The combination of EthylBloc Sachet and 2,4-pyridinedicarboxylic acid reduces petal blackening and prolongs vase life of cut flowers of lotus (*Nelumbo nucifera* Gaerth) cvs. Sattabongkot and Saddhabutra

Nurainee Salaemae, Shigeru Satoh, WachirayaImsabai, Seiji Takeda and Samak Kaewsuksaeng

Scientia Horticulturae 240: 133-138. (2018)

Abstract

Postharvest lotus (*Nelumbo nucifera* cvs. Sattabongkot and Saddhabutra) flowers show a rapid petal blackening which shortens the vase life of flowers. We studied the effect of EthylBloc Sachet and/or 2,4-pyridinedicarboxylic acid (PDCA) on the petal blackening and the vase life of two commercial cultivars. Cut flowers were treated with distilled water (control), EthylBloc 2 Sachet (active ingredient 0.014%, fumigation for 6 h at 256 ppb), vase solution of 2,4-PDCA (2.0 mM) or the combination of EthylBloc Sachet and 2,4-PDCA.

All treatments were kept at 28 ± 1 °C and 80–85% RH. The combination of 2,4-PDCA and EthylBloc Sachet caused the longest vase lives of 49.8 h with 'Sattabongkot' and 69.0 h with 'Saddhabutra', when the control values were 44.4 and 36.0 h, respectively. The combination of EthylBloc Sachet and 2,4-PDCA increased water uptake, delayed weight decrease and hue angle change, and reduced petal blackening. Moreover, the treatment caused less ethylene production and less respiration in the flowers than the other treatments. This method is useful for handling in commercial cut lotus flower.