

**Title** Influence of post-harvest treatments on quality of Galia melons during low temperature storage

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### **Abstract**

A new post-harvest treatment for 'Galia'-type melons has been developed for simultaneously clearing and disinfecting using hot water and brushes. Pre-storage heat treatment appears to be one of the most promising in post-harvest control decay. The efficiency of HWRB treatment was dependent on the temperature used and time of exposure. Fruits were placed on rotating brushes and rinsed with tap water followed by a hot water rinse (HWRB) at 50, 54, 58 and 60  $\pm$ 1°C for 15 sec. The fruits were removed from the cartons and hand-sprayed until completely coated hand-sprayed with Zivdar wax (Safepack, Raanana, Decco, Israel) for melons, containing 2% (w/v) sodium bicarbonate (SBS) incorporated into wax represented the current commercial treatment. After drying, melons were repacked in the cartons and stored for 14 days at 2°C and 5°C and up to 5 days at 20°C (shelf life during retail and marketing). The optimal treatment to reduce decay while maintain fruit quality after prolonged storage and marketing simulation was 60  $\pm$ 1°C for 15 sec. Treatment includes hot water drenching (60°C for 10-15 sec) applied while the fruit is rolling on soft brushes and followed by coating with a wax preparation containing 2% sodium bicarbonate. The efficacy of the new post-harvest practice (hot water washing, coating with wax preparation containing sodium bicarbonate) was confirmed in Galia melons. This practice improved the general appearance and reduced post-harvest decay while maintaining fruit quality.