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Effect of Light Irradiation on the Change of Components in Soybean Sprout

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To analyze the change of some components of soybean sprout, sodium light irradiation was applied to two soybean materials of Poongsannamulkong and Nokcheakong. The results showed that isoflavon, asparagine, vitamin C and cellulose contents were affected by light irradiation duration. Daidzein content among isoflavon composition were sharply increased to the 12 hours of light irradiation and maintained to the 24 hours of irradiation, and slightly decreased after that. On the other hand, Glycitein content showed to rapidly decrease till 6 hours of irradiation and increase sharply after 6 hours of irradiation. In case of Asparagine, it showed to increase till 12 hours of irradiation and maintained to the 24 hours of irradiation. Vitamin C content showed to decrease by the duration of irradiation, but cellulose content was increased by the duration of irradiation. No statistical difference of component was showed between two materials by the light irradiation.

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Antioxidant and Inhibition on ACE Activity of Colored Potato Extracts

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Recent studies have focused the colored potatoes such as purple- and red-flesh potato. however, little is known about their biological activities. Therefore, this experiment was conducted to know the biological activity of colored potato extracts. In order to know the antioxidant and antihypertensive ability of colored potatoes, it has been evaluated for antioxidative activity using Fenton's reagent/ethyl linoleate system and for free radical scavenging activity using the DPPH free radical generating system. There were significant differences of antioxidant activities in 50 μ g/mL extracts treatment among different colored potatoes. About two-fold higher radical scavenging activity was found in "Daegwan 1-102", "Daegwan 1-104" and "Jasim", compared to that in "Superior". Based on the flesh color tested, potatoes with purple tuber showed higher radical scavenging activity than red potatoes, while white potatoes showed the lowest radical scavenging activity. The ability of 80% ethanol extracts from colored potatoes to influence the inhibitory activity of angiotensin converting enzyme and xanthine oxidase has also been investigated. Expect "Jasim", the high levels of inhibition activity of xanthine oxidase in two colored potatoes such as "Daegwan 1-102" and "Daegwan 1-104" were highly correlated to IC₅₀ values of angiotensin converting enzyme inhibition activity. This result revealed that the extracts of colored potatoes are expected to be good candidate for development into source of free radical scavengers and anti-hypertensive agent.

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