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| Table S1 The table of flavonoid metabolites of PCRC with different aging periods  |
| Component name | Precursor ion | Ionization model | Molecular formula | Molecular Weight  | Classification | C0 | C1 | C2 | C3 | C4 | C29 |
| Tectochrysin | 269.08  | [M+H]+ | C16H12O4 | 268.074  | Flavonoid | 0  | 21822  | 20924  | 22378  | 18803  | 18717  |
| Apigenin | 271.06  | [M+H]+ | C15H10O5 | 270.053  | Flavonoid | 0  | 69684  | 194160  | 176273  | 234647  | 191600  |
| 8-Methoxychrysin(Wogonin) | 285.08  | [M+H]+ | C16H12O5 | 284.068  | Flavonoid | 87443  | 78834  | 93191  | 79655  | 70357  | 49135  |
| Isoscutellarein | 287.06  | [M+H]+ | C15H10O6 | 286.047  | Flavonoid | 77022667  | 50893000  | 65170000  | 52640667  | 25652000  | 28880667  |
| Luteolin | 285.04  | [M-H]- | C15H10O6 | 286.048  | Flavonoid | 0  | 99007  | 183020  | 399967  | 321533  | 194553  |
| Hispidulin | 301.07  | [M+H]+ | C16H12O6 | 300.063  | Flavonoid | 591870  | 1971100  | 1923933  | 5635267  | 3397133  | 2027800  |
| Diosmetin | 299.06  | [M-H]- | C16H12O6 | 300.063  | Flavonoid | 5567233  | 2317000  | 1797967  | 7555833  | 4590500  | 5743867  |
| 6,7,8-Tetrahydroxy-5-methoxyflavone | 301.07  | [M+H]+ | C16H12O6 | 300.063  | Flavonoid | 631377  | 1950700  | 2183433  | 5733433  | 3503333  | 1977733  |
| 5,7,8-Tetrahydroxy-6-methoxyflavone | 301.07  | [M+H]+ | C16H12O6 | 300.063  | Flavonoid | 100846  | 52927  | 0  | 370727  | 49953  | 46693  |
| Tricetin | 301.04  | [M-H]- | C15H10O7 | 302.043  | Flavonoid | 18482667  | 17647667  | 19474000  | 14083000  | 14713667  | 11634000  |
| 6-Hydroxyluteolin | 301.04  | [M-H]- | C15H10O7 | 302.043  | Flavonoid | 0  | 36007  | 80031  | 109570  | 110593  | 455953  |
| 5,7,4'-Trimethoxyflavone | 313.11  | [M+H]+ | C18H16O5 | 312.100  | Flavonoid | 2746233  | 2004233  | 2075867  | 3671867  | 2712000  | 2784233  |
| Ladanein | 315.09  | [M+H]+ | C17H14O6 | 314.079  | Flavonoid | 5708467  | 3595533  | 538900  | 22362667  | 9550733  | 11776333  |
| 5,2'-Dihydroxy-7,8-dimethoxy flavone | 315.09  | [M+H]+ | C17H14O6 | 314.079  | Flavonoid | 266750  | 198297  | 185997  | 463517  | 287623  | 355803  |
| Tricin | 331.08  | [M+H]+ | C17H14O6O7 | 330.074  | Flavonoid | 197553  | 340580  | 30148  | 602223  | 258257  | 238673  |
| Tetramethyl-O-isoscutellarein | 343.12  | [M+H]+ | C19H18O6 | 342.110  | Flavonoid | 2974767  | 2131833  | 2730133  | 3589667  | 3276433  | 3505433  |
| 5,7,8,4'-Tetramethoxyflavone | 343.12  | [M+H]+ | C19H18O6 | 342.110  | Flavonoid | 8135633  | 6259000  | 7578300  | 10111867  | 9374933  | 9645200  |
| 7,8-Dihydroxy-5,6,4'-trimethoxyflavone | 345.10  | [M+H]+ | C18H16O7 | 344.089  | Flavonoid | 5824467  | 3700567  | 2296033  | 17944667  | 7535633  | 14042000  |
| 5,7-Dihydroxy-3',4',5'-trimethoxyflavone | 345.10  | [M+H]+ | C18H16O7 | 344.090  | Flavonoid | 27547667  | 20061333  | 18395000  | 49951333  | 44449333  | 56847667  |
| 5,7,4',5'-Tetrahydro-3',6-dimethoxyflavone | 347.08  | [M+H]+ | C17H14O8 | 346.069  | Flavonoid | 1977300  | 1728600  | 802760  | 6304167  | 3293700  | 4872767  |
| Limocitrin | 347.07  | [M+H]+ | C17H14O8 | 346.069  | Flavonoid | 2093233  | 1345767  | 756007  | 9187533  | 4453933  | 8396233  |
| 7-Hydroxy-3,5,6,8-tetramethoxyflavone | 359.11  | [M+H]+ | C19H18O7 | 358.105  | Flavonoid | 4157533  | 3771933  | 3727733  | 6327367  | 5337367  | 6088433  |
| 5-Hydroxy-6,7,3',4'-tetramethoxyflavone | 359.11  | [M+H]+ | C19H18O7 | 358.105  | Flavonoid | 122710000  | 137023333  | 113473333  | 190366667  | 146906667  | 161900000  |
| Isosinensetin | 373.13  | [M+H]+ | C20H20O7 | 372.121  | Flavonoid | 6607900  | 6602933  | 6486267  | 9363233  | 8669700  | 8266633  |
| Sinensetin (5,6,7,3',4'-pentamethoxyflavone) | 373.13  | [M+H]+ | C20H20O7 | 372.121  | Flavonoid | 2030633  | 1910767  | 2178300  | 2650633  | 2656367  | 2487333  |
| Skullcapflavon II | 375.11  | [M+H]+ | C19H18O8 | 374.100  | Flavonoid | 5890767  | 2552133  | 2177067  | 11817000  | 6840367  | 12938000  |
| 5-Hydroxy-6,7,8,3',4'-pentamethoxyflavone | 389.12  | [M+H]+ | C20H20O8 | 388.116  | Flavonoid | 295460000  | 278610000  | 274616667  | 298050000  | 279746667  | 293590000  |
| Nobiletin | 403.14  | [M+H]+ | C21H22O8 | 402.131  | Flavonoid | 9971500  | 9870533  | 8308200  | 10398333  | 10374333  | 10351333  |
| Apigenin 7-O-glucoside(Cosmosiin) | 431.10  | [M-H]- | C21H20O10 | 432.106  | Flavonoid | 54740  | 277050  | 506453  | 190017  | 272907  | 229623  |
| Apigenin 5-O-glucoside | 433.11  | [M+H]+ | C21H20O10 | 432.106  | Flavonoid | 98752000  | 30621000  | 57616333  | 26812000  | 24127000  | 17756667  |
| Loquatoside | 437.11  | [M-H]- | C20H22O11 | 438.116  | Flavonoid | 2157467  | 943910  | 1087607  | 1427967  | 188630  | 0  |
| Luteolin-7-O-glucoside(Cynaroside) | 449.11  | [M+H]+ | C21H20O11 | 448.101  | Flavonoid | 865727  | 482110  | 544613  | 428940  | 349427  | 303023  |
| Diosmetin-7-O-galactoside | 463.12  | [M+H]+ | C22H22O11 | 462.116  | Flavonoid | 465617  | 435267  | 0  | 1297767  | 350773  | 536077  |
| Diosmetin-6-C-glucoside | 463.12  | [M+H]+ | C22H22O11 | 462.116  | Flavonoid | 2586667  | 1504900  | 1224300  | 2209467  | 1067000  | 768990  |
| Chrysoeriol-7-O-glucoside | 461.11  | [M-H]- | C22H22O11 | 462.116  | Flavonoid | 4254500  | 5652700  | 2002533  | 14309667  | 5912233  | 6147133  |
| Chrysoeriol-5-O-hexoside | 461.11  | [M-H]- | C22H22O11 | 462.116  | Flavonoid | 701150  | 914130  | 715993  | 1137833  | 835260  | 863867  |
| Chrysoeriol-C-hexoside | 463.12  | [M+H]+ | C22H22O11 | 462.116  | Flavonoid | 86464  | 96580  | 108610  | 159900  | 149997  | 195067  |
| Hesperetin-7-O-glucoside | 465.14  | [M+H]+ | C22H24O11 | 464.131  | Flavonoid | 266713333  | 218520000  | 222330000  | 183836667  | 184690000  | 142130000  |
| Hesperetin-5-O-glucoside | 463.12  | [M-H]- | C22H24O11 | 464.131  | Flavonoid | 202287  | 256913  | 223737  | 1900600  | 278387  | 15956  |
| 5,2'-Dihydroxy-7,8-dimethoxyflavone glycosides | 477.14  | [M+H]+ | C23H24O11 | 476.132  | Flavonoid | 508293  | 1486160  | 670443  | 2824167  | 1671867  | 3801633  |
| Limocitrin-O-arabinoside | 479.12  | [M+H]+ | C22H22O12 | 478.111  | Flavonoid | 55909  | 189930  | 335893  | 184257  | 136717  | 104145  |
| Limocitrin 3-rhamnoside | 493.13  | [M+H]+ | C23H24O12 | 492.126  | Flavonoid | 436097  | 490233  | 371497  | 890843  | 620997  | 1215700  |
| Tricin 7-O-Glucoside | 493.13  | [M+H]+ | C23H24O12 | 492.127  | Flavonoid | 469063  | 491803  | 343247  | 804093  | 581697  | 1199667  |
| Chrysoeriol-O-acetylhexoside | 503.12  | [M-H]- | C24H24O12 | 504.127  | Flavonoid | 23328333  | 10802333  | 9599667  | 3803700  | 1523233  | 263763  |
| Eupatilin 3-glucoside | 507.15  | [M+H]+ | C24H26O12 | 506.142  | Flavonoid | 88674  | 109450  | 117530  | 274177  | 201000  | 535567  |
| Limocitrin 7-glucoside | 509.13  | [M+H]+ | C23H24O13 | 508.121  | Flavonoid | 7607667  | 5936867  | 4745900  | 4088767  | 4405767  | 5571367  |
| Limocitrin 3-galactoside | 509.13  | [M+H]+ | C23H24O13 | 508.121  | Flavonoid | 2135500  | 2774367  | 2740833  | 5433200  | 4918833  | 8263733  |
| Limocitrin 3-glucoside | 509.13  | [M+H]+ | C23H24O13 | 508.121  | Flavonoid | 1707300  | 2731033  | 2328367  | 6852367  | 7159633  | 10429000  |
| Tricin O-saccharic acid | 521.09  | [M-H]- | C23H22O14 | 522.101  | Flavonoid | 2996633  | 3654567  | 3291000  | 2804400  | 1655333  | 1308733  |
| Tricin O-eudesmic acid | 523.12  | [M-H]- | C27H24O11 | 524.132  | Flavonoid | 186427  | 138527  | 736710  | 160647  | 576123  | 57931  |
| Diosmetin-7-O-(6'-O-malonyl)-β-D-glucoside | 549.12  | [M+H]+ | C25H24O14 | 548.117  | Flavonoid | 1032643  | 435240  | 184797  | 64951  | 4508  | 0  |
| Tricin O-malonyl rhamnoside | 561.12  | [M-H]- | C26H26O14 | 562.132  | Flavonoid | 15981  | 25584  | 15825  | 33564  | 24914  | 17762  |
| Tricin 7-O-(6''-O-Malonyl)-Beta-D-Glucoside | 579.13  | [M+H]+ | C26H26O15 | 578.127  | Flavonoid | 24980667  | 8171500  | 6992133  | 2804133  | 1316667  | 588470  |
| Rhoifolin | 579.17  | [M+H]+ | C27H30O14 | 578.164  | Flavonoid | 157166667  | 51323000  | 83418333  | 51809667  | 42239000  | 36157000  |
| Apigenin 7-rutinoside(Isorhoifolin) | 579.17  | [M+H]+ | C27H30O14 | 578.164  | Flavonoid | 1472200  | 350030  | 648273  | 349030  | 312583  | 228440  |
| Luteolin-O-hexosyl-O-pentoside | 581.15  | [M+H]+ | C26H28O15 | 580.143  | Flavonoid | 523380  | 274083  | 335600  | 363623  | 185283  | 68237  |
| Chrysoeriol-C-rhamnoside-O-rhamnoside | 593.18  | [M+H]+ | C28H32O14 | 592.177  | Flavonoid | 945087  | 2644267  | 2911900  | 1035713  | 2242200  | 1959933  |
| Linarin | 593.19  | [M+H]+ | C28H32O14 | 592.179  | Flavonoid | 1630750  | 4572900  | 4918533  | 1890833  | 3913100  | 3475900  |
| Luteolin-6-C-5-glucuronylxyloside | 595.13  | [M+H]+ | C26H26O16 | 594.122  | Flavonoid | 2100100  | 1230600  | 1181700  | 1594633  | 1184933  | 1303233  |
| Luteolin-caffeoyl-O-rhamnoside | 593.13  | [M-H]- | C30H26O13 | 594.138  | Flavonoid | 35219667  | 17477000  | 24030000  | 15168667  | 12753667  | 9171967  |
| Luteolin-7-O-rutinoside | 593.15  | [M-H]- | C27H30O15 | 594.158  | Flavonoid | 4364700  | 3173833  | 3357200  | 3993200  | 2974133  | 3207833  |
| Luteolin 7-O-neohesperidoside(Lonicerin) | 595.17  | [M+H]+ | C27H30O15 | 594.158  | Flavonoid | 5651733  | 3175000  | 2989867  | 3018000  | 2257200  | 1700367  |
| Apigenin 6,8-C-diglucoside | 595.17  | [M+H]+ | C27H30O15 | 594.158  | Flavonoid | 4869533  | 2929300  | 2890767  | 3485200  | 2406633  | 2645533  |
| Chrysoeriol-7-O-rutinoside | 607.17  | [M-H]- | C28H32O15 | 608.174  | Flavonoid | 11591667  | 25004000  | 16462000  | 17058000  | 21581333  | 19878000  |
| Diosmin | 609.18  | [M+H]+ | C28H32O15 | 608.174  | Flavonoid | 1246273  | 1666000  | 1225733  | 1291100  | 1303500  | 1147967  |
| Luteolin-3',7-di-O-glucoside | 611.16  | [M+H]+ | C27H30O16 | 610.153  | Flavonoid | 895787  | 370770  | 95262  | 564733  | 104667  | 260827  |
| Luteolin-8-C-hexosyl-O-hexoside | 611.16  | [M+H]+ | C27H30O16 | 610.153  | Flavonoid | 17029333  | 9035267  | 6312033  | 11782333  | 7761633  | 4755400  |
| Apigenin-7-O-[β-D-glucuronosyl(1→2)-O-β-D-glucuronoside) | 623.12  | [M+H]+ | C27H26O17 | 622.117  | Flavonoid | 952890  | 0  | 0  | 0  | 0  | 0  |
| Luteolin-6-C-2-glucuronylglucoside | 625.14  | [M+H]+ | C27H28O17 | 624.133  | Flavonoid | 2580800  | 1986633  | 1477633  | 2551633  | 1514067  | 1555400  |
| Chrysoeriol-O-hexosyl-O-hexoside | 625.18  | [M+H]+ | C28H32O16 | 624.169  | Flavonoid | 302257  | 211690  | 239800  | 285687  | 258430  | 204797  |
| Tricin-O-rutinoside | 639.19  | [M+H]+ | C29H34O16 | 638.184  | Flavonoid | 21733333  | 27659667  | 30596667  | 29560333  | 32847667  | 23675333  |
| Luteolin-O-sinapoylhexoside | 655.17  | [M+H]+ | C32H30O15 | 654.158  | Flavonoid | 127580  | 64086  | 13599  | 244900  | 6411  | 100523  |
| Sudachiin B | 667.19  | [M+H]+ | C30H34O17 | 666.180  | Flavonoid | 6479700  | 10167333  | 13377000  | 23983667  | 19959000  | 42296000  |
| Sudachiin C | 667.19  | [M+H]+ | C30H34O17 | 666.180  | Flavonoid | 6595067  | 10396833  | 13719667  | 24551000  | 20224333  | 42833667  |
| Chrysoeriol-O-sinapoylhexoside | 669.18  | [M+H]+ | C33H32O15 | 668.174  | Flavonoid | 2557433  | 2044833  | 268163  | 8258367  | 1071877  | 1922000  |
| Tricin 7-O-[sinapoyl]-glucoside | 699.19  | [M+H]+ | C34H34O16 | 698.185  | Flavonoid | 141843  | 234690  | 141330  | 512833  | 404537  | 752930  |
| Apigenin-O-rutinoside-O-Hexoside | 725.20  | [M+H]+ | C33H40O18 | 724.193  | Flavonoid | 1155567  | 218540  | 336853  | 151583  | 37279  | 0  |
| Apigenin O-hexosyl-O-rutinoside | 739.21  | [M-H]- | C33H40O19 | 740.216  | Flavonoid | 379580  | 127783  | 244680  | 127427  | 147277  | 159067  |
| Narirutin 4'-glucoside | 741.23  | [M-H]- | C33H42O19 | 742.232  | Flavonoid | 1413600  | 311603  | 763863  | 316380  | 220017  | 200363  |
| Luteolin-C-hexosyl-O-rhamnoside O-hexoside | 757.22  | [M+H]+ | C33H40O20 | 756.211  | Flavonoid | 279820  | 214277  | 129560  | 223480  | 125767  | 120243  |
| Chrysoeriol-O-hexosyl-O-rutinoside | 771.23  | [M+H]+ | C34H42O20 | 770.227  | Flavonoid | 32574333  | 34010000  | 33408000  | 28367333  | 29969333  | 25641667  |
| Chrysoeriol-6-C-hexoside 8-C-hexoside-O-hexoside | 787.23  | [M+H]+ | C34H42O21 | 786.222  | Flavonoid | 1093677  | 829373  | 603067  | 604303  | 474963  | 466680  |
| Kumatakenin | 313.07  | [M-H]- | C17H14O6 | 314.079  | Flavonols | 1835600  | 1032677  | 127797  | 9449900  | 3579800  | 4104633  |
| Rhamnetin(7-O-Methxyl Quercetin) | 315.05  | [M-H]- | C16H12O7 | 316.058  | Flavonols | 115535  | 42470  | 47213  | 163860  | 95041  | 94180  |
| Isorhamnetin | 315.05  | [M-H]- | C16H12O7 | 316.058  | Flavonols | 170627  | 126407  | 74241  | 1338167  | 447953  | 307763  |
| Tamarixetin (3,3',5,7-Tetrahydroxy-4'-Methoxyflavone) | 317.07  | [M+H]+ | C16H12O7 | 316.058  | Flavonols | 108568  | 78792  | 22971  | 729193  | 268150  | 346577  |
| Sexangularetin | 315.05  | [M-H]- | C16H12O7 | 316.058  | Flavonols | 11340  | 26131  | 18948  | 36136  | 23087  | 29831  |
| Myricetin | 319.04  | [M+H]+ | C15H10O8 | 318.038  | Flavonols | 193650  | 167567  | 129280  | 167963  | 92672  | 81228  |
| 3,7-Di-O-methylquercetin | 329.07  | [M-H]- | C17H14O7 | 330.074  | Flavonols | 124232  | 157095  | 19622  | 1145460  | 285647  | 296357  |
| Syringetin | 345.06  | [M-H]- | C17H14O8 | 346.069  | Flavonols | 574117  | 364097  | 215270  | 2679900  | 1492033  | 3039933  |
| Tangeretin | 373.13  | [M+H]+ | C20H20O7 | 372.121  | Flavonols | 4152167  | 3859667  | 4086067  | 4390600  | 4209700  | 4508867  |
| Natsudaidain | 417.12  | [M-H]- | C21H22O9 | 418.126  | Flavonols | 12579000  | 13199333  | 14265333  | 32273333  | 36856333  | 31437667  |
| Kaempferol-3-O-rhamnoside (Afzelin)(Kaempferin) | 431.10  | [M-H]- | C21H20O10 | 432.106  | Flavonols | 34298  | 34856  | 63205  | 53453  | 35651  | 46179  |
| 3,5,6,7,8,3',4'-Heptamethoxyflavone | 433.15  | [M+H]+ | C22H24O9 | 432.142  | Flavonols | 9314100  | 9192733  | 10682667  | 14497000  | 17378333  | 15745333  |
| Quercetin-3-O-β-D-xylopyranoside | 435.09  | [M+H]+ | C20H18O11 | 434.084  | Flavonols | 306070  | 142177  | 183367  | 131213  | 108361  | 75791  |
| Isorhamnetin-3-O-arabinoside | 449.11  | [M+H]+ | C21H20O11 | 448.100  | Flavonols | 661973  | 493873  | 540423  | 472393  | 389490  | 261863  |
| Kaempferol-3-O-glucoside (Astragalin) | 449.11  | [M+H]+ | C21H20O11 | 448.101  | Flavonols | 3700333  | 2451300  | 1803167  | 4811533  | 2075900  | 2056300  |
| Kaempferol-3-O-galactoside (Trifolin) | 447.09  | [M-H]- | C21H20O11 | 448.101  | Flavonols | 367580  | 419453  | 242413  | 851010  | 338677  | 467333  |
| Kaempferol-7-O-glucoside | 447.09  | [M-H]- | C21H20O11 | 448.101  | Flavonols | 439043  | 512903  | 272253  | 1043093  | 425410  | 558733  |
| Quercetin-3-O-α-L-rhamnoside(Quercitrin ) | 449.11  | [M+H]+ | C21H20O11 | 448.101  | Flavonols | 16635000  | 12511000  | 13150333  | 10355333  | 10173967  | 7405433  |
| Kaempferol-3-O-β-D-glucuronide | 461.07  | [M-H]- | C21H18O12 | 462.080  | Flavonols | 155323  | 193310  | 173390  | 277353  | 185923  | 210483  |
| Quercetin-3-O-β-D-glucoside(Isoquercitrin) | 463.09  | [M-H]- | C21H20O12 | 464.095  | Flavonols | 471477  | 450560  | 351200  | 1113333  | 440320  | 591710  |
| Quercetin-3-O-β-D-Galactoside (Hyperin) | 463.09  | [M-H]- | C21H20O12 | 464.095  | Flavonols | 1808900  | 2010167  | 1969467  | 2282633  | 1905833  | 1713067  |
| Myricetin-3-O-rhamnoside (Myricitrin) | 463.09  | [M-H]- | C21H20O12 | 464.095  | Flavonols | 4912  | 25321  | 18450  | 6014  | 16509  | 5870  |
| Isorhamnetin-3-O-glucoside | 479.11  | [M+H]+ | C22H22O12 | 478.101  | Flavonols | 14991000  | 12796333  | 9679867  | 17761000  | 12444667  | 13041333  |
| Isorhamnetin-C-glucoside | 479.12  | [M+H]+ | C22H22O12 | 478.111  | Flavonols | 526720  | 631567  | 780303  | 1381433  | 846877  | 801007  |
| Kaempferol-3-O-(6''-acetyl)-glucoside | 489.10  | [M-H]- | C23H22O12 | 490.111  | Flavonols | 255677  | 48383  | 26931  | 16761  | 4689  | 0  |
| Quercetin-O-acetylhexoside | 505.10  | [M-H]- | C23H22O13 | 506.106  | Flavonols | 0  | 50023  | 94463  | 324543  | 293150  | 256400  |
| Isorhamnetin-acetyl hexoside | 519.11  | [M-H]- | C24H24O13 | 520.122  | Flavonols | 937593  | 264943  | 160227  | 57247  | 16444  | 0  |
| Kaempferol-3-O-(6''-trans-p-Coumaroyl)-β-D-galactopyranoside | 595.14  | [M+H]+ | C30H26O13 | 594.137  | Flavonols | 17814000  | 8442200  | 11416667  | 7091100  | 5660833  | 4280367  |
| Kaempferol-3-O-(2''-trans-p-Coumaroyl)-β-D-galactopyranoside | 595.14  | [M+H]+ | C30H26O13 | 594.137  | Flavonols | 761033  | 329817  | 393683  | 333483  | 211737  | 101746  |
| Tiliroside | 593.13  | [M-H]- | C30H26O13 | 594.137  | Flavonols | 34270000  | 17128000  | 23440333  | 14883000  | 12474667  | 8904767  |
| Kaempferol-3-O-neohesperidoside | 595.17  | [M+H]+ | C27H30O15 | 594.158  | Flavonols | 259633333  | 180110000  | 177383333  | 148510000  | 133400000  | 93072333  |
| Kaempferol-3-O-rutinoside(Nicotiflorin) | 593.15  | [M-H]- | C27H30O15 | 594.158  | Flavonols | 1038140  | 801000  | 733040  | 733780  | 746940  | 682400  |
| Quercetin-O-feruloyl-Pentoside | 611.16  | [M+H]+ | C30H26O14 | 610.148  | Flavonols | 21798667  | 12526333  | 8698433  | 12703000  | 11202000  | 5427433  |
| Quercetin-3-O-rutinoside (Rutin) | 609.15  | [M-H]- | C27H30O16 | 610.153  | Flavonols | 6527733  | 1743900  | 1219200  | 12907333  | 1104320  | 3084000  |
| Kaempferol-3,7-O-diglucoside | 611.16  | [M+H]+ | C27H30O16 | 610.153  | Flavonols | 1169803  | 751840  | 587013  | 419177  | 477343  | 458773  |
| Methylquercetin glu-rha | 625.18  | [M+H]+ | C28H32O16 | 624.169  | Flavonols | 81896333  | 61244333  | 56771333  | 83991667  | 68572333  | 58875333  |
| Isorhamnetin-3-O-neohesperidoside | 625.18  | [M+H]+ | C28H32O16 | 624.169  | Flavonols | 6497433  | 2647167  | 2643267  | 5832533  | 4227067  | 5538200  |
| Isorhamnetin-3-O-rutinoside (Narcissin) | 623.16  | [M-H]- | C28H32O16 | 624.169  | Flavonols | 5056767  | 7055333  | 6186500  | 19246000  | 11678000  | 12669000  |
| Isorhamnetin-glc-rha | 625.17  | [M+H]+ | C28H32O16 | 624.169  | Flavonols | 24127000  | 17177667  | 18182667  | 34767667  | 24479333  | 27140000  |
| 6-Hydroxykaempferol-3,6-O-Diglucoside | 627.16  | [M+H]+ | C27H30O17 | 626.148  | Flavonols | 93267  | 241573  | 0  | 475717  | 155233  | 349490  |
| Quercetin-3,7-O-β-D-diglucoside | 627.16  | [M+H]+ | C27H30O17 | 626.148  | Flavonols | 3417467  | 2484767  | 2567367  | 2154833  | 1601367  | 1502933  |
| Isorhamnetin-O-Hexoside-O-Hexoside | 641.17  | [M+H]+ | C28H32O17 | 640.163  | Flavonols | 1715667  | 1746733  | 540310  | 1737100  | 814950  | 1064380  |
| Limocitrin-3-O-(3-hydroxy-3-methylglutarate)-glucoside | 653.17  | [M+H]+ | C29H32O17 | 652.164  | Flavonols | 1518433  | 3178067  | 2518800  | 11007000  | 10686133  | 18637333  |
| Kaempferol-3-O-β-glucosyl(1→2)(6'-O-acetyl)-β-D-galactoside | 651.16  | [M-H]- | C29H32O17 | 652.164  | Flavonols | 305900  | 216077  | 247860  | 285823  | 171143  | 112613  |
| Gossypetin glu-glucuronic acid | 657.13  | [M+H]+ | C27H28O19 | 656.122  | Flavonols | 5895300  | 5323100  | 5288233  | 5728633  | 5046433  | 5147733  |
| Natsudaidain 3-O-(3-hydroxy-3-methylglutarate)-glucoside) | 725.23  | [M+H]+ | C33H40O18 | 724.221  | Flavonols | 71853667  | 223500000  | 229713333  | 329306667  | 387756667  | 392553333  |
| Robinin(Kaempferol-3-O-gal-rham-7-O-rham) | 741.22  | [M+H]+ | C33H40O19 | 740.216  | Flavonols | 84250000  | 30257333  | 46227333  | 13862000  | 15889333  | 15857667  |
| Quercetin-O-rhamnoside-O-Hexoside-O-rhamnoside | 757.22  | [M+H]+ | C33H40O20 | 756.211  | Flavonols | 539707  | 368060  | 289063  | 250263  | 247223  | 251473  |
| Kaempferol-3-O-rutinoside-7-glucoside | 757.22  | [M+H]+ | C33H40O20 | 756.211  | Flavonols | 2092100  | 1610533  | 1377600  | 1578033  | 1267433  | 1005090  |
| Quercetin-O-rutinoside-hexose | 771.20  | [M-H]- | C33H40O21 | 772.206  | Flavonols | 424493  | 506213  | 228810  | 472373  | 239127  | 286543  |
| Quercetin-glucoside-glucoside-rhamnoside | 773.21  | [M+H]+ | C33H40O21 | 772.206  | Flavonols | 598413  | 281983  | 112917  | 372850  | 154983  | 163860  |
| 6-Hydroxykaempferol-3-O-rutin-6-O-glucoside | 773.21  | [M+H]+ | C33H40O21 | 772.206  | Flavonols | 1231967  | 1221133  | 710650  | 751887  | 852310  | 653510  |
| Isorhamnetin-O-Hexoside-O-Hexoside-O-Rhamnoside | 787.23  | [M+H]+ | C34H42O21 | 786.221  | Flavonols | 539673  | 602553  | 232860  | 667237  | 347973  | 323517  |
| Natsudaidain 3-O-(5-glucosyl-3-hydroxy-3-methylglutarate)-glucoside) | 887.28  | [M+H]+ | C39H50O23 | 886.274  | Flavonols | 46090333  | 25482000  | 25516333  | 22683333  | 16406333  | 4236167  |
| Isorhamnetin-O-Hexoside-O-rhamnoside-O-rhamnoside-O-Hexoside | 933.26  | [M+H]+ | C40H52O25 | 932.252  | Flavonols | 954857  | 1168420  | 236587  | 2756800  | 401527  | 1315933  |
| Isorhamnetin-O-Hexoside-O-rhamnoside-O-glucuronate-O-Hexoside | 963.27  | [M+H]+ | C40H50O27 | 962.262  | Flavonols | 2607800  | 4047867  | 4148133  | 3301933  | 1511200  | 2604700  |
| Apigenin-8-C-Glucoside (Vitexin) | 433.11  | [M+H]+ | C21H20O10 | 432.106  | Flavonoid carbonoside | 29319667  | 20788000  | 12603000  | 34252667  | 13391667  | 13826000  |
| Apigenin-6-C-glucoside (Isovitexin) | 431.10  | [M-H]- | C21H20O10 | 432.106  | Flavonoid carbonoside | 8050000  | 7681533  | 3787600  | 13874000  | 5785500  | 10247667  |
| Isohemiphloin | 433.11  | [M-H]- | C21H22O10 | 434.121  | Flavonoid carbonoside | 367777  | 310653  | 161850  | 523493  | 211537  | 338723  |
| Luteolin-8-C-Glucoside (Orientin) | 449.11  | [M+H]+ | C21H20O11 | 448.101  | Flavonoid carbonoside | 61195000  | 26839333  | 7670900  | 104235333  | 16584333  | 23168333  |
| Luteolin-6-C-glucoside (Isoorientin) | 447.09  | [M-H]- | C21H20O11 | 448.101  | Flavonoid carbonoside | 10917200  | 4390933  | 855420  | 19435667  | 2769967  | 3612533  |
| Swertiajaponin | 463.12  | [M+H]+ | C22H22O11 | 462.116  | Flavonoid carbonoside | 5171133  | 4992933  | 1150100  | 5256900  | 635987  | 800457  |
| 5,7,4'-Trihydroxy-6-methoxyflavone-8-C-β-D-glucoside | 463.13  | [M+H]+ | C22H22O11 | 462.116  | Flavonoid carbonoside | 3256633  | 1824300  | 1494600  | 2696133  | 1246167  | 981243  |
| 5,4'-Dihydroxy-6,7-dimethoxyflavone-8-C-β-D-glucoside | 477.14  | [M+H]+ | C23H24O11 | 476.132  | Flavonoid carbonoside | 67129  | 239023  | 340777  | 815490  | 755750  | 1595533  |
| Hesperetin C-malonylhexoside | 549.16  | [M+H]+ | C26H28O13 | 548.153  | Flavonoid carbonoside | 37950667  | 9506000  | 8876433  | 2485000  | 1109267  | 609720  |
| Isoschaftoside | 565.16  | [M+H]+ | C26H28O14 | 564.123  | Flavonoid carbonoside | 206897  | 140340  | 133980  | 137657  | 63793  | 129200  |
| Genistein 8-C-apiosyl(1→6)glucoside | 565.16  | [M+H]+ | C26H28O14 | 564.148  | Flavonoid carbonoside | 1515500  | 762387  | 155883  | 735163  | 216293  | 311733  |
| Apigenin-6-C-glucose-8-xylcose | 565.16  | [M+H]+ | C26H28O14 | 564.148  | Flavonoid carbonoside | 30584000  | 16222000  | 3464133  | 13327333  | 4487500  | 4221100  |
| Apigenin-6-C-2-glucuronylxyloside | 579.13  | [M+H]+ | C26H26O15 | 578.127  | Flavonoid carbonoside | 1034120  | 746113  | 193820  | 714637  | 286327  | 329187  |
| Vitexin 2''-O-rhamnoside | 579.17  | [M+H]+ | C27H30O14 | 578.164  | Flavonoid carbonoside | 4820367  | 3733200  | 805600  | 3111667  | 1396533  | 1726167  |
| Isovitexin 7-O-glucoside(Saponarin) | 593.15  | [M-H]- | C27H30O15 | 594.158  | Flavonoid carbonoside | 2822267  | 1658833  | 1731667  | 2100133  | 1540867  | 1778867  |
| Vitexin-2-O-glucopyranoside | 595.17  | [M+H]+ | C27H30O15 | 594.158  | Flavonoid carbonoside | 1648767  | 1101600  | 1063400  | 983077  | 1057490  | 708683  |
| Luteolin-6,8-di-C-glucoside | 611.16  | [M+H]+ | C27H30O16 | 610.153  | Flavonoid carbonoside | 4563800  | 3969433  | 1931033  | 4804333  | 2070033  | 2177233  |
| Chrysoeriol-6,8-di-C-glucoside | 625.18  | [M+H]+ | C28H32O16 | 624.169  | Flavonoid carbonoside | 24655000  | 18531000  | 14504667  | 24048667  | 14279000  | 14447333  |
| 6-C-Hexosyl chrysoeriol O-hexoside | 625.18  | [M+H]+ | C28H32O16 | 624.169  | Flavonoid carbonoside | 14152000  | 2737167  | 2418500  | 4155800  | 1982800  | 5313333  |
| 8-C-Hexosyl-hesperetin O-hexoside | 627.19  | [M+H]+ | C28H34O16 | 626.185  | Flavonoid carbonoside | 2232433  | 1168593  | 237870  | 2797900  | 620853  | 749273  |
| 6-C-Hexosyl-hesperetin O-hexoside | 627.19  | [M+H]+ | C28H34O16 | 626.185  | Flavonoid carbonoside | 5571200  | 3663800  | 3743700  | 3268267  | 3125300  | 1895133  |
| 5,4'-Dihydroxy-6,7-dimethoxyflavone-8-C-[β-D-glucosyl-(1-2)]-β-D-glucoside | 639.20  | [M+H]+ | C29H34O16 | 638.185  | Flavonoid carbonoside | 1424733  | 1016153  | 1776867  | 2287067  | 2411500  | 2157133  |
| 6-C-Hexosyl-apigenin O-hexosyl-O-hexoside | 757.22  | [M+H]+ | C33H40O20 | 756.211  | Flavonoid carbonoside | 1065853  | 664237  | 675550  | 526450  | 424983  | 435120  |
| 8-C-Hexosyl-apigenin O-feruloylhexoside | 771.21  | [M+H]+ | C37H38O18 | 770.206  | Flavonoid carbonoside | 1686367  | 1049313  | 1095867  | 798057  | 810283  | 1117067  |
| 6-C-Hexosyl-apigenin O-feruloylhexoside | 771.21  | [M+H]+ | C37H38O18 | 770.206  | Flavonoid carbonoside | 2042467  | 1415867  | 1446200  | 1711600  | 1092953  | 1208417  |
| 8-C-Hexosyl-apigenin O-sinapoylhexoside | 801.22  | [M+H]+ | C38H40O19 | 800.216  | Flavonoid carbonoside | 314660  | 250290  | 335473  | 294287  | 201440  | 254583  |
| Naringenin | 271.06  | [M-H]- | C15H12O5 | 272.068  | Dihydroflavone | 333523  | 1308500  | 3408267  | 2149467  | 2475300  | 1055733  |
| Butin | 273.08  | [M+H]+ | C15H12O5 | 272.068  | Dihydroflavone | 435377  | 1686667  | 4220800  | 2430600  | 2838633  | 1151133  |
| Isosakuranetin(4'-Methylnaringenin) | 287.09  | [M+H]+ | C16H14O5 | 286.084  | Dihydroflavone | 126767  | 888373  | 1784533  | 1090167  | 1629567  | 1266533  |
| Eriodictyol | 287.06  | [M-H]- | C15H12O6 | 288.063  | Dihydroflavone | 76828  | 533217  | 990117  | 1122450  | 851797  | 586707  |
| Homoeriodictyol | 303.09  | [M+H]+ | C16H14O6 | 302.079  | Dihydroflavone | 1007713  | 59225333  | 136053333  | 59222667  | 88361667  | 47430333  |
| Hesperetin | 301.07  | [M-H]- | C16H14O6 | 302.079  | Dihydroflavone | 417317  | 26183667  | 67591333  | 29585667  | 44605333  | 24821667  |
| 5,7,3',4',5'-Pentamethoxyflavanone | 375.14  | [M+H]+ | C20H22O7 | 374.124  | Dihydroflavone | 1813067  | 1814000  | 1861633  | 4969833  | 4605867  | 11552667  |
| 5,6,7,8,3',4'-Hexamethoxyflavanone | 405.15  | [M+H]+ | C21H24O8 | 404.147  | Dihydroflavone | 588443  | 3761167  | 5750100  | 10055433  | 10927667  | 8091967  |
| Naringenin-7-O-glucoside | 433.11  | [M-H]- | C21H22O10 | 434.121  | Dihydroflavone | 316467  | 210257  | 487050  | 337503  | 234023  | 125283  |
| Eriodictyol 7-O-glucoside | 451.12  | [M+H]+ | C21H22O11 | 450.116  | Dihydroflavone | 4019200  | 3013733  | 3162833  | 2883000  | 2325267  | 1657400  |
| Farrerol 7-O-glucoside | 463.16  | [M+H]+ | C23H26O10 | 462.152  | Dihydroflavone | 1614800  | 2590367  | 1262220  | 4287733  | 2021800  | 2662033  |
| Persicoside | 477.14  | [M-H]- | C23H26O11 | 478.148  | Dihydroflavone | 216413  | 492163  | 500303  | 778393  | 602490  | 546540  |
| Naringenin 7-O-(2-β-Dapiofuranosyl)-β-D-glucopyranoside | 551.18  | [M+H]+ | C26H30O13 | 550.169  | Dihydroflavone | 0  | 812880  | 610157  | 1311633  | 1663300  | 28452  |
| Naringenin-7-O-Neohesperidoside(Naringin) | 579.17  | [M-H]- | C27H32O14 | 580.179  | Dihydroflavone | 1208600  | 504457  | 1071300  | 765443  | 446020  | 340803  |
| Naringenin-7-O-Rutinoside(Narirutin) | 579.17  | [M-H]- | C27H32O14 | 580.179  | Dihydroflavone | 1159867  | 461883  | 965130  | 728467  | 425650  | 315160  |
| Poncirin(Isosakuranetin-7-neohesperidoside) | 593.19  | [M-H]- | C28H34O14 | 594.195  | Dihydroflavone | 36353000  | 17941000  | 24826000  | 15676667  | 13143333  | 9389733  |
| Eriocitrin | 595.17  | [M-H]- | C27H32O15 | 596.174  | Dihydroflavone | 21199667  | 11991333  | 16827667  | 18111000  | 17573000  | 22460667  |
| Hesperetin 7-O-neohesperidoside(Neohesperidin) | 609.18  | [M-H]- | C28H34O15 | 610.190  | Dihydroflavone | 14202333  | 12615000  | 13569000  | 10351567  | 10608333  | 8861933  |
| Hesperidin | 609.18  | [M-H]- | C28H34O15 | 610.190  | Dihydroflavone | 14419000  | 13198000  | 14271667  | 11122000  | 11220667  | 9461733  |
| Gallic acid | 169.01  | [M-H]- | C7H6O5 | 170.022  | Tannin | 1886167  | 7537267  | 8771900  | 5550400  | 7696900  | 5678667  |
| Methyl gallate | 183.03  | [M-H]- | C8H8O5 | 184.037  | Tannin | 19785  | 106395  | 157937  | 275190  | 463257  | 686393  |
| Galloylgallic acid | 321.00  | [M-H]- | C14H10O9 | 322.021  | Tannin | 1150  | 0  | 0  | 12176  | 29879  | 59776  |
| 2-O-Galloyl-β-D-glucose | 331.07  | [M-H]- | C13H16O10 | 332.075  | Tannin | 268440  | 69801  | 241590  | 43367  | 33673  | 16700  |
| 3-O-Galloyl-β-D-glucose | 331.07  | [M-H]- | C13H16O10 | 332.075  | Tannin | 230460  | 532817  | 389613  | 570363  | 311130  | 189257  |
| Ellagicacid-4-O-β-D-galloyl-β-Dglucopyranoside | 463.05  | [M-H]- | C20H16O13 | 464.060  | Tannin | 49387000  | 37226333  | 41787000  | 37884333  | 33119333  | 26839333  |
| Gallic acid O-feruloyl-O-hexosyl-O-hexoside | 671.18  | [M+H]+ | C29H34O18 | 670.174  | Tannin | 489110  | 519970  | 546403  | 669533  | 665753  | 593137  |
| Formononetin | 267.07  | [M-H]- | C16H12O4 | 268.074  | Isoflavones | 6045  | 16281  | 7335  | 6547  | 49496  | 4629  |
| Prunetin | 283.06  | [M-H]- | C16H12O5 | 284.068  | Isoflavones | 393157  | 338733  | 332037  | 1958400  | 1126233  | 962820  |
| 2'-Hydroxyisoflavone | 285.05  | [M-H]- | C15H10O6 | 286.048  | Isoflavones | 0  | 5850  | 8584  | 11922  | 40597  | 13405  |
| Pratensein | 301.07  | [M+H]+ | C16H12O6 | 300.063  | Isoflavones | 634853  | 2020100  | 2077733  | 5863700  | 3408933  | 2080433  |
| Formononetin 7-O-glucoside(Ononin) | 431.13  | [M+H]+ | C22H22O9 | 430.126  | Isoflavones | 68826  | 66012  | 46273  | 139833  | 135626  | 151000  |
| Sissotrin | 447.13  | [M+H]+ | C22H22O10 | 446.121  | Isoflavones | 35090  | 61476  | 64855  | 84049  | 65529  | 43733  |
| Wistin (6,4'-Dimethoxyisoflavone-7-glucoside) | 461.14  | [M+H]+ | C23H24O10 | 460.137  | Isoflavones | 171823  | 93048  | 78197  | 125326  | 100853  | 101345  |
| Astilbin | 449.11  | [M-H]- | C21H22O11 | 450.116  | Dihydroflavonol | 110414  | 98872  | 153890  | 149983  | 108457  | 156470  |
| Hesperetin O-Glucuronic acid | 477.14  | [M-H]- | C23H26O11 | 478.148  | Dihydroflavonol | 80803  | 110097  | 108932  | 307997  | 352740  | 716857  |
| Phellodendroside | 519.19  | [M+H]+ | C26H30O11 | 518.179  | Dihydroflavonol | 504943  | 357613  | 632727  | 880173  | 327737  | 146547  |
| Hesperetin O-malonylhexoside | 549.12  | [M-H]- | C25H26O14 | 550.132  | Dihydroflavonol | 242930  | 445670  | 223110  | 185230  | 172960  | 100991  |
| Hesperetin O-hexosyl-O-hexoside | 625.18  | [M-H]- | C28H34O16 | 626.185  | Dihydroflavonol | 11485  | 12936  | 9903  | 14081  | 11988  | 10180  |
| Catechin | 289.07  | [M-H]- | C15H14O6 | 290.079  | Flavanols | 14581  | 42918  | 48119  | 209880  | 317890  | 557353  |
| Gallocatechin | 307.08  | [M+H]+ | C15H14O7 | 306.074  | Flavanols | 0  | 4148  | 40853  | 91122  | 24953  | 14235  |
| Epicatechin gallate | 441.08  | [M-H]- | C22H18O10 | 442.090  | Flavanols | 16309  | 20018  | 18206  | 28836  | 34775  | 40764  |
| Catechin gallate | 441.08  | [M-H]- | C22H18O10 | 442.090  | Flavanols | 10235  | 16418  | 17880  | 24402  | 33487  | 36614  |
| Gallocatechin-catechin | 593.13  | [M-H]- | C30H26O13 | 594.137  | Flavanols | 9256600  | 6806367  | 6799733  | 6484633  | 7038667  | 6773433  |
| Cyanidin-3-O-(6''-p-Coumaroylglucoside) | 595.14  | [M]+ | C30H27O13+ | 595.145  | Anthocyanins | 255130000  | 175373333  | 171200000  | 144513333  | 130620000  | 90379667  |
| Peonidin-3-(6''-p-Coumaroylglucoside) | 609.16  | [M]+ | C31H29O13+ | 609.160  | Anthocyanins | 1297433  | 1716167  | 1258600  | 1304333  | 1375933  | 1102363  |
| Delphinidin-3-O-(6''-p-Coumaroylglucoside) | 611.14  | [M]+ | C30H27O14+ | 611.140  | Anthocyanins | 27031000  | 12909667  | 8100333  | 24877000  | 11409667  | 7894100  |
| Petunidin-3-(6''-p-Coumaroylglucoside) | 625.16  | [M]+ | C31H29O14+ | 625.155  | Anthocyanins | 14901000  | 9709400  | 8015267  | 17426667  | 10552000  | 9740067  |
| Naringenin chalcone | 273.08  | [M+H]+ | C15H12O5 | 272.068  | Chalcones | 457010  | 1735500  | 4326967  | 2453833  | 2924133  | 1165167  |
| 2'-Hydroxy-3,4,5,3',4',6'-hexameth-oxychalcone | 405.15  | [M+H]+ | C21H24O8 | 404.147  | Chalcones | 109081  | 118860  | 156753  | 173197  | 185203  | 227687  |
| Phlorizin | 435.13  | [M-H]- | C21H24O10 | 436.137  | Chalcones | 44767  | 22916  | 26652  | 51046  | 20167  | 0  |
| Monohydroxy-trimethoxyflavone | 329.10  | [M+H]+ | C18H16O6 | 328.095  | Other Flavonoids | 2245767  | 1051870  | 829363  | 2841567  | 2853700  | 4833300  |
| Monohydroxy-hexamethoxyflavone | 419.13  | [M+H]+ | C21H22O9 | 418.126  | Other Flavonoids | 7915333  | 6687000  | 5806933  | 18228667  | 13955667  | 16131000  |
| Procyanidin A2 | 577.13  | [M+H]+ | C30H24O12 | 576.127  | Proanthocyanidins | 306240  | 145960  | 211933  | 132097  | 125447  | 67548  |
| Procyanidin B3 | 579.15  | [M+H]+ | C30H26O12 | 578.142  | Proanthocyanidins | 295333  | 203217  | 208533  | 185560  | 173800  | 140073  |
| 5,7-Dihydroxy-2'-methoxy-3',4'-methyleneoxydihydroisoflavone | 329.07  | [M-H]- | C17H14O7 | 330.074  | Dihydroisoflavone | 121883  | 57707  | 46669  | 305663  | 158383  | 254577  |