E-E3-17

Effect of phenolic compound concentrations on UV treatment in *Catharanthus roseus* hairy roots

Eun-young Kang , Sun-joo Lee , Su-hyun Seo, Tran-Dang Khanh, Joung-kuk Ahn, Luong-chi cong, Ji-yeon Lee, Ill-min Chung*
Department of applied life science of konkuk university, Seoul, South Korea.

Catharanthus roseus has been widely cultivated for medicinal purposes. This plant contains numerous phenolic compounds such as benzoic acid, t-cinnamic acid etc. The objectives of this study were to examine the concentrations of phenolic compounds which detected in *C. roseus* hairy roots between UV treatment and UV not-treatment. The total average of phenolic compound concentration was 6004.73 μg/g. Whereas its concentration in exposure time of UV 24h treatment was shown the highest (7883.26μg/g) and 72h not-treatment was lowest (4798.73μg /g). The concentration of total phenolic compound in the UV 6h was similar to UV 12hr and increased at the 24h treatment about 1.4 times. Total concentration of phenolic compound was significantly reduced between the treatment of UV 24h and UV 36h, however, the UV 36h and 48h treatment exhibited negligible decrease of total concentration of phenolic compound. To compare UV treatment and non-treatment in 72h and 7d, concentration of total phenolic compound was increased in UV treatment. Benzoic acid revealed the greatest by about 11% of total content of phenolic compounds, while p-coumaric acid, resveratrol were contained lower than 1% of total average of phenolic compound concentrations. The obtained results will provide more understanding about the optimum of UV treatment to enhance total content of phenolic compounds in C.roseus hairy roots.
* Corresponding Author Email: imcim@konkuk.ac.kr (02-450-3730)

E-E3-18

Evaluation of anthocyanins contents in the flowers of *catharanthus roseus* cultivars

Su-hyun Seo, Eun-young Kang, Sun-joo Lee, Tran-dang Khanh, Joung-kuk Ahn, Luong-chi Cong, Tae-sic Gwak, Ill-min Chung*
Department of applied life science, graduate school of konkuk university. seoul Korea

Catharanthus roseus is tropical plant, widely used for medicinal purposes. Many secondary metabolite compounds have been found in this plants. The attempts of our research were to analysis the anthocyanin content in its flowers. The obtained results showed that anthocyanins were significantly varied among the examined the cultuvars of C. roseus. The highest concentration of cyanidin was in the sample of 89, cyanidin-3-glucoside in the sample of 45, delphinidin in the sample of 63, malvidin in the sample of 87, malvidin-3-glucoside in the sample of 13, pelargonidin in the sample of 41, pelargonidin-3-glucoside in the sample of 44, peonidin in the sample of 41, peonidin-3-glucoside in the sample of 91, petunidin in the sample of 87. Total concentration of anthocyanins in 13, 41 and 87 C. roseus samples was showed the greatest. The mean is 9482.8, 7100.8 and 6451.3.
All these results suggested that anthocyanin in C.roseus could be handled with medicinal purpose by variety selection.
*Corresponding author E.mail : imcim@konkuk.ac.kr (02.450.3730)