

Abstract:

Freshness of horticultural produce as an important component of postharvest quality combines a number of extrinsic and intrinsic produce properties. This is one of the main reasons for the difficulties to objectively determine freshness without great efforts. The objective of the present study was to develop a method for the determination of freshness based on easy-to-use measuring procedures. Within the scope of an integrated approach it is assumed that loss of freshness during the post-harvest chain is exclusively caused by transpiration and degradation of internal compounds. A freshness indicator is established considering water loss as current water content related to the water content at harvest in a first step and degradation of compounds via time and temperature. To describe the developed method green-house tomatoes stored in different postharvest environments were used as an example. Further investigations have to be carried out to include the effects of microbial activities on the freshness indicator.