

Abstract:

Fruits of "Merry O'Henry" and "Baby Gold 6" peaches were submitted to different heat treatments, controlled and modified atmospheres and CO₂ shocks with the purpose of improving its postharvest conservation. Respiration and ethylene production were measured immediately after the different treatments, and also after 45 days of storage in refrigerated chambers. Standard quality parameters were also evaluated and the content of the three polyamines putrescine, spermidine and spermine and enzymatic peroxidase and polyphenoloxidase activity were quantified. Peaches submitted to a CO₂ shock for 24 hours or conserved in semi-permeable polyethylene films showed respiration and ethylene production levels lower than controls or peaches submitted to other treatments, and also had better general quality, reflected in nearly all the quality parameters studied. Spermidine was found in very low levels in both varieties while spermine did not change with treatments. Putrescine appeared to increase in all CA and shock treatments. Heat treatments and controlled atmospheres used in this work were not very effective in peach quality maintaining during storage. By contrast, CO₂ shock treatments and modified atmospheres using semi-permeable polyethylene films retarded respiration and ethylene production levels, thus delaying the ripening process, and peaches submitted to these treatments showed very acceptable quality parameters.