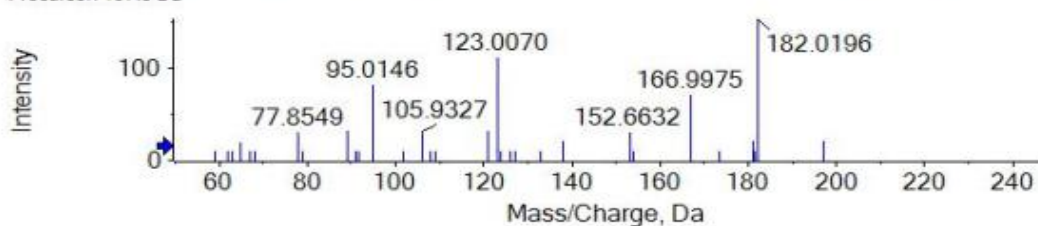
Chemical Formula: C<sub>8</sub>H<sub>8</sub>O<sub>4</sub>  
Exact Mass: 168.04226

(6) Syringic acid

Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 8.972 min



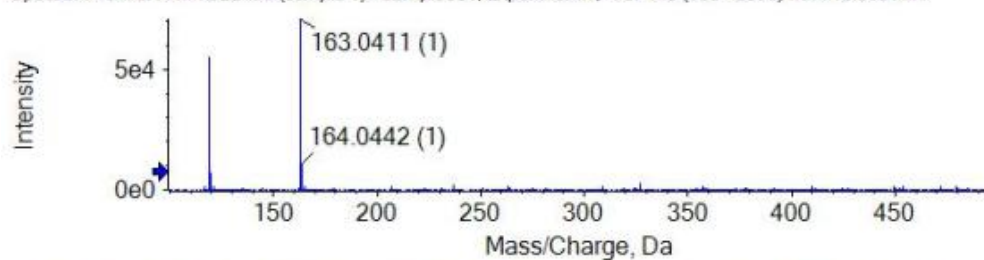
Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 3, -TOF MS<sup>2</sup> (50 - 2000) from 8.897 min  
Precursor: 197.0 Da



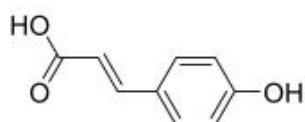
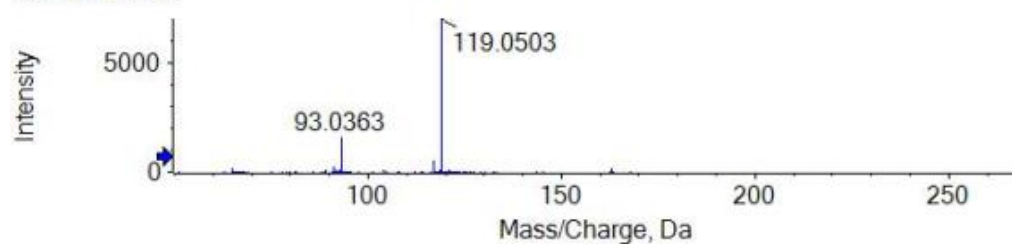
Chemical Formula: C<sub>9</sub>H<sub>10</sub>O<sub>5</sub>  
Exact Mass: 198.05282

(7) p-Coumaric acid

Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 10.840 min



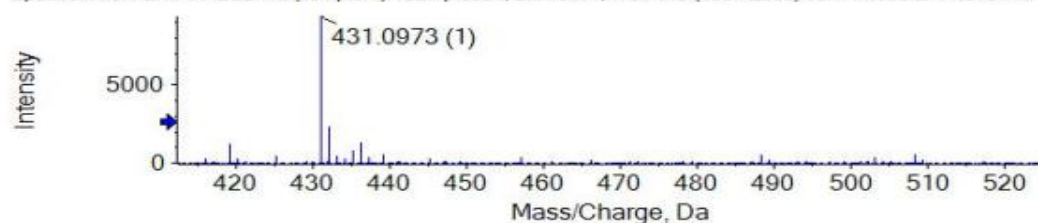
Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 3, -TOF MS<sup>2</sup> (50 - 2000) from 10.750 min  
Precursor: 163.0 Da



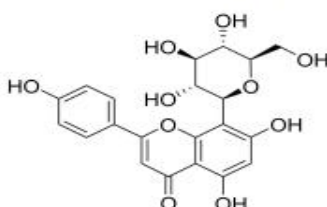
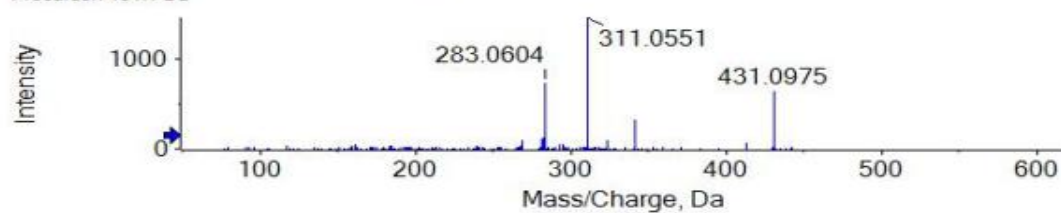
Chemical Formula: C<sub>9</sub>H<sub>8</sub>O<sub>3</sub>  
Exact Mass: 164.04734

## (8) Vitexin

Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 11.305 to 11.343 min



Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 8, -TOF MS<sup>2</sup> (50 - 2000) from 11.318 min  
Precursor: 431.1 Da

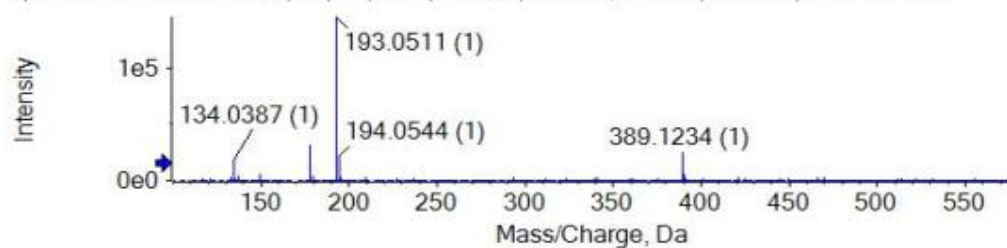


Chemical Formula: C<sub>21</sub>H<sub>20</sub>O<sub>10</sub>  
Exact Mass: 432.10565

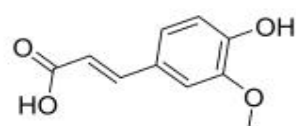
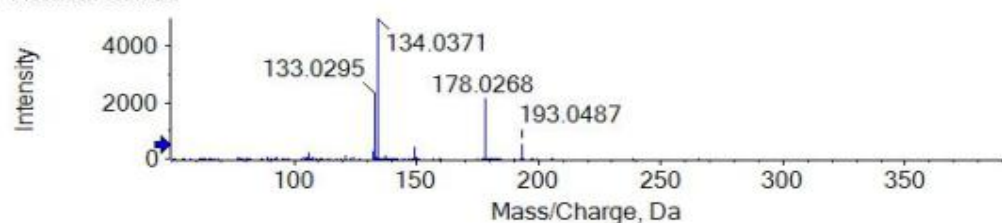
## (9) ferulic acid



Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 11.670 min



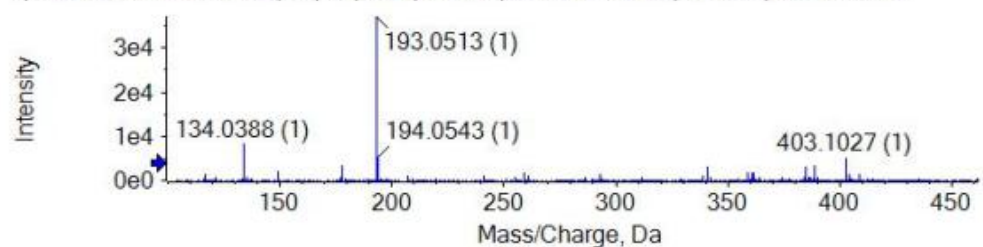
Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 4, -TOF MS<sup>2</sup> (50 - 2000) from 11.676 min  
Precursor: 193.1 Da



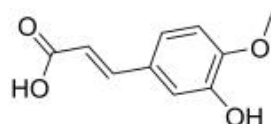
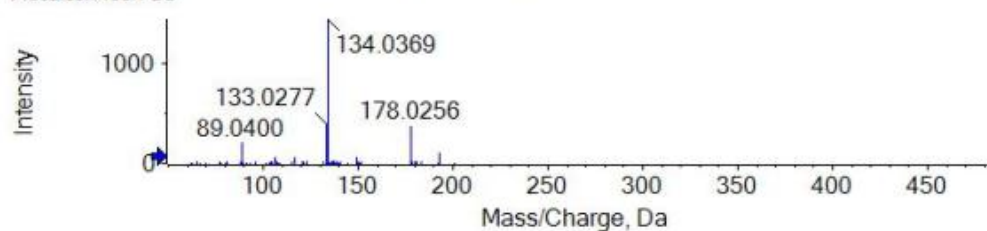
Chemical Formula: C<sub>10</sub>H<sub>10</sub>O<sub>4</sub>  
Exact Mass: 194.05791

# (10) Isoferulic acid

Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 1, -TOF MS (100 - 2000) from 12.352 min

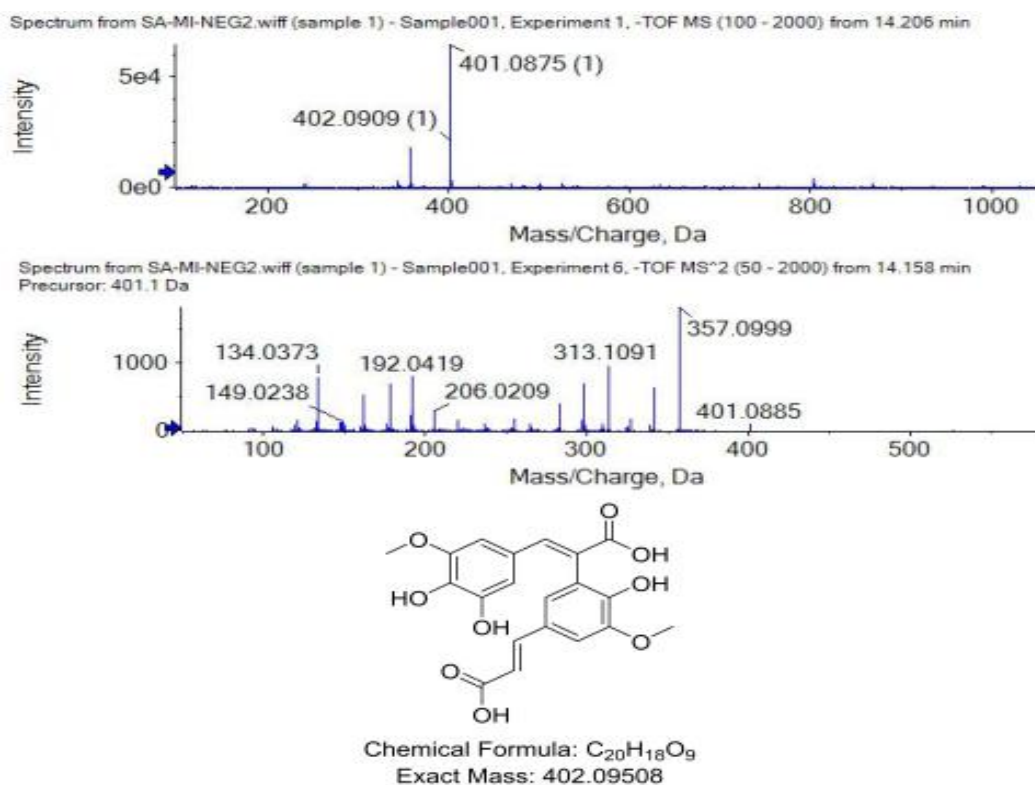


Spectrum from SA-MI-NEG2.wiff (sample 1) - Sample001, Experiment 4, -TOF MS<sup>2</sup> (50 - 2000) from 12.320 min  
Precursor: 193.1 Da

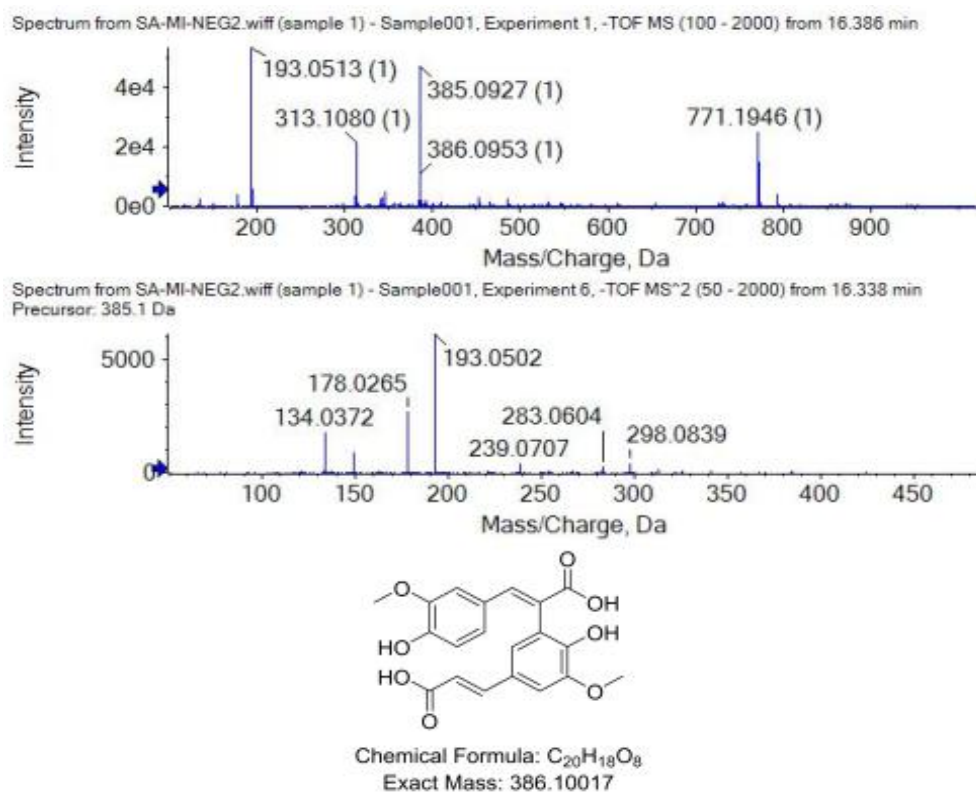


Chemical Formula: C<sub>10</sub>H<sub>10</sub>O<sub>4</sub>  
Exact Mass: 194.05791

(11) biferulic acid



(12) 4,4'-dihydroxy-3,5'-dimethoxy, 3'-bicinnamic acid



**Figure S2.** Mass spectrum and structural formula of BPIS components.