**Table S1.** Optimized mass spectrometric parameters of sixteen metabolites

| No | Name | CAS No | Formula | M.W. | MRM transitions(precursor → product) | tR (min) | DP/V | CE/eV |
|---|---|---|---|---|---|---|---|---|
| 1 | liquiritin apioside | 74639-14-8 | $C_{26}H_{30}O_{13}$ | 550.51 | 549.13/254.99 | 5.00 | -70 | -44 |
| 2 | neoliquiritin | 5088-75-5 | $C_{21}H_{22}O_9$ | 418.39 | 417.09/255.10 | 5.05 | -150 | -20 |
| 3 | liquiritin | 551-15-5 | $C_{21}H_{22}O_9$ | 418.39 | 417.08/255.06 | 5.23 | -125 | -26 |
| 4 | isoliquiritin apioside | 120926-46-7 | $C_{26}H_{30}O_{13}$ | 550.51 | 549.098/255.01 | 7.42 | -200 | -38 |
| 5 | isoliquiritin | 5041-81-6 | $C_{21}H_{22}O_9$ | 418.39 | 417.08/255.00 | 8.16 | -165 | -28 |
| 6 | ononin | 486-62-4 | $C_{22}H_{22}O_9$ | 430.40 | 475.09/267.20 | 8.62 | -30 | -18 |
| 7 | neoisoliquiritin | 59122-93-9 | $C_{21}H_{22}O_9$ | 418.39 | 417.09/254.90 | 8.71 | -80 | -22 |
| 8 | licochalcone B | 58749-23-8 | $C_{16}H_{14}O_5$ | 286.28 | 285.05/149.90 | 8.93 | -130 | -30 |
| 9 | liquiritigenin | 578-86-9 | $C_{15}H_{12}O_4$ | 256.25 | 254.99/135.00 | 9.73 | -95 | -20 |
| 10 | echinatin | 34221-41-5 | $C_{16}H_{14}O_4$ | 270.28 | 269.14/91.99 | 12.54 | -135 | -36 |
| 11 | isoliquiritigenin | 961-29-5 | $C_{15}H_{12}O_4$ | 256.25 | 255.09/119.00 | 14.48 | -85 | -32 |
| 12 | glycyrrhizin | 1405-86-3 | $C_{42}H_{62}O_{16}$ | 822.93 | 821.35/351.00 | 14.78 | -10 | -56 |
| 13 | formononetin | 485-72-3 | $C_{16}H_{12}O_4$ | 268.26 | 267.03/251.99 | 14.81 | -140 | -28 |
| 14 | licoflavone A | 61153-77-3 | $C_{20}H_{18}O_4$ | 322.35 | 320.99/266.00 | 14.99 | -125 | -32 |
| 15 | licochalcone A | 58749-22-7 | $C_{21}H_{22}O_4$ | 338.40 | 337.12/305.2 | 15.46 | -45 | -28 |
| 16 | glycyrrhetinic acid | 471-53-4 | $C_{30}H_{46}O_4$ | 470.68 | 469.28/425.00 | 18.07 | -210 | -52 |

Note: M.W means the molecular weight; DP means declustering potential; CE means collision energy.