

Isolation and Identification of bakkenolides and caffeoylquinic acids from the aerial parts of *Petasites japonicus*

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The major aim of this work is the research of secondary metabolites isolated from the aerial parts of *Petasites japonicus*. The plant material is extracted with a polar solvent, which is 95% by volume methanol at room temperature. The concentrated extract was partitioned as EtOAc, *n*-BuOH, and H₂O fractions. From the EtOAc and *n*-BuOH fraction, two bakkenolides and two caffeoylquinic acid were isolated using the Diaion HP-20, silica gel, ODS-A, and Sephadex LH-20 column chromatographies. According to the results of the results of physico-chemical and spectroscopic data including NMR, MS and UV. The chemical structures of the compounds were respectively determined as bakkenolide B (**1**), bakkenolide D (**2**), 1,5-dicaffeoylquinic acid (**3**), and 5-*O*-caffeoylquinic acid (**4**). These results suggest that the compounds isolated from the aerial parts of this plant were almost identical with known components of *Petasites japonicus*. However, it is necessary to investigate more about the difference of amounts of constituents according to harvest area and time.

Key words: bakkenolides, caffeoylquinic acid, *Petasites japonicas*, NMR