**Title** Sucrose affects postharvest characteristics of torch ginger (*Etlingera elatior*) inflorescence

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**Abstract**

Torch ginger (*Etlingera elatior*) is a native plant in Malaysia that commonly used in culinary. The use of torch ginger inflorescence as cut flower is new in Malaysia. Therefore, the effects of sucrose on the postharvest characteristics of cut torch ginger inflorescence were evaluated in this study. Sucrose at different concentrations (5, 10, 15 and 20%) was used as vase solution and distilled water as control treatment. Postharvest characteristics including vase solution uptake rate, fresh weight of cut stems and bulb diameter were determined. The supplementation of sucrose at different concentrations in vase solution significantly increased the vase solution uptake, fresh weight and bulb diameter compared to control treatment. Increased of vase solution uptake, fresh weight and bulb diameter were shown from day 0 to day 2 in all vase solutions. However, significant reduction was shown on day 4 and decreased thereafter until the end of vase life. Fresh weight was positively correlated with vase solution uptake and bulb diameter. Therefore, low vase solution uptake could be a possible cause of the reduction in fresh weight and bulb diameter resulting in loss of vase life. The bracts started to dry and browning showed when fresh weight decreased while reduction of bulb diameter caused the failure of bulb to open. Supplementation of sucrose in vase solution was able to reduce bracts browning. However, the result was not satisfactory due to the low vase solution uptake. Low vase solution uptake caused insufficient energy resource for the continuous growth and development of cut inflorescence. Further experiment will be conducted to determine the causes oflow vase solution uptake and the use of other postharvest treatments to improve the postharvest quality and extend the vase life of cut torch ginger inflorescence.