

Abstract:

We studied the effects of cycloheximide (CHI) and cytokinins on the senescence and longevity of isolated flowers of *Hemerocallis fulva*. Mature buds were detached from the scapes in the field at 1700h one day before anthesis and transferred to 15 ml glass vials containing distilled water. On the subsequent day at 800 h one set of partially open flowers was sprayed with CHI (0.5mM 25°C) and the other set with plain water. The flowers were transferred to 15ml glass vials containing 0.5mM of each of the Kinetin, BAP and DPU besides distilled water which served as control. Flowers sprayed with CHI significantly enhanced longevity to 3.3 days in distilled water. Kinetin and BAP markedly delayed senescence and prolonged longevity in CHI sprayed flowers. The present study reveals that spray treatment of partially open flowers with CHI followed by transfer to BAP or Kinetin were the effective treatments in delaying senescence, maintaining flower quality and thereby prolonging longevity of isolated flowers of *Hemerocallis fulva*. In these treatments lesser ion leakage, besides higher fresh mass and water content was recorded suggesting maintenance of membrane integrity. These treatments also maintain the respiratory pool of sugars in the perianth tissues, besides being effective in slowing down protein degradation with flower opening and senescence.