**S1 Table. Correlation Matrix between compounds**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Pinocembrin | Apigenin | Chrysin | Galangin |  |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Τectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | 1.000.731.890.210.535.583-.142.848.119.049.417.237.158.213.133-.241-.324-.279-.258.140.301.582-.253 | .7311.000.598.555.352.400-.292.628.124-.008.120.469.692-.222.705-.048.067-.474-.249.191-.178.707-.056 | .890.5981.000.027.628.806-.112.910.036-.338.441.108-.082.331-.084-.200-.505-.230-.091.013.173.207-. 220 | .210.555.0271.000-.295-.298-.399-.168.806.041.322.943.863.179.815.022.275-.003.084-.020.303.309.031 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Ellagic acid | τectochrysin | Syringic acid | Ferullic acid |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | .535.352.628-.2951.000.444-.328.817-.451-.286.004-.295-.256-.149-.196-.208-.512-.424-.400.014-.198.109-.216 | .583.400.806-.298.4441.000.360.760-.305-.287.030-.179-.206.065-.186-.189-.443-.382-.060-.061-.209.075-.218 | -.142-.292-.112-.399-.328.3601.000-.170-.276.482-.416-.263-.191-.139-.246-.203-.185-.331-.001-.113-.070.002-.217 | .848.628.910-.168.817.760-.1701.000-.311-.242.201-.155-.119-.008-.083-.170-.414-.370-.291.129-.108.362-.187 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Gallic acid | Hesperetin | Luteolin | **p-Coumaήc acid** |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | .119.124.036.806-.451-.305-.276-.3111.000-.077.555.879.432.691.366-.103.129.418.245-.244.721-.087-.093 | .049-.008-.338.041-.286-.287.482-.242-.0771.000-.338.012.269-.352.201-.198.181-.308-.348.161.172.639-.188 | .417.120.441.322.004.030-.416.201.555-.3381.000.265-.071.642-.190.421-.383.355.617.396.617-.11ο.420 | .237.469.108.943-.295-.179-.263-.155.879.012.2651.000.747.378.720-.252.232.067-.038-.310.436.185-.245 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Pinobanksin | PIN-7ME | Caffeic acid | Pinostrobin |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | .158.692-.082.863-.256-.206-.191-.119.432.269-.071.7471.000-.304.977.046.408-.341-.101.103-.114.579.053 | .213-.222.331.179-.149.065-.139-.008.691-.352.642.378-.3041.000-.332-.267-.186.657.218-.403.822-.439-.267 | .133.705-.084.815-.196-.186-.246-.083.366.201-.190.720.977-.3321.000-.061.519-.296-.240-.024-.203.563-.055 | -.241-.048-.200.022-.208-.189-.203-.170-.103-.198.421-.252.046-.267-.0611.000-.122-.005.820.852-.272-.0831.000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | CAPE | Quercetin | Rhamnetin | Kaempferol |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | -.324.067-.505.275-.512-.443-.185-.414.129.181-.383.232.408-.186.519-.1221.000.422-.314-.213-.193.273-.108 | -.279-.474-.230-.003-.424-.382-.331-.370.418-.308.355.067-.341.657-.296-.005.4221.000.193-.256.464-.427.006 | -.258-.249-.091.084-.400-.060-.001-.291.245-.348.617-.038-.101.218-.240.820-.314.1931.000.543.088-.432.814 | .140.191.013-.020.014-.061-.113.129-.244.161.396-.31ο.103-.403-.024.852-.213-.256.5431.000-.189.360.851 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Chlorogenic****acid** | **Protocatechui****cacid** | Kaempferide | Acacetin |  |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | .301-.178.173.303-.198-.209-.070-.108.721.172.617.436-.114.822-.203-.272-.193.464.088-.1891.000-.069-.263 | .582.707.207.309.109.075.002.362-.087.639-.11ο.185.579-.439.563-.083.273-.427-.432.360-.0691.000-.081 | -.253-.056-.220.031-.216-.218-.217-.187-.093-.188.420-.245.053-.267-.0551.000-.108.006.814.851-.263-.0811.000 | .063.016-.091-.230-.078-.098-.015.069-.363.265.286-.491-.083-.381-.179.759-.042-.063.430.934-.167.368.759 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Resveratrol | Eriodictyol | Naringenin | **Pinobanksin-****3o-acetate** |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | .876.442.899.106.547.507-.321.775.253-.279.663.181-.159.568-.179-.202-.440.078-.068.020.507.173-.212 | .681.977.537.601.338.332-.309.565.178.014.008.555.730-.193.770-.217.164-.434-.398.005-.151.685-.223 | .676.411.791-.058.424.571-.305.732-.014-.459.723-.127-.207.290-.250.362-.422.045.361.471.114.106.347 | .554.414.623-.299.498.546-.312.765-.370-.363.199-.344-.248.002-.161.055.057.123-.157.211-.225.274.042 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (+) -Catechin | Rutin | lsorhamnetin | Sakuranetin |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | .495.483.670-.150.350.765.065.672-.307-.367.338-.245-.047-.141-.092.458-.438-.381.394.535-.352.153.433 | -.182.186-.011.205-.238.376.502-.139.065-.088-.454.326.377-.166.400-.227.036-.418-.016-.408-.376-.132-.242 | .566.023.470.193.068.042-.161.242.530.048.833.245-.190.727-.307-.012-.435.301.241.162.884.053-.011 | .893.653.903-.111.745.702-.217.984-.242-.188.289-.117-.084.037-.057-.127-.338-.280-.264.198-.025.444-.143 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **lsosakuraneti****η** | Daidzein | Vitexin | **Rosmarinic****acid** |  |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | -.221-.166-.363-.094-.315-.317.095-.277-.202.327.248-.355.025-.389-.115.847-.090-.11ο.615.901-.126.185.851 | .071.633-.123.832-.216-.218-.217-.152.427.184-.226.775.961-.267.987-.150.495-.280-.264-.151-.152.465-.143 | .893.653.903-.111.745.702-.217.984-.242-.188.289-.117-.084.037-.057-.127-.338-.280-.264.198-.025.444-.143 | .875.634.895-.137.796.690-.236.991-.274-.205.263-.142-.107.016-.076-.141-.368-.305-.288.181-.046.416-.156 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Myricetin | Ursolic acid | Genistein | **Cynnamiliden e acetic acid** |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | -.248-.11ο-.296-.026-.271-.273-.079-.237-.148.047.355-.306.042-.335-.085.967-.104-.048.752.908-.209.041.969 | -.253-.056-.220.031-.216-.218-.217-.187-.093-.188.420-.245.053-.267-.0551.000-.108.006.814.851-.263-.0811.000 | -.011.540-.073.684-.301.044.103-.167.349.099-.338.701.850-.238.874-.196.379-.363-.167-.275-.258.286-.199 | .893.653.903-.111.745.702-.217.984-.242-.188.289-.117-.084.037-.057-.127-.338-.280-.264.198-.025.444-.143 |

|  |  |  |
| --- | --- | --- |
|  | **t-Cinnamic acid** | Vanillin |
| Correlation Pinocembrin Apigenin Chrysin Galangin Ellagic acid Tectochrysin Syringic acid Ferullic acid Gallic acid Hesperetin Luteolinp-Coumaric acidPinobanksin PIN-7ME Caffeic acid Pinostrobin CAPE Quercetin Rhamnetin KaempferolChlorogenic acidProtocatechuic acidKaempferide | .073-.122.032-.449.713-.021.001.287-.557.225-.355-.447-.318-.372-.294-.272-.449-.491-.488-.028-.148.056-.267 | -.506-.445-.382-.447.312-.331-.329-.147-.419-.286-.483-.419-.416-.181-.265-.228.226.248-.401-.398-.336-.423-.217 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Pinocembrin | Apigenin | Chrysin | Galangin |  |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | .063.876.681.676.554.495-.182.566.893-.221.071.893.875-.248-.253-.011.893.073-.506 | .016.442.977.411.414.483.186.023.653-.166.633.653.634-.11ο-.056.540.653-.122-.445 | -.091.899.537.791.623.670-.011.470.903-.363-.123.903.895-.296-.220-.073.903.032-.382 | -.230.106.601-.058-.299-.150.205.193-.111-.094.832-.111-.137-.026.031.684-.111-.449-.447 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Ellagic acid | τectochrysin | Syringic acid | Ferullic acid |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | -.078.547.338.424.498.350-.238.068.745-.315-.216.745.796-.271-.216-.301.745.713.312 | -.098.507.332.571.546.765.376.042.702-.317-.218.702.690-.273-.218.044.702-.021-.331 | -.015-.321-.309-.305-.312.065.502-.161-.217.095-.217-.217-.236-.079-.217.103-.217.001-.329 | .069.775.565.732.765.672-.139.242.984-.277-.152.984.991-.237-.187-.167.984.287-.147 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Gallic acid | Hesperetin | Luteolin | **p-Coumaήc acid** |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | -.363.253.178-.014-.370-.307.065.530-.242-.202.427-.242-.274-.148-.093.349-.242-.557-.419 | .265-.279.014-.459-.363-.367-.088.048-.188.327.184-.188-.205.047-.188.099-.188.225-.286 | .286.663.008.723.199.338-.454.833.289.248-.226.289.263.355.420-.338.289-.355-.483 | -.491.181.555-.127-.344-.245.326.245-.117-.355.775-.117-.142-.306-.245.701-.117-.447-.419 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Pinobanksin | PIN-7ME | Caffeic acid | Pinostrobin |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | -.083-.159.730-.207-.248-.047.377-.190-.084.025.961-.084-.107.042.053.850-.084-.318-.416 | -.381.568-.193.290.002-.141-.166.727.037-.389-.267.037.016-.335-.267-.238.037-.372-.181 | -.179-.179.770-.250-.161-.092.400-.307-.057-.115.987-.057-.076-.085-.055.874-.057-.294-.265 | .759-.202-.217.362.055.458-.227-.012-.127.847-.150-.127-.141.9671.000-.196-.127-.272-.228 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | CAPE | Quercetin | Rhamnetin | Kaempferol |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | -.042-.440.164-.422.057-.438.036-.435-.338-.090.495-.338-.368-.104-.108.379-.338-.449.226 | -.063.078-.434.045.123-.381-.418.301-.280-.11ο-.280-.280-.305-.048.006-.363-.280-.491.248 | .430-.068-.398.361-.157.394-.016.241-.264.615-.264-.264-.288.752.814-.167-.264-.488-.401 | .934.020.005.471.211.535-.408.162.198.901-.151.198.181.908.851-.275.198-.028-.398 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Chlorogenic acid** | **Protocatechui cacid** | Kaempferide | Acacetin |  |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | -.167.507-.151.114-.225-.352-.376.884-.025-.126-.152-.025-.046-.209-.263-.258-.025-.148-.336 | .368.173.685.106.274.153-.132.053.444.185.465.444.416.041-.081.286.444.056-.423 | .759-.212-.223.347.042.433-.242-.011-.143.851-.143-.143-.156.9691.000-.199-.143-.267-.217 | 1.000-.038-.158.408.315.422-.537.140.162.901-.317.162.137.856.759-.441.162-.048-.280 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Resveratrol | Eriodictyol | Naringenin | **Pinobanksin-****3o-acetate** |
| Acacetin Resveratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | -.0381.000.394.787.572.418-.358.754.819-.308-.212.819.809-.265-.212-.294.819.025-.321 | -.158.3941.000.260.338.315.241-.036.580-.325.722.580.567-.280-.223.621.580-.089-.338 | .408.787.2601.000.747.807-.349.528.783.137-.348.783.761.261.347-.372.783-.186-.388 | .315.572.338.7471.000.604-.352.094.812-.107-.275.812.796-.026.042-.330.812-.070.043 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (+) -Catechin | Rutin | lsorhamnetin | Sakuranetin |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | .422.418.315.807.6041.000.123.069.661.239-.192.661.642.359.433-.050.661-.171-.466 | -.537-.358.241-.349-.352.1231.000-.532-.242-.352.468-.242-.248-.303-.242.788-.242-.260-.209 | .140.754-.036.528.094.069-.5321.000.332.071-.314.332.310.027-.011-.437.332-.087-.477 | .162.819.580.783.812.661-.242.3321.000-.208-.1431.000.997-.179-.143-.1991.000.199-.217 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **lsosakuraneti****η** | Daidzein | Vitexin | **Rosmarinic****acid** |  |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | .901-.308-.325.137-.107.239-.352.071-.2081.000-.208-.208-.227.954.851-.289-.208-.081-.316 | -.317-.212.722-.348-.275-.192.468-.314-.143-.2081.000-.143-.156-.179-.143.909-.143-.267-.217 | .162.819.580.783.812.661-.242.3321.000-.208-.1431.000.997-.179-.143-.1991.000.199-.217 | .137.809.567.761.796.642-.248.310.997-.227-.156.9971.000-.195-.156-.216.997.267-.159 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Myricetin | Ursolic acid | Genistein | **Cynnamiliden e acetic acid** |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | .856-.265-.280.261-.026.359-.303.027-.179.954-.179-.179-.1951.000.969-.249-.179-.190-.272 | .759-.212-.223.347.042.433-.242-.011-.143.851-.143-.143-.156.9691.000-.199-.143-.267-.217 | -.441-.294.621-.372-.330-.050.788-.437-.199-.289.909-.199-.216-.249-.1991.000-.199-.366-.302 | .162.819.580.783.812.661-.242.3321.000-.208-.1431.000.997-.179-.143-.1991.000.199-.217 |

|  |  |  |
| --- | --- | --- |
|  | **t-Cinnamic acid** | Vanillin |
| Acacetin Resνeratrol Eriodictyol NaringeninPinobanksin-3o-acetate(+)-Catechin Rutin lsorhamnetin Sakuranetin lsosakuranetin Daidzein VitexinRosmarinic acidMyricetin Ursolic acid Genistein**Cynnamilidene acetic acid**t-Cinnamic acidVanillin | -.048.025-.089-.186-.070-.171-.260-.087.199-.081-.267.199.267-.190-.267-.366.1991.000.489 | -.280-.321-.338-.388.043-.466-.209-.477-.217-.316-.217-.217-.159-.272-.217-.302-.217.4891.000 |