

Comparative Analysis of Essential Oil and Fatty acid composition from *Asarum sieboldii* by Supercritical CO₂ and Conventional extraction method

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Essential oil is volatile, ethereal liquids of oily consistency. They are extracted from plants; the oils have odors highly characteristic of the original plants. They can contain hydrocarbon, alcohols, phenols, ethers, aldehydes, ketones, acid and esters. *Asarum* is a genus of low growing herbs across the temperate zones, most species in East Asia (China, Korea, Japan and Vietnam). The radix of it has been used to treat pain and inflammation in Korea. The entire plant has been used as an anesthetic, analgesic, antibacterial and hypotensive. It is also used in the treatment of colds, severe toothache, rheumatic pain and chronic bronchitis with copious and thin phlegm. Mainly distillation method and conventional solvent was used for essential oil extraction. A supercritical carbon dioxide extraction (SC-CO₂) is a promising process for the extraction and fractionation of oils. In this study for extracting SC-CO₂ will used. For detection of volatile compound gas chromatography-mass spectrometry (GC-MS) and for fatty acid detection gas chromatography (GC) will be used.