Extraction and electrochemical fingerprinting of total flavonoids from *Hovenia spp.*

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The effective components of medicinal and edible plant are an important raw material for biological pharmacy and health food, thus flavonoids have become a research focus in biomedical field. *Hovenia spp.* is rich in flavonoids with a number of pharmacological effects. In this work, ultrasonic assisted and ethanol reflux method was first to be adopted to extract the total flavonoids of *Hovenia spp.* The effects of solvent concentration, liquid-to-solid ratio, ultrasonic/ethanol reflux temperature and extraction time in the extraction process were investigated. Afterwards, the electrochemical fingerprinting of total flavonoids were recorded. Three factors extracted from PCA analysis can reach an interpretation rate of 98%. The identification of each species can be achieved by locating the hot area of the 2D density pattern, which is much easier compared with using electrochemical fingerprinting.

Keywords: Electrochemical fingerprint; Total flavonoids; *Hovenia*; Extraction; PCA analysis

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