**Table S1.** Summary of optimized QTRAP parameters for the LC-MS analysis of phenolic acids and flavonoid compounds. Abbreviations: Q1/Q3 – m/z values for precursor and fragment ion detected in Q1 and Q3 quadrupole, respectively (tracked MRM transitions); declustering potential (DP); entrance potential (EP); collision cell exit potential (CXP); collision energy (CE).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Compound** | **Retention time [min]** | **Q1/Q3**  **[m/z]** | **DP**  **[V]** | **EP**  **[V]** | **CEP**  **[V]** | **CE**  **[eV]** |
| **Phenolic acids** | | | | | | |
| Gallic acid | 5.16 | 168.7/78.9  168.7/124.9 | -35  -35 | -3  -3 | -12  -12 | -36  -14 |
| 3-Caffeoylquinic acid | 6.93 | 352.9/191.1  352.9/178.9 | -25  -25 | -10  -10 | -24.7  -24.7 | -28  -22 |
| Protocatechuic acid | 8.42 | 152.9/80.9  152.9/107.8 | -55  -55 | -1  -1 | -10  -10 | -26  -38 |
| 5-Caffeoylquinic acid | 9.24 | 353.0/190.9  353.0/85 | -35  -35 | -4.5  -4.5 | -16  -16 | -20  -60 |
| 4-Caffeoylquinic acid | 9.38 | 352.9/173  352.9/135  352.9/179 | -25  -25 | -10  -10 | -24.7  -24.7  -24.7 | -21  -36  -22 |
| 4-Hydroxybenzoic acid | 10.84 | 136.8/92.9 | -30 | -7 | -10 | -18 |
| Gentisic acid | 11.37 | 152.8/80  152.8/96.9 | -70  -70 | -4  -4 | -16  -16 | -110  -52 |
| Caffeic acid | 11.38 | 178.7/88.9  178.7/134.9 | -30  -30 | -6.5  -6.5 | -12  -12 | -46  -16 |
| Vanilic acid | 11.41 | 166.8/107.9  166.8/123 | -35  -35 | -4  -4 | -12  -12 | -18  -12 |
| Syringic acid | 11.42 | 196.9/122.8  196.9/181.9 | -30  -30 | -9  -9 | -12  -12 | -24  -12 |
| 3-Hydroxybenzoic acid | 12.12 | 136.8/93  136.8/75 | -35  -35 | -4  -4 | -16.7  -16.7 | -16  -48 |
| 4-Hydroxycinnamic acid (*p*-coumaric acid) | 14.10 | 162.7/119  162.7/93 | -30  -30 | -8  -8 | -12  -12 | -14  -44 |
| Sinapic acid | 14.47  14.94 | 222.8/121  222.8/148.9 | -35  -35 | -8.5  -8.5 | -10  -10 | -36  -20 |
| Ferulic acid | 14.80  15.22 | 192.8/133.9  192.8/177.9 | -25  -25 | -11.5  -11.5 | -14  -14 | -16  -12 |
| 3-Hydroxycinnamic acid (*m*-coumaric acid) | 15.50 | 162.7/119  162.7/91 | -35  -35 | -4.5  -4.5 | -12  -12 | -14  -36 |
| Rosmarinic acid | 15.91 | 358.7/160.8  358.7/196.8 | -50  -50 | -5  -5 | -26  -26 | -20  -22 |
| 2-Hydroxycinnamic acid (*o*-coumaric acid) | 16.80 | 162.7/119  162.7/93 | -25  -25 | -5  -5 | -10  -10 | -14  -46 |
| Salicylic acid | 17.91 | 136.8/93  136.8/75 | -35  -35 | -4  -4 | -10  -10 | -16  -48 |
| **Flavonoid aglycones** | | | | | | |
| Catechin | 9.64 | 288.8/244.9  288.8/109 | -45  -45 | -4.5  -4.5 | -16  -16 | -16  -32 |
|  |  |  |  |  |  |  |
| Epigallocatechin gallate | 11.20 | 457/169.1  457/125 | -25  -25 | -10  -10 | -28.6  -28.6 | -30  -30 |
| Dihydromyricetin | 12.10 | 319/193  319/125 | -25  -25 | -10  10 | -23.5  -23.5 | -30  -30 |
| Naringenin | 14.52 | 270.8/119  270.8/150.9 | -50  -50 | -11.5  -11.5 | -12  -12 | -34  -22 |
| Taxifolin | 15.15 | 302.7/124.9  302.7/284.8 | -45  -45 | -3.5  -3.5 | -18  -18 | -26  -14 |
| Myricetin | 16.57 | 316.7/136.9  316.7/150.9 | -55  -55 | -9  -9 | -14  -14 | -32  -26 |
| Luteolin | 17.82 | 284.7/132.9  284.7/150.9 | -75  -75 | -9  -9 | -18  -18 | -38  -26 |
| Eriodictiol | 17.89 | 286.7/134.9  286.7/150.9 | -45  -45 | -6  -6 | -12  -12 | -32  -18 |
| Laricitrin  (3'-O-Methylmyricetin) | 17.9 | 330.97/151  330.97/315.9 | -25  -25 | -10  10 | -23.9  -23.9 | -30  -30 |
| Quercetin | 17.94 | 300.7/150.9  300.7/178.8 | -60  -60 | -2.5  -2.5 | -12  -12 | -26  -20 |
| 3-*O*-Methylquercetin | 18.11 | 314.7/299.8  314.7/270.8 | -55  -55 | -9.5  -9.5 | -22  -22 | -18  -26 |
| Apigenin | 18.64 | 268.8/117  268.8/106.8 | -70  -70 | -9.5  -9.5 | -12  -12 | -44  -34 |
| Kaempferol | 18.85 | 284.7/116.8  284.7/93 | -70  -70 | -5  -5 | -12  -12 | -46  -52 |
| Isorhamnetin | 18.99 | 314.7/299.7  314.7/150.9 | -65  -65 | -2.5  -2.5 | -26  -26 | -20  -30 |
| Isokaempferide | 19.16 | 298.8/283.9  298.8/226.9 | -50  -50 | -4.5  -4.5 | -12  -12 | -18  -28 |
| Rhamnetin | 20.10 | 314.7/165  314.7/120.9 | -60  -60 | -5.5  -5.5 | -18  -18 | -24  -36 |
| Sakuranetin | 21.67 | 284.7/118.9  284.7/164.8 | -60  -60 | -5.5  -5.5 | -12  -12 | -34  -20 |
| Chrysin | 21.82 | 252.8/208.9  252.8/142.9 | -80  -80 | -10  -10 | -14  -14 | -22  -26 |
| Prunetin | 21.98 | 282.8/267.7  282.8/238.7 | -55  -55 | -12  -12 | -18  -18 | -20  -26 |
| Rhamnazin | 22.37 | 328.7/270.8  328.7/313.8 | -70  -70 | -3  -3 | -28  -28 | -26  -14 |
| **Flavonoid glycosides** | | | | | | |
| Eleutheroside E | 10.38 | 740.8/416.9  740.8/578.9 | -60  -60 | -3.5  -3.5 | -54  -54 | -36  -14 |
| Luteolin 3’,7’-diglucoside | 11.28 | 609.1/285  609.1/447 | -70  -70 | -7.5  -7.5 | -28  -28 | -50  -32 |
| Quercetin 3,7-dirhamnoside | 11.35 | 592.8/445.7  592.8/298.9 | -90  -90 | -4  -4 | -26  -26 | -48  -34 |
| Eriodictyol-7-*O*-rutinoside (Eriocitrin) | 11.93 | 594.8/286.9  594.8/150.9 | -75  -75 | -4.5  -4.5 | -28  -28 | -34  -46 |
| Quercetin-3-*O*-rutinoside (Rutin) | 11.99 | 608.7/299.6  608.7/270.9 | -90  -90 | -8  -8 | -30  -30 | -46  -60 |
| Kempferol 3,7-dirhamnoside (Kaempferitrin) | 12.16 | 576.8/284.8  576.8/430.9 | -80  -80 | -4.5  -4.5 | -28  -28 | -42  -30 |
| Apigenin – 6-*C*-glucoside (Isovitexin) | 12.38 | 430.8/310.9  430.8/340.9 | -65  -65 | -4.5  -4.5 | -18  -18 | -28  -26 |
| Apigenin – 8-*C*-glucoside (Vitexin) | 12.40 | 430.8/310.9  430.8/340.9 | -75  -75 | -4.5  -4.5 | -20  -20 | -26  -34 |
| Quercetin-3-*O*-galactoside (Hyperoside) | 12.80 | 462.7/299.7  462.7/254.7 | -70  -70 | -4  -4 | -18  -18 | -28  -42 |
| Luteolin-7-*O*-glucoside (Luteoloside) | 12.87 | 446.8/284.8  446.8/132.9 | -70  -70 | -10.5  -10.5 | -20  -20 | -30  -78 |
| Quercetin-3-*O*-glucoside (Isoquercetin) | 13.00 | 462.7/299.7  462.7/270.7 | -85  -85 | -1.5  -1.5 | -20  -20 | -30  -44 |
| Eriodictyol-7-*O*-glucopyranoside | 13.06 | 448.8/286.9  448.8/134.9 | -75  -75 | -4.5  -4.5 | -20  -20 | -24  -48 |
| Kaempferol – 3-*O*-rutinoside (Nicotiflorin) | 13.31 | 592.7/284.8  592.7/226.7 | -65  -65 | -12  -12 | -30  -30 | -38  -68 |
| Isorhamnetin-3-*O*-rutinoside (Narcissoside) | 13.52 | 622.8/314.9  622.8/298.8 | -90  -90 | -4.5  -4.5 | -30  -30 | -40  -52 |
| Naringenin-7-*O*-rutinoside (Narirutin) | 13.80 | 578.9/270.8  578.9/118.9 | -90  -90 | -4.5  -4.5 | -24  -24 | -34  -76 |
| Naringenin-7-*O*-rhamnosidoglucoside (Naringin) | 14.50 | 579.1/151  579.1/271 | -80  -80 | -4  -4 | -26  -26 | -54  -42 |
| Kaempferol – 3-*O*-glucoside (Astragalin) | 14.66 | 446.7/226.8  446.7/254.8 | -75  -75 | -9  -9 | -20  -20 | -54  -40 |
| Isorhamnetin-3-glucoside | 14.76 | 476.8/313.9  476.8/270.9 | -95  -95 | -10  -10 | -22  -22 | -30  -44 |
| Quercetin 3-*O*-rhamnoside (Quercitrin) | 14.83 | 446.7/299.7  446.7/270.7 | -65  -65 | -9  -9 | -18  -18 | -30  -40 |
| Apigenin 7-*O*-glucoside | 14.91 | 430.7/267.7  430.7/116.9 | -70  -70 | -9  -9 | -20  -20 | -38  -84 |
| Naringenin 7-*O*-glucoside | 15.12 | 432.7/270.8  432.7/118.9 | -40  -40 | -8.5  -8.5 | -20  -20 | -22  -64 |
| Afzelin (Kaempferol 3-rhamnoside) | 15.9 | 431.1/284.9  431.1/254.9 | -25  -25 | -10  -10 | -27.6  -27.6 | -30  -30 |
| Tiliroside | 17.39 | 592.8/284.8  592.8/254.7 | -70  -70 | -7.5  -7.5 | -24  -24 | -38  -56 |

**Table S2.** Analytical parameters used for quantitative determination of phenolic acids and flavonoids detected in samples.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Compound** | **LOD**  **[ng/mL]** | **LOQ**  **[ng/mL]** | **R2** | **Linearity range**  **[ng/mL]** |
| **Phenolic acids** | | | | |
| Gallic acid | 900 | 1600 | 0.9988 | 1600-16000 |
| 3-Caffeoylquinic acid | 50 | 150 | 0.9992 | 150-15000 |
| Protocatechuic acid | 200 | 400 | 0.9988 | 1890-18900 |
| 5-Caffeoylquinic acid | 75 | 180 | 0.9991 | 180-18000 |
| 4-Caffeoylquinic acid | 60 | 120 | 0.9990 | 150-15000 |
| Caffeic acid | 195 | 389 | 0.9991 | 389-19500 |
| Syringic acid | 500 | 732 | 0.9993 | 732-18300 |
| **Flavonoid aglycones** | | | | |
| Catechin | 250 | 330 | 0.9982 | 330-6600 |
| Luteolin | 6 | 16 | 0.9974 | 33-1650 |
| Eriodictyol | 33 | 66 | 0.9984 | 66-6600 |
| Quercetin | 66 | 132 | 0.9977 | 132-6600 |
| Apigenin | 15 | 22 | 0.9979 | 89-4470 |
| Isorhamnetin | 300 | 480 | 0.9993 | 850-5100 |
| Sakuranetin | 70 | 140 | 0.9991 | 140-6200 |
| **Flavonoid glycosides** | | | | |
| Eleutheroside E | 275 | 550 | 0.9989 | 1000-20000 |
| Luteolin 3’,7’-diglucoside | 250 | 500 | 0.9990 | 1250-25000 |
| Rutin | 150 | 300 | 0.9983 | 750-15000 |
| Hyperoside | 160 | 250 | 0.9983 | 500-25000 |
| Luteoloside | 50 | 100 | 0.9980 | 250-25000 |
| Isoquercetin | 160 | 250 | 0.9988 | 500-50000 |
| Eriodictyol-7-glucopyranoside | 150 | 300 | 0.9991 | 600-24000 |
| Nicotiflorin | 70 | 140 | 0.9993 | 140-60000 |
| Narcissoside | 75 | 150 | 0.9989 | 200-25000 |
| Astragalin | 100 | 250 | 0.9990 | 750-25000 |
| Isorhamnetin-3-glucoside | 100 | 225 | 0.9986 | 750-35000 |
| Quercitrin | 50 | 100 | 0.9986 | 1000-25000 |
| Apigenin 7-glucoside | 100 | 250 | 0.9989 | 750-25000 |
| Naringenin 7-*O*-glucoside | 100 | 167 | 0.9987 | 250-25000 |
| Afzelin | 10 | 20 | 0.9973 | 30-6000 |