

**Title** Application of chlorophyll a fluorescence method for evaluation of quality of potted anthurium and cut rose flowers

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**Keyword** anthurium; rose; chlorophyll a fluorescence

### Abstract

The quality of flowers and their potential decorative value is difficult to determine at time of purchase. The time of this work was to evaluate the quality status of potted anthurium and cut rose flowers by means of chlorophyll a fluorescence (ChF) measurements. Experiments were performed on: 1. Potted anthurium (cvs. 'Tender Love' and 'Secret Love') cultivated under 70% RH (relative humidity) for four months, and 2. Cut rose plants cv. 'Sweet avalanche+' kept during vase life in two kinds of water and in solution 'Chrysal Professional 2'. Vase with flowers were kept in the room, simulating 'home conditions'. The measurements were done with MINI-PAM fluorometer (Walz, Germany) on two leaves: young and older. Among a lot of obtained ChF parameters, we chosen those which could be used to show changes that took place during senescence of flowers.

*Anthurium*: during four months of cultivation value of ChF parameters (Yield-actual photochemical activity; ETR-rate of electron transport; and qP (photochemical quenching) decreased. At first month of cultivation (the highest quality of plants), value of ChF parameters was lower for young leaves but during next months it changed and in fourth month value of ChF parameters was evidently higher for younger leaves'. It shows for faster senescence process of leaves situated in lower part of plant (older leaves).

*Roses*: Vase life of flowers kept in solution 'Chrysal Professional 2' was evidently longer than plants kept in water. It was accompanied by high value of ChF parameters. Deionized water was harmful for flowers. They lost decorative value very fast and ChF parameters dramatically decreased.