

P227

Study of quercetin and kaemferol contents variation in leaves of *Cudrania tricuspidata* associated with cultivating locations, collecting seasons and drying methods

Hie Tay Park and Sangjun Han *

Department of Agricultural and Life Science, Korea National Open University, Seoul 03087, Korea

Abstract

In order to study the content variation of Quercetin and Kaempferol associated with Varieties (with thorn, without thorn), Cultivating Locations, Collecting Seasons, Leaves of *Cudrania tricuspidata* (*carrier*) Bureau containing higher content of pharmaceutical components than the other parts were tested after collecting 6 varieties including w or w/o thorn from 4 locations such as Cheongsong, Milyang, Goesan and Gochang at 3 seasons, spring, summer and fall in 2015 and 2016. As a result, Kaempferol content associated with Varieties between with thorn and without thorn, collecting Locations and Years have no difference statistically in their mean values but the differences associated with Seasons were statistically significant. The content was higher at spring and then gradually declined at summer and fall. The content variation in Year 2015 which was higher at spring and lower at summer and then recovered at fall abnormally, shows similar pattern of sunshine variation of the year. The content variation of Quercetin and Kaempferol seems to be come from climate fluctuation specially in Sunshine hours rather than Varieties, Locations. The variation associated with drying methods for utilizing leaves are statically significant. Natural Dry was shown the least variation because heat input while drying makes degradation of the content.

Keywords: *Cudrania tricuspidata*, Kaempferol, HPLC-MS/MS, MRM

Corresponding author*

Sangjun Han

Address: Department of Agricultural and Life Science, Korea National Open University, 86 Daehak-ro, Jongro-gu Seoul Korea (03087)

Tel and Fax: 02-3668-4632

E-mail: shan@knou.ac.kr