Development of HPLC Fingerprinting Techniques and ITS DNA Authentication for Taiwan Tea

Yen Rui-hong, Li Shi-jie
E-mail: 9701082@mail.dyu.edu.tw

ABSTRACT

50 Taiwan teas were used for catechin content analysis and their ITS sequences determination. There are twenty Tai-tea cultural cultivars (TA01~TA20), fourteen Partial-Fermented tea (PF01~PF14), twelve Mountain tea (TM01~TM12) and five commercial available teas (TC01~TC05). The order catechins contents in Taiwan tea is Epigallocatechin gallate (EGCG) > Epigallocatechin (EGC) > Epicatechin (EC) > Gallocatechin (GC) > Epicatechin gallate (ECG) > Catechin (C). The cultivars rich in ester-catechin are TA03, TA07, TA08, TA12, TA14, TA17, TA18, TM03 and TM05, there are excellent clones in developing health food products. EGCG3"Me content is determined to be higher than nine tea cultivars 1% dry leaf weight. The length of ITS region is range from 594 bp to 647 bp in our studied. The inter-specific variations in the ITS region was very high with 0.571~1 of divergence among the test samples. In conclusion, the HPLC fingerprinting and ITS authentication techniques for teas in Taiwan area were established.

Keywords: catechins, Epigallocatechin gallate, fingerprint, ITS, HPLC.


Widmer A. and Baltisberger M. (1999) Molecular evidence for...


Visser, T., Ferwarda, F., Wit, H., Veenman N.V and Zonen E., (1969) Outline of perennial crop...

Parsimony, PAUP 4.08. Sinauer, Sunderland, MA.


Shaw, P. C. (2002) Authentication of Chinese Medicinal...


