

麥門冬葉子的甲醇與熱水抽取物抗氧化活性之研究
**Antioxidant activities of methanolic and hot-water
extracts from leaves of three cultivars of
Mai-Men-Dong (*Liriope spicata* L.)**

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摘要

三種麥門冬的抽取物，無論是 80% 甲醇抽取物（進一步以正己烷、乙酸乙酯、及水依次分配抽取）或是模仿茶粉泡茶方式（即以熱水浸泡麥門冬粉），均具有 DPPH 自由基（以分光光度方法測定）和氫氧自由基（以 ESR，即電子自旋共振光譜方法測定）的清除能力，且與濃度具有相關性。熱水抽取物的 DPPH 自由基的清除能力與其內含的總酚量有密切關連性。

Abstract

1,1-diphenyl-2-picrylhydrazyl (DPPH) scavenging activities of the 80% methanolic leaf extracts of three cultivars (small leaf, SL; big leaf, BL; thin leaf, TL) of Mai-Men-Dong (*Liriope spicata* L.) are analyzed by spectrophotometry. The concentrations required for 50% inhibition (IC₅₀) of DPPH radicals were 81.08, 96.97, and 53.78 μg/mL, respectively. The methanolic extracts were further partitioned into three n-hexane-, ethylacetate-, and water-soluble fractions, among which the ethylacetate-soluble fraction exhibited the highest DPPH scavenging activity. The IC₅₀ of ethylacetate-soluble fractions of SL, BL, and TL for DPPH radical scavenging activity were 41.55, 24.55, and 53.33 μg/mL, respectively. Each Mai-Men-Dong powder (1g) was deposited in a tea bag and then dipped in hot water (100°C, 100mL) for 3 min with triplicate samples. These hot-water extracts were then freeze-dried for an anti-DPPH radical capacity test, which found a positive correlation with the phenolic contents of each hot water extract. The IC₅₀ of hot water extracts of SL, BL, and TL for DPPH radical scavenging activities were 378.97, 171.12, and 95.84 mg/mL, respectively. All three hot water extracts can effectively scavenge hydroxyl radical using electron spin resonance (ESR) spectrometry. The IC₅₀ against hydroxyl radical were 80.8, 69.7, and 116 μg/mL, respectively, for the SL, BL, and TL cultivars.