Soluble proteins and polyphenoloxidase activity in bud flowers, flowers and leaves of cold stored lisianthus

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Abstract

This study evaluated the activity of the enzyme polyphenol oxidase (PPO) and the content of soluble protein present in lisianthus bud flowers, flowers and leaves in room temperature (24±2°C) and pre-exposure cold chamber at 9±2°C for 24 h, in order to examine a possible correlation between these parameters and postharvest longevity of lisianthus flowers. After treatments, flowers were kept in pots with water, stored at room temperature and evaluated every three days until the end of their decorative life for biochemical analyzes. During the experimental period the enzymatic activity increased with the aging of the material, directly related to the high concentration of phenolics that were accumulated in injured tissue, providing browning, while soluble protein content slightly decreased. Thus, PPO enzyme activity can be applied for plant senescence evaluation, acting as a biochemical marker for product visual quality.