

Title Total phenolic and flavonoid, and rosmarinic acid contents in misai kucing (*Orthosiphon stamineus*) in relation to storage conditions

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Abstract

Misai kucing (*Orthosiphon stamineus*) is one of the important medicinal herbs in Malaysia. The effect of storage conditions on total phenolics, total flavonoid and rosmarinic acid contents of Misai kucing leaves were investigated. Fresh leaves of Misai kucing (MK) packed in perforated polyethylene bag were stored at low storage temperature of 5° and 10°C for 4 weeks. Results showed that total phenolic, total flavonoid and rosmarinic acid contents in fresh leaves of Misai kucing after harvest prior to storage at low temperature were 58.79 mg gallic acid equivalents (GAE)/g dry weight (DW), 69.78 catechin equivalents (CE)/g DW and 22.97 mg/g DW, respectively. The losses of these phytochemicals in this herb were considerably high when stored at ambient condition. These losses were found to be 19.5%, 29.9% and 27.6% for total phenolics, total flavonoid and rosmarinic acid, respectively. Phytochemicals in Misai kucing seemed to be preserved well in storage at low temperature especially at 5°C, until 1 week of storage. The amount of total phenolic, total flavonoid and rosmarinic acid after 1 week of storage at low temperature were in the range of 62.34-64.04 mg GAE/g DW, 60.08-66.66 mg CE/g DW and 22.39-23.98 mg/g DW, respectively, which were almost similar to those after harvest. However, the losses of total phenolic, total flavonoid and rosmarinic acid in MK, were found to increase with storage period, especially when stored at 10°C.