

Title Enhancement of phytochemical contents in cold stored fresh Misai kucing (*Orthosiphon stamineus* Benth) by prolonged storage in dried form

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Abstract

The effect of low temperature pre-storage of fresh leaves followed by storage of leaves in dried form on the phytochemical content of Misai kucing (*Orthosiphon stamineus* Benth) was studied. The fresh leaves that were packed in perforated polyethylene (PE) bag and stored for one to four weeks at 10°C, were then dried, packed in sealed packaging and further stored at ambient for another 6 months. Observations on phytochemical changes were done after storage of both fresh and dried leaves. Continuous storage of leaves in dried form for 6 months after fresh storage was found to increase total phenolic and rosmarinic acid contents in Misai kucing. The total phenolic contents of stored dried leaves from each storage period prior to drying were increased by 65% after 6 months storage at ambient, whereas rosmarinic acid remained higher only in stored dried leaves of the first 3 week removal but declining in dried leaves from 4 weeks removal. Meanwhile total flavonoid content showed the opposite result as its content rapidly declined with fresh storage period and the amount of total flavonoid seemed to decrease when the dried leaves were subjected to prolonged storage. The results suggest that the prolonged storage of leaves in dried form at ambient condition after pre-storage of fresh leaves at 10°C can enhance the phytochemical contents in Misai kucing.