

Supplementary Table 5 Flavonoids composition and content in each period.

| Class II metabolite | Compounds | The relative content | | | | | |
|--|--|---|----------|----------|----------|----------|----------|
| | | NP | P12 | P24 | P36 | P48 | |
| Flavonoid | Chrysin | 6.55E+04 | 3.41E+03 | 1.88E+03 | 6.82E+02 | 1.56E+03 | |
| | Apigenin 5-O-glucoside | 6.61E+05 | 6.61E+05 | 3.76E+05 | 5.37E+05 | 4.77E+05 | |
| | Apigenin 6,8-C-diglucoside | 1.81E+07 | 1.85E+07 | 1.68E+07 | 1.32E+07 | 9.21E+06 | |
| | Luteolin O-hexosyl-O-pentoside | 1.67E+04 | 1.75E+04 | 1.48E+04 | 5.70E+03 | 9.88E+03 | |
| | Chrysoeriol O-glucuronic acid-O-hexoside | 2.13E+04 | 4.57E+04 | 3.52E+04 | 3.37E+04 | 5.06E+04 | |
| | Luteolin 3',7-di-O-glucoside | 1.06E+05 | 5.48E+04 | 7.94E+04 | 7.75E+04 | 2.69E+04 | |
| | Chrysoeriol O-malonylhexoside | 1.42E+06 | 1.93E+06 | 1.63E+06 | 2.19E+06 | 3.11E+06 | |
| | Luteolin 8-C-hexosyl-O-hexoside | 5.35E+06 | 3.27E+06 | 3.91E+06 | 5.55E+06 | 4.82E+06 | |
| | Chrysoeriol C-hexoside | 2.44E+04 | 1.90E+04 | 3.18E+04 | 3.41E+04 | 2.84E+04 | |
| | Quercetin 5-O-malonylhexosyl-hexoside | 1.75E+04 | 1.75E+04 | 2.23E+04 | 1.67E+04 | 2.05E+04 | |
| | Quercetin 7-O-malonylhexosyl-hexoside | 1.09E+04 | 1.69E+04 | 2.93E+04 | 1.99E+04 | 1.41E+05 | |
| | Tricin 7-O-hexosyl-O-hexoside | 9.06E+05 | 1.14E+06 | 1.40E+06 | 1.85E+06 | 1.20E+06 | |
| | Tricin O-malonylhexoside | 3.25E+05 | 5.19E+05 | 9.75E+05 | 1.50E+06 | 1.61E+06 | |
| | Tricin 7-O-hexoside | 4.95E+06 | 4.94E+06 | 8.64E+06 | 1.39E+07 | 7.48E+06 | |
| | Luteolin 7-O-glucoside(Cynaroside) | 3.78E+06 | 8.40E+06 | 6.37E+06 | 6.10E+06 | 5.98E+06 | |
| | Hispidulin | 1.32E+06 | 2.31E+05 | 1.92E+05 | 7.01E+04 | 4.94E+04 | |
| | Luteolin-6,8-di-C-glucoside | 5.30E+05 | 4.39E+05 | 6.19E+05 | 4.57E+05 | 1.31E+05 | |
| | Luteolin-6-C-2-glucuronylglucoside | 6.37E+05 | 5.48E+05 | 6.28E+05 | 5.35E+05 | 4.34E+05 | |
| | Diosmetin-7-O-galactoside | 2.06E+07 | 1.15E+07 | 6.19E+06 | 1.88E+06 | 2.72E+06 | |
| | Luteolin-7-O-(6'-O-malonyl)- β -D-glucoside | 1.87E+04 | 1.93E+04 | 1.72E+04 | 2.36E+04 | 2.13E+04 | |
| | Diosmetin-7-O-(6'-O-malonyl)- β -D-glucoside | 1.33E+05 | 1.76E+05 | 1.49E+05 | 1.88E+05 | 2.96E+05 | |
| | Luteolin-7-O-rutinoside | 5.30E+06 | 4.30E+06 | 4.44E+06 | 4.15E+06 | 4.15E+06 | |
| | Luteolin-7,3'-Di-O- β -D-Glucoside | 7.26E+05 | 3.60E+05 | 4.64E+05 | 5.65E+05 | 1.58E+05 | |
| | Lonicerin | 8.42E+06 | 6.68E+06 | 6.70E+06 | 6.51E+06 | 5.91E+06 | |
| | Flavonols | Kaempferol-3-O-glucoside-7-O-rhamnoside | 8.95E+06 | 7.08E+06 | 7.44E+06 | 7.04E+06 | 6.66E+06 |
| | | Quercetin-3-O-glucoside-7-O-rhamnoside | 5.17E+06 | 3.35E+06 | 4.02E+06 | 5.73E+06 | 4.93E+06 |
| | | Quercitrin | 4.92E+04 | 1.72E+04 | 3.16E+04 | 4.40E+04 | 6.28E+04 |
| | | Tamarixetin | 1.02E+04 | 5.87E+03 | 2.51E+04 | 2.07E+04 | 1.46E+04 |
| Isorhamnetin 3-O-neohesperidoside | | 4.93E+04 | 2.86E+04 | 4.25E+04 | 5.65E+04 | 5.29E+04 | |
| Quercetin | | 1.49E+04 | 8.52E+04 | 7.60E+04 | 2.25E+05 | 8.00E+04 | |
| Quercetin-7-O-(6'-O-malonyl)- β -D-glucoside | | 4.51E+03 | 2.22E+03 | 5.27E+03 | 9.65E+03 | 7.48E+03 | |
| Quercetin 3,7-bis-O- β -D-glucoside | | 1.19E+06 | 7.60E+05 | 8.92E+05 | 5.92E+05 | 5.10E+05 | |
| Kaempferol-3-neohesperidoside-7-glucoside | | 2.93E+04 | 3.64E+04 | 2.17E+04 | 9.33E+03 | 1.01E+04 | |
| Kaempferol-3-rutinoside-7-glucoside | | 2.40E+04 | 3.01E+04 | 2.53E+04 | 1.41E+04 | 1.15E+04 | |
| 6-Hydroxykaempferol-7-O-glucoside | | 1.02E+07 | 8.88E+06 | 7.52E+06 | 9.55E+06 | 9.80E+06 | |
| 6-Hydroxykaempferol-3,6-O-Diglucoside | | 1.11E+06 | 6.14E+05 | 7.02E+05 | 1.09E+06 | 8.10E+05 | |
| 6-Hydroxykaempferol-7,6-O-Diglucoside | | 1.29E+06 | 8.57E+05 | 9.48E+05 | 6.25E+05 | 5.07E+05 | |
| Flavonoid carbonoside | 8-C-Hexosyl-hesperetin O-hexoside | 4.87E+05 | 3.21E+05 | 3.73E+05 | 2.38E+05 | 1.82E+05 | |
| | 6-C-Hexosyl-hesperetin O-hexoside | 1.36E+05 | 1.56E+05 | 1.59E+05 | 1.65E+05 | 1.31E+05 | |
| | 8-C-Hexosyl-luteolin O-hexoside | 1.56E+05 | 9.35E+04 | 1.17E+05 | 1.24E+05 | 1.97E+05 | |

| | | | | | | |
|----------------|----------------------------------|----------|----------|----------|----------|----------|
| | Apigenin-8-C-glucoside | 1.03E+07 | 1.01E+07 | 5.68E+06 | 7.81E+06 | 6.91E+06 |
| | Chysoeriol-6,8-di-C-glucoside | 2.34E+06 | 1.84E+06 | 2.21E+06 | 1.99E+06 | 1.51E+06 |
| | Swertiajaponin | 2.64E+05 | 1.89E+05 | 1.09E+05 | 1.74E+05 | 1.52E+05 |
| | Genistein 8-C-glucoside | 1.46E+07 | 1.42E+07 | 8.54E+06 | 1.16E+07 | 1.02E+07 |
| | Vitexin-2-O-D-glucopyranoside | 4.22E+06 | 4.10E+06 | 4.00E+06 | 2.77E+06 | 1.93E+06 |
| | Hesperetin C-malonylhexoside | 4.78E+04 | 4.23E+04 | 4.60E+04 | 4.13E+04 | 3.16E+04 |
| Anthocyanins | Cyanin chloride | 1.59E+06 | 1.41E+06 | 1.10E+07 | 2.26E+07 | 2.80E+07 |
| | Petunidin 3-O-glucoside | 1.71E+05 | 2.41E+05 | 1.95E+05 | 1.51E+05 | 1.37E+05 |
| | Peonidin 3-O-glucoside chloride | 1.83E+07 | 1.99E+07 | 2.84E+07 | 6.94E+07 | 7.61E+07 |
| | Cyanidin 3-O-malonylhexoside | 6.44E+06 | 4.64E+06 | 7.20E+06 | 1.22E+07 | 1.54E+07 |
| | Pelargonidin 3-O-malonylhexoside | 1.12E+06 | 1.22E+06 | 6.32E+05 | 6.42E+05 | 1.28E+06 |
| | Peonidin | 9.42E+03 | 1.93E+04 | 1.44E+04 | 1.62E+04 | 1.15E+04 |
| | Jaceosidin | 2.30E+05 | 9.02E+04 | 1.59E+05 | 1.05E+05 | 6.55E+04 |
| | Anthocyanin 3-O-beta-D-glucoside | 1.37E+07 | 1.08E+07 | 1.11E+07 | 6.77E+06 | 6.70E+06 |
| Flavanols | (+)-Gallocatechin | 2.84E+04 | 2.94E+04 | 4.05E+04 | 8.59E+04 | 6.14E+04 |
| | L-Epicatechin | 2.02E+04 | 1.63E+04 | 2.42E+04 | 6.06E+04 | 3.36E+04 |
| | Protocatechuic aldehyde | 1.16E+05 | 1.36E+05 | 2.39E+05 | 1.75E+05 | 1.28E+05 |
| Isoflavones | Malonyglygenistin | 3.72E+05 | 3.18E+05 | 2.14E+05 | 1.25E+05 | 3.90E+05 |
| | Psoralenol | 5.79E+06 | 1.67E+06 | 2.91E+06 | 4.39E+05 | 5.13E+05 |
| Dihydroflavone | Homoeriodictyol | 5.93E+04 | 1.75E+04 | 2.68E+04 | 4.92E+03 | 1.16E+04 |
| Chalcones | Naringenin chalcone | 4.03E+05 | 7.73E+04 | 1.97E+05 | 2.71E+05 | 3.85E+05 |