

Figure 1. (a) Fragmentation patterns and full scan product ion mass spectra of $[M+H]^+$ ion of kaempferol standard.

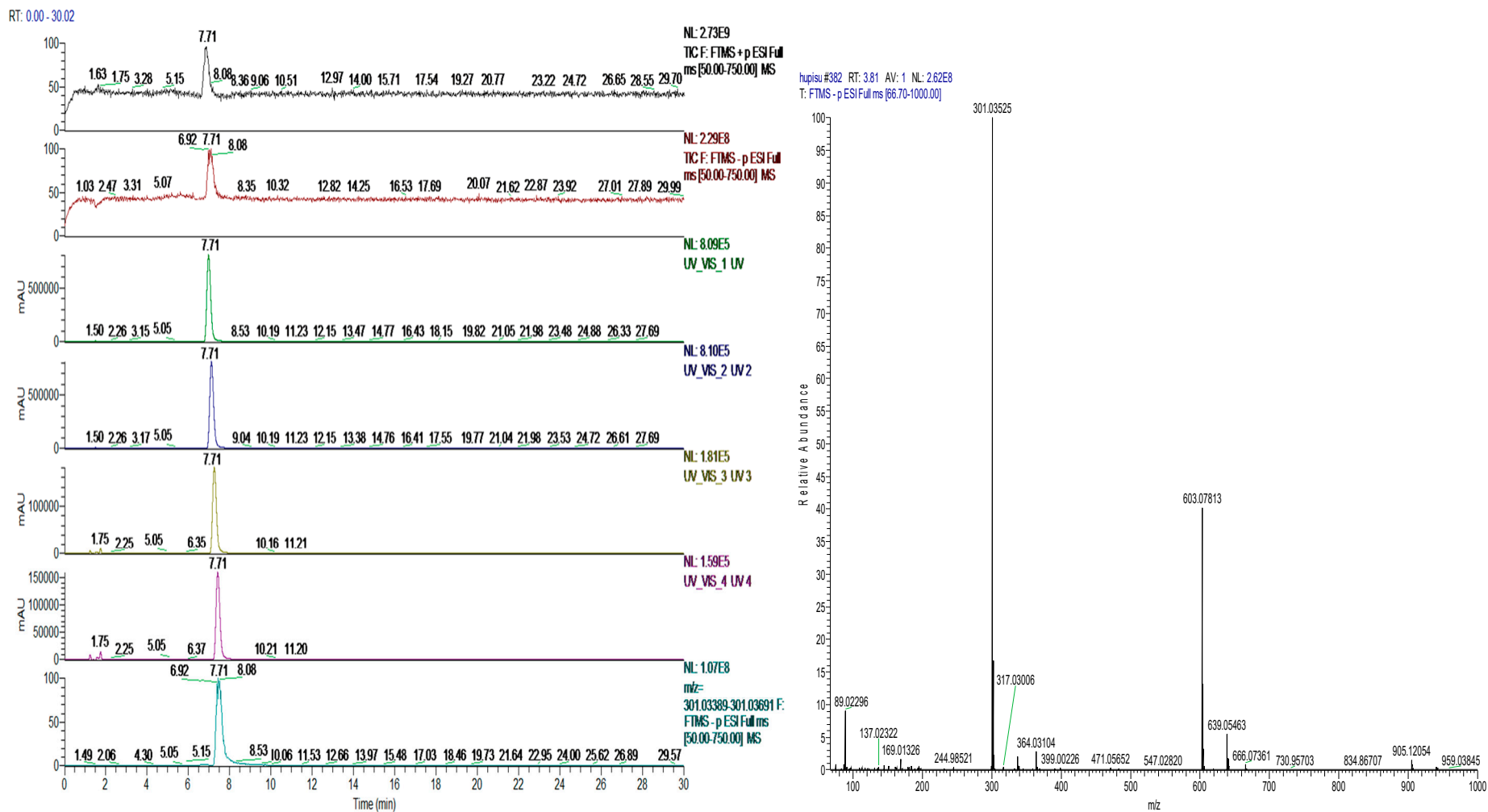


Figure S-1 (b) Fragmentation patterns and full scan product ion mass spectra of $[M+H]^+$ ion of quercetin standard.

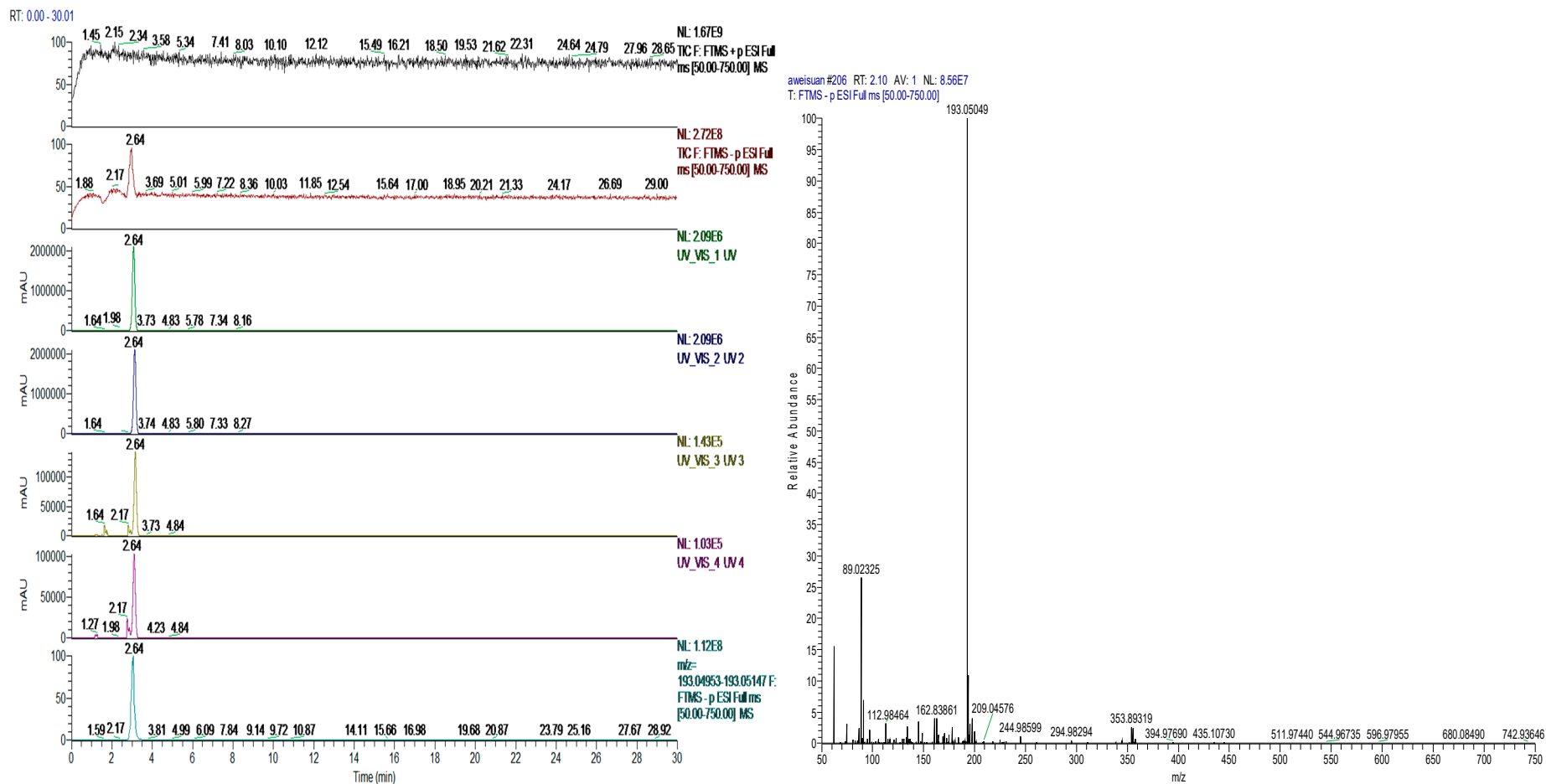


Figure S-1 (c) Fragmentation patterns and full scan product ion mass spectra of $[M+H]^+$ ion of ferulic acid standard.

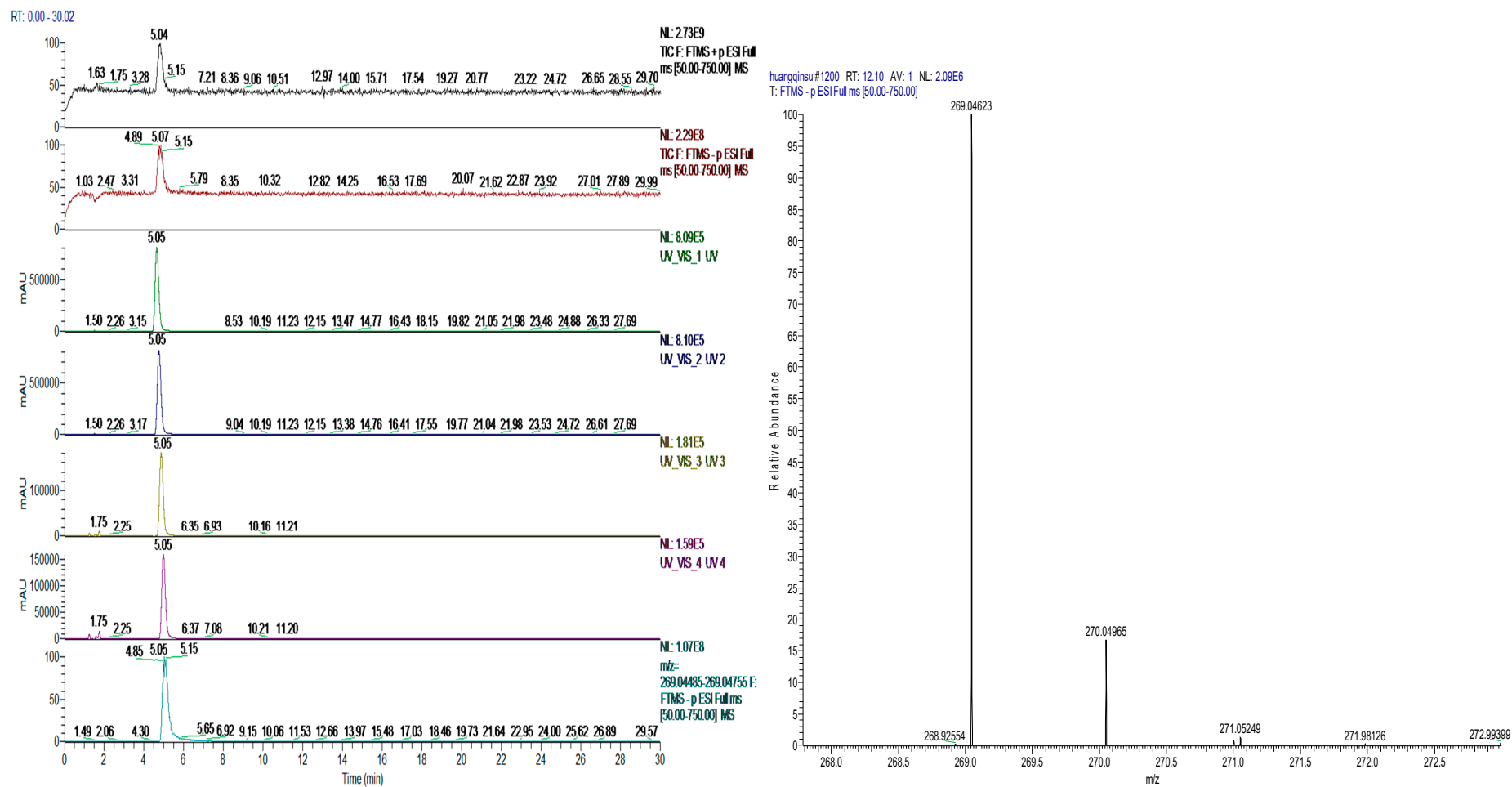


Figure S-1 (d) Fragmentation patterns and full scan product ion mass spectra of $[M+H]^+$ ion of apigenin standard.

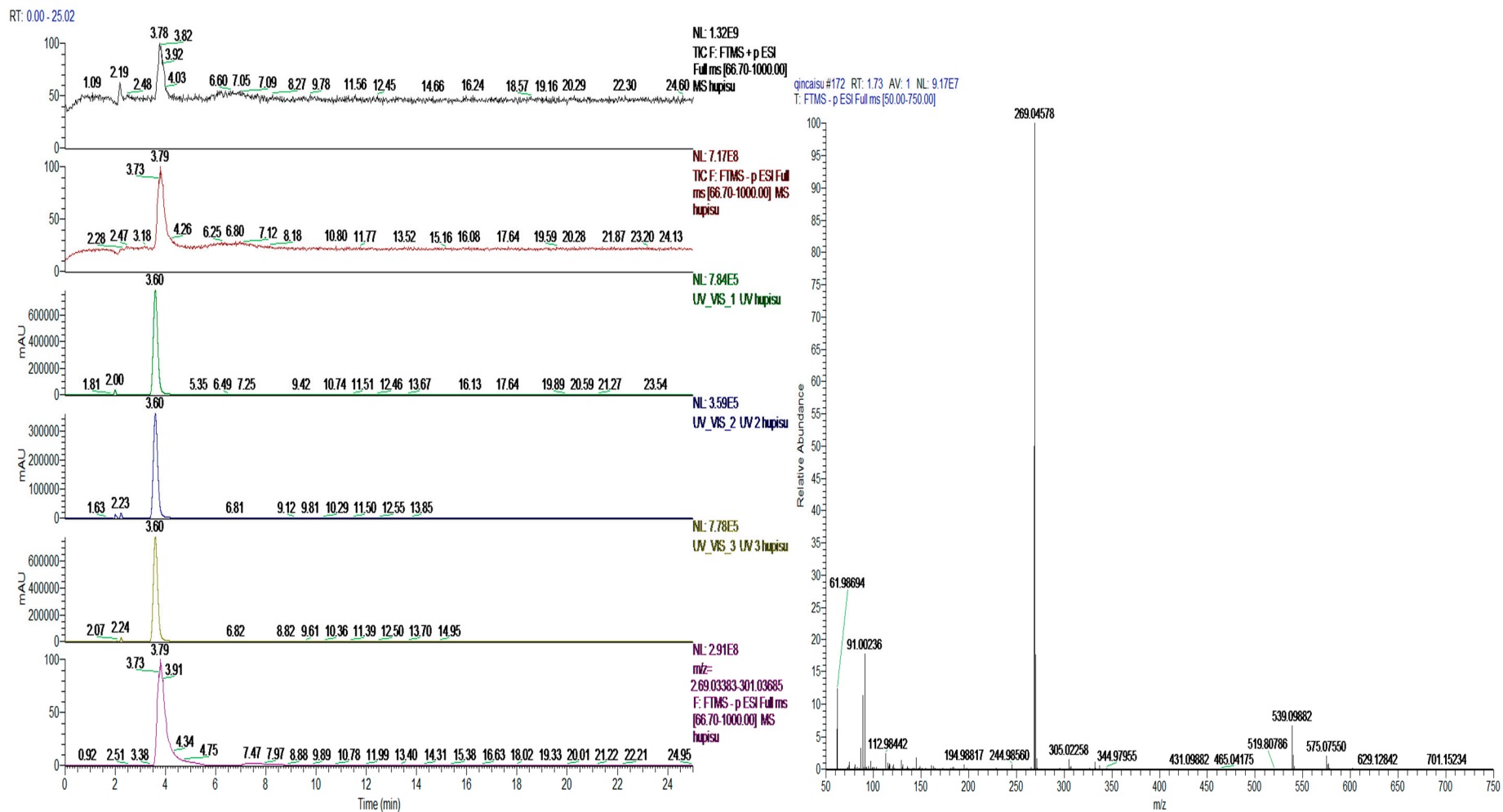


Figure S-1 (e) Fragmentation patterns and full scan product ion mass spectra of $[M+H]^+$ ion of baicalein standard.

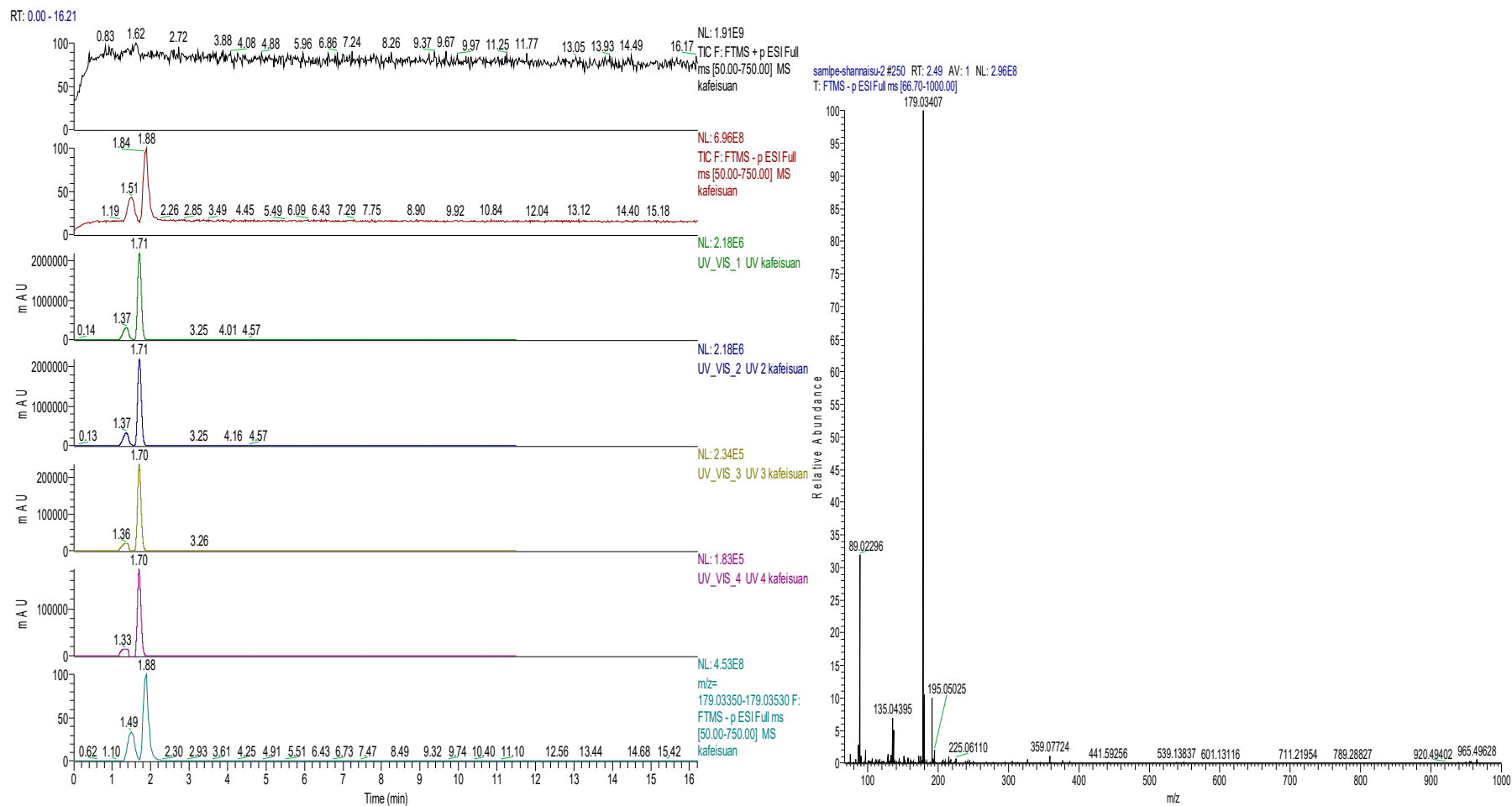


Figure S-1 (f) Fragmentation patterns and full scan product ion mass spectra of $[M+H]^+$ ion of caffeic acid standard.

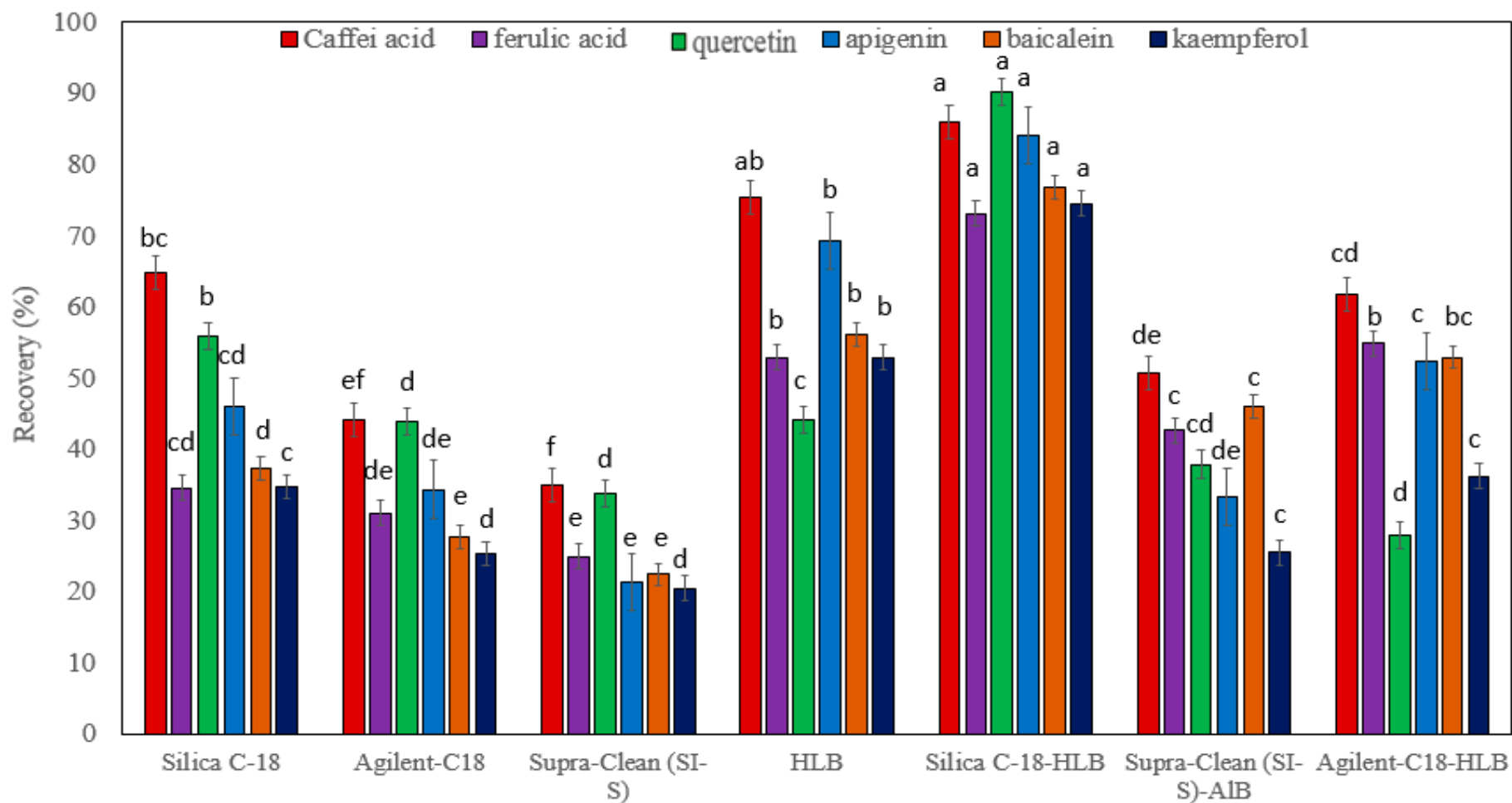


Figure S-2. Recovery of six compound in AR, calculated from the solvent-based standards, with different SPE cartridges using the optimized clean-up step. Data presented as mean \pm standard error from 3 replicates (n=3). Bars with the different letters showed statistically significant difference ($P < 0.05$). The small letters mean that the recovery of same compounds compared with the different SPE columns.

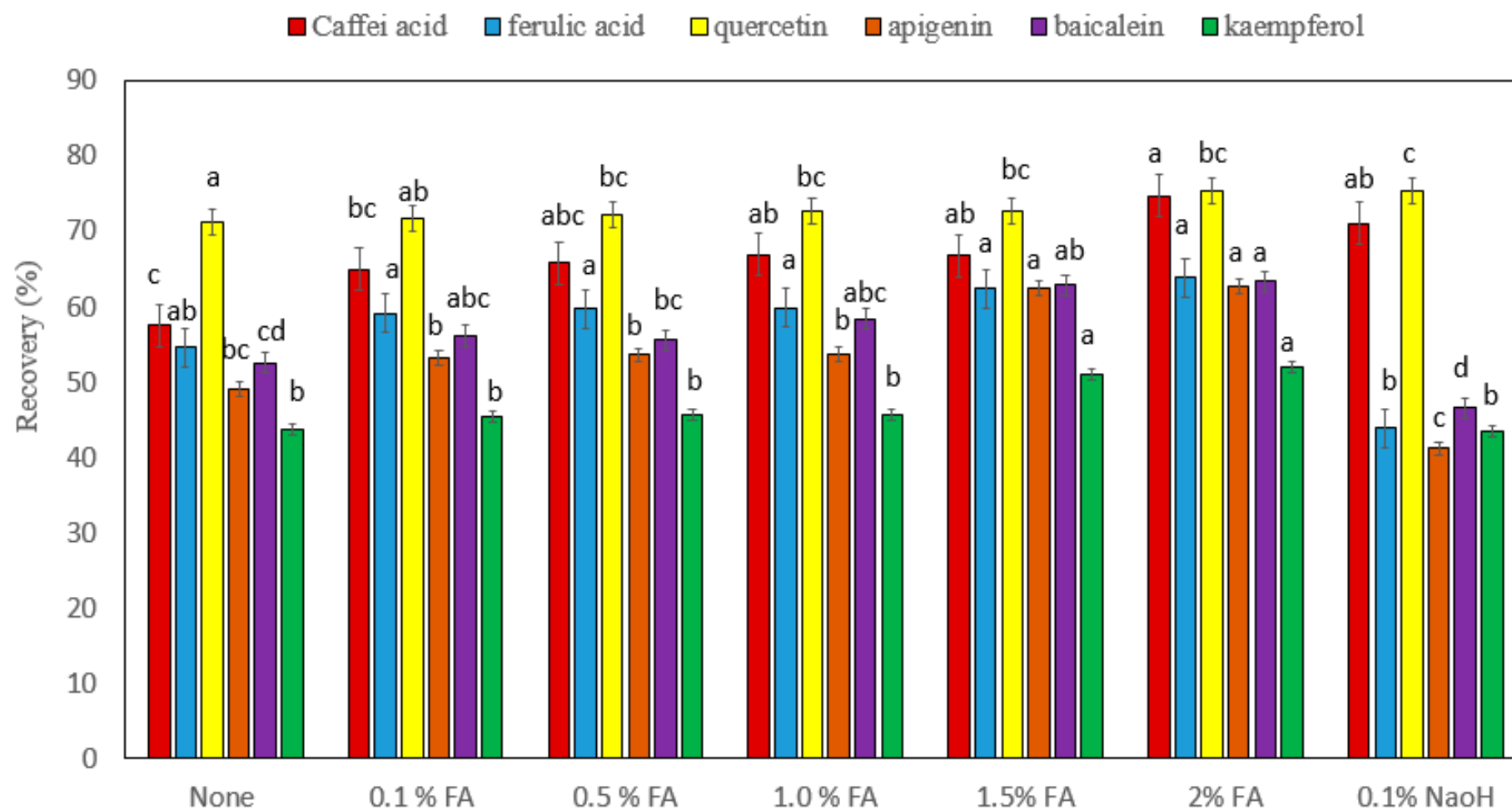


Figure S-3. Recovery of six compound in AR, calculated from the solvent-based standards, with the different concentration of formic acid (FA) extraction solution and salt-out step (0.1% NaOH). Data presented as mean \pm standard error from three replicates (n=3) Bars with the different letters showed statistically significant difference ($P < 0.05$). The small letters mean that the recovery of same compounds compared with the different extraction conditions.

RT: 0.00 - 25.00

NL:
6.35E4
UV_VIS_1
UV 6

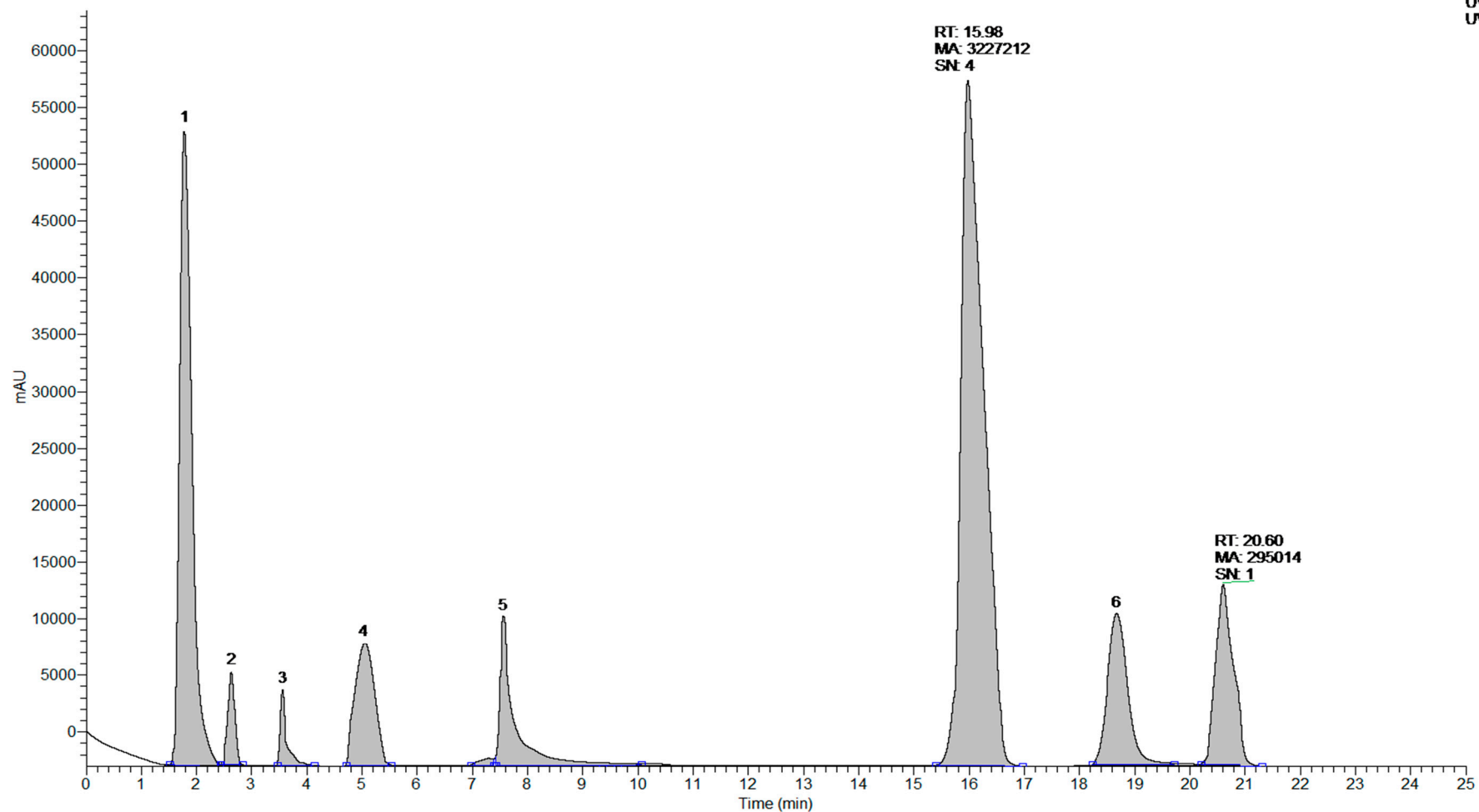


Figure S-4-G-C, UV and MS-SIM chromatograms of the six compounds in Chinese green AR. 1: Caffeic acid, 2: Quercetin, 3: Apigenin, 4: Ferulic acid, 5: Baicalein, 6: Kaempferol

RT: 0.00 - 25.00

NL:
1.04E5
UV_VIS_1
UV2

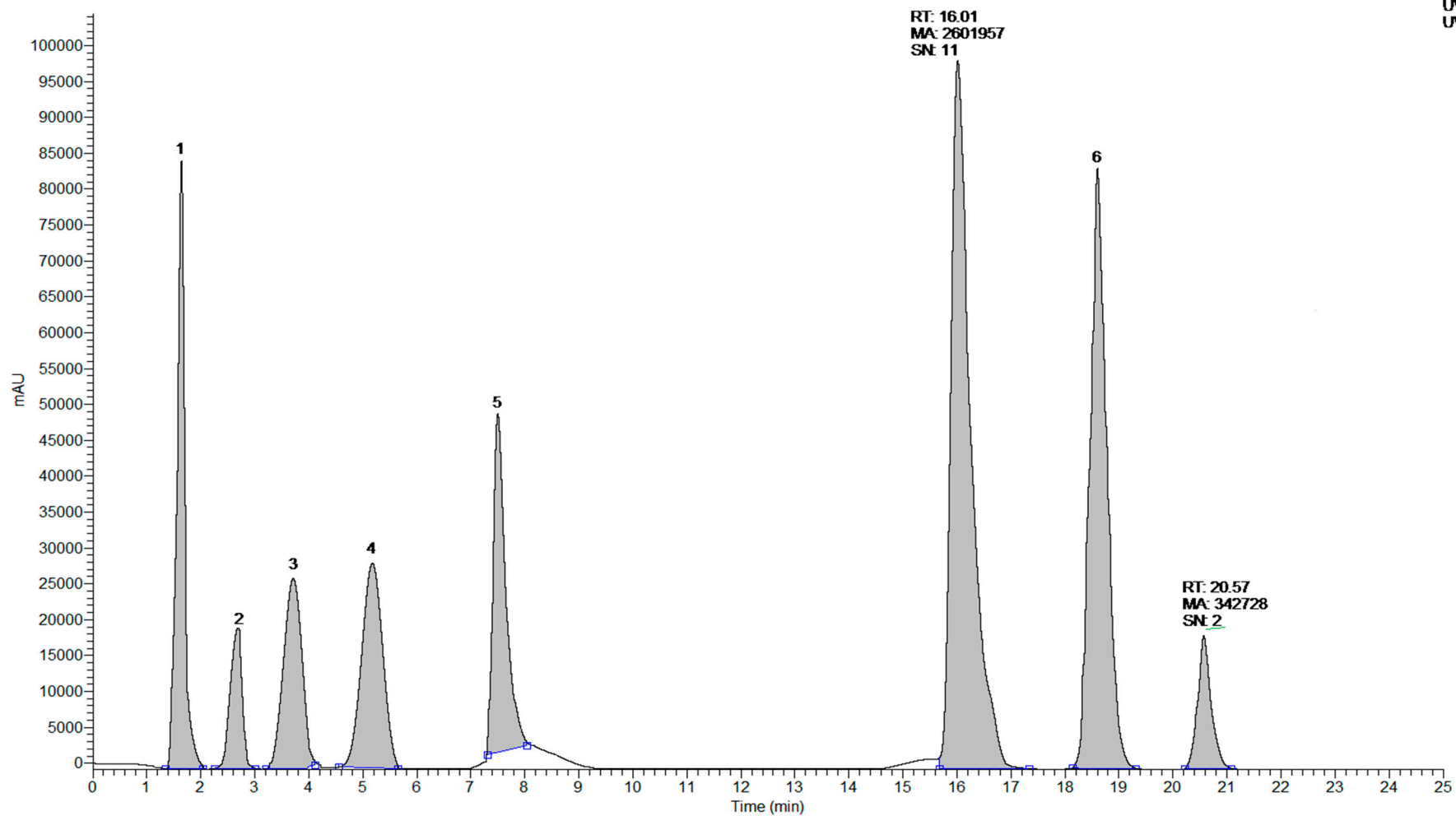


Figure S-4-G-N, UV and MS-SIM chromatograms of the six compounds in New Zealand AR. 1: Caffeic acid, 2: Quercetin, 3: Apigenin, 4: Ferulic acid, 5: Baicalein, 6: Kaempferol

RT: 0.00 - 25.00

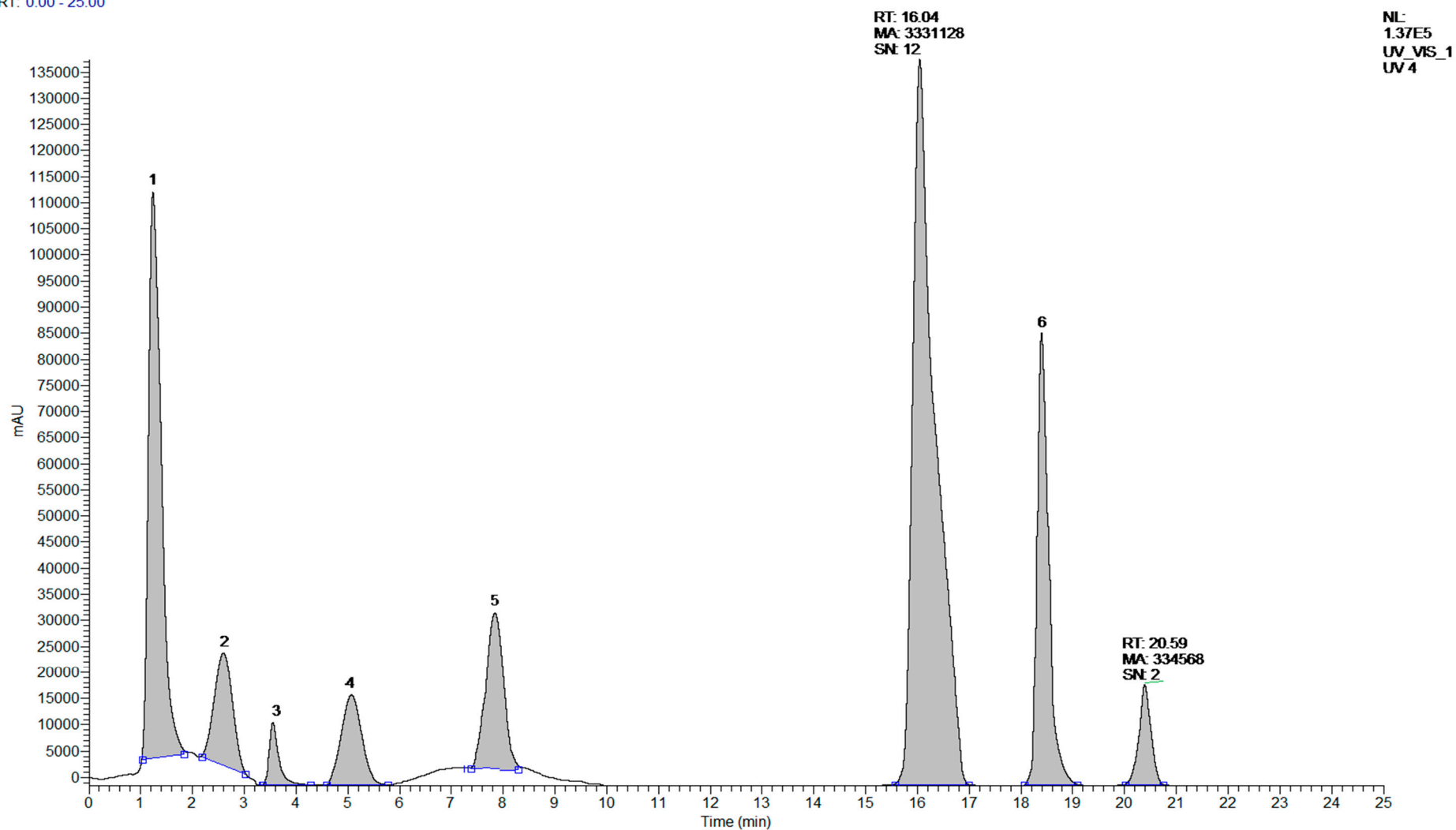


Figure S-4-P-C, UV and MS-SIM chromatograms of six compounds in Chinese purples AR. 1: Caffeic acid, 2: Quercetin, 3: Apigenin, 4: Ferulic acid, 5: Baicalein, 6: Kaempferol

RT: 0.00 - 25.00

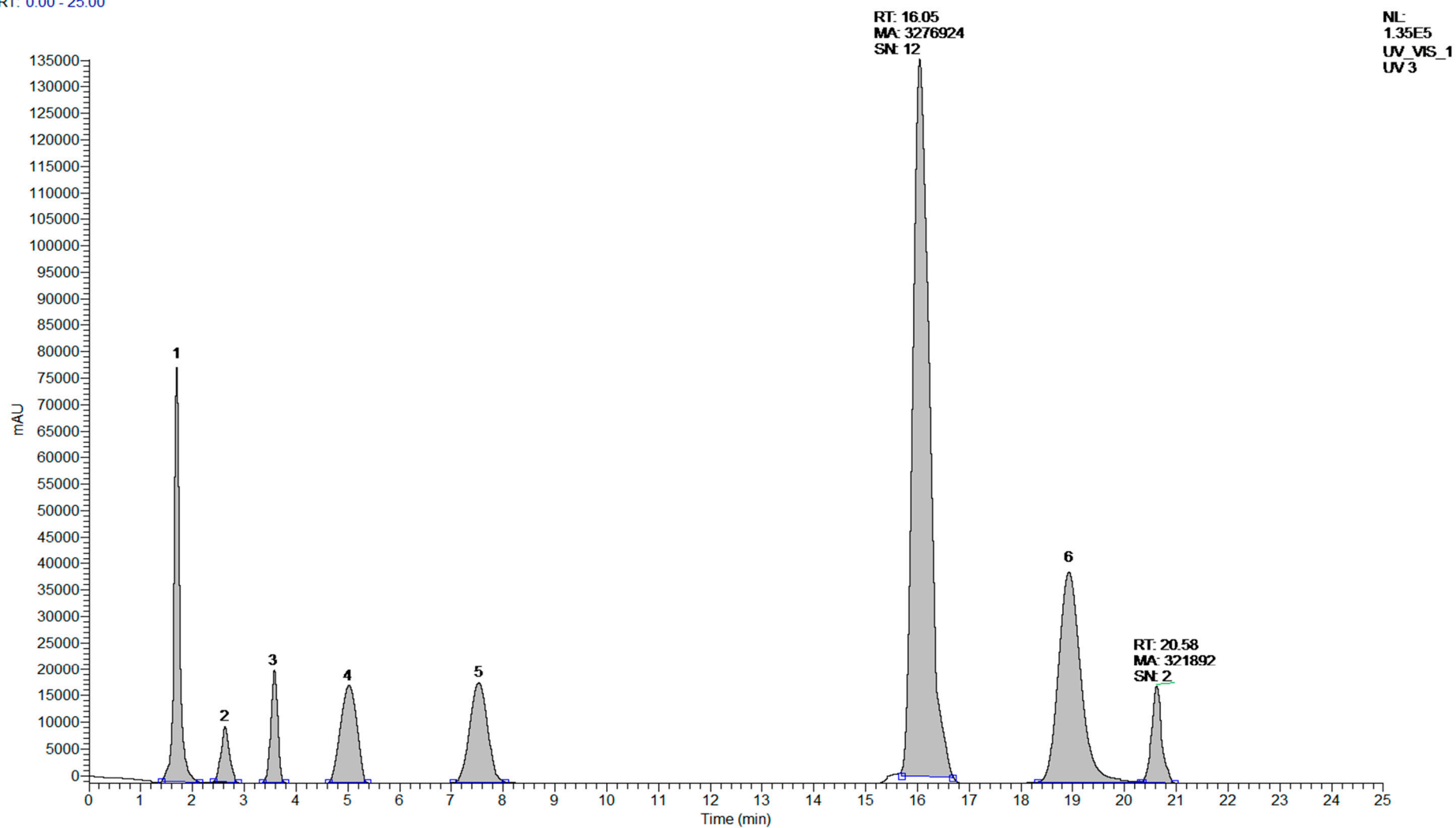


Figure S-4-P-NZ, UV and MS-SIM chromatograms of six compounds in New Zealand purple AR. 1: Caffeic acid, 2: Quercetin, 3: Apigenin, 4: Ferulic acid, 5: Baicalein, 6: Kaempferol