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Study on Chemical Components of the Aerial Parts and the Roots of Buckwheat

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Buckwheat is a important vegetable in asia for long time. Recently, Buckwheat has attracted attention to its potential for health benefit and especially as a gluten-free food. Conventional buckwheat studies have focused on seeds and sprouts, but we studied the components of the aerial parts and roots of buckwheat after harvesting. Therefore, we hope that this research will be a basic study to expand the application range of buckwheat plants which are discarded after harvesting. The ethanol extracts of aerial part and roots of buckwheat (Daegwan, Yangjul) were analysed using high performance liquid chromatography (HPLC). Rutin was detected as the major compound in Daegwan, Yangjul aerial part and Daegwan root extracts, except yangjul root extract. So we analysed Yangjul root extract using liquid chromatography-mass spectrometry (LC-MS) and then obtained the informations about the components in Yangjul root extract. Yangjul root extract was analysed by LC-MS^n in negative ESI mode within the range m/z 150-2000 amu. Totally, four components was found in the Yangjul root extract and obtained the fragments ion patterns of ones. Further study, we have to confirm the structure of components in Yangjul root extract and try to more biological activity test the components for development as useful food or cosmetic ingredients.

Key words: Buckwheat, HPLC, LC-MS

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