Title Effects of leaf maturity on asiaticoside, beta-carotene and calcium of India pennywort (*Centella asiatica* (L.) Urban)

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Abstract

Asiaticoside, beta-carotene and calcium content were studied in the leaves of three accessions of *Centella asiatica* (L.) Urban, namely Nakhon Si Thammarat, Ubon Ratchathani and Rayong at the age of 7, 14, 21 and 28 days after emerging, at Thailand Institute of Scientific and Technological Research, on 1st-30th November 2006. Asiaticoside content was determined by HPLC technique. The result showed that Ubon Ratchathani accession had the highest asiaticoside content among the accessions tested, especially leaves of Ubon Ratchathani accession which were collected at 21 days after emerging (4.66% (w/w)). The leaves received from Nakhon Si Thammarat accession and Rayong accessions that were collected at 28 days after emerging had the highest asiaticoside content 3.85 and 3.51% (w/w) respectively. The beta-carotene was determined by the UV-spectrophotometry method. The result showed that the leaves received from Rayong accession at 14 days after emerging had the highest beta-carotene content 241.57 µg/100 g dry leaves. While, the leaves received from Nakhon Si Thammarat and Ubon Ratchathani accessions at 28 days after emerging had the highest beta-carotene 241.23 and 229.15 µg/100 g dry leaves respectively. The calcium content was determined by AAS technique. The results showed that leaves collected at 28 days after emerging of all accessions had the highest calcium content. Leaves of Nakhon Si Thammarat accession had the highest content of calcium 1.54% followed by Unbon Ratchathani and Rayong accessions which had 1.42 and 1.30% respectively. From this experiment the results suggested that different leaves aging of different accessions effected on asiaticoside, beta-carotene and calcium content.