**Title** Post-harvest behaviour of peaches (*Prunus persica*) pre-treated with antagonist Debaryomyces hansenii and calcium chloride.

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**Abstract**

A study was conducted during 2004-05 to determine the combined effect of Debaryomyces hanseni and calcium chloride on post harvest spoilage and fruit quality f sharbati peaches ( *Prunus persica* (L.) Bastsch) during storage. Initially Rhizopus stolonifer and R. macrosporus were isolate from infected fruit and healthy fruits were inoculated with these strains. The infected fruts were treated either with calcium chloride (2.0%), D hansenii (10 cfu/ml), calcium chloride + D. hansenii, and untreated fruit served as control. The fruits were then packed in HDPE bags (200 gauges, 1.0% perforation and stored in cool chamber (5+1C) for 42 days. Observations were recorded on disease incidence, lesion diameter, and fruit spoilage, physiological loss in weight and fruit quality parameters. Our studies indicated that disease incidence was maximum in untreated fruit and minimum in calcium chloride + D hansenii treated fruit. Calcium chloride + D hansenii treated fruits were not spoiled up to 35 days under cool chamber, whereas spoilage started after 21 days in control samples. Minimum spoilage of fruit was recorded in D. hansenii + calcium chloride (1.37%) as compared to untreated fruit (33.5%) after 42 days of storage. D. hansenii - calcium chloride reduced the physiological loss in weight significantly over control after 42 days of storage. Firmness of the fruit was reduced in all the treatments and had no significant variation among the treatments. Total soluble solid content of the fruits increased and acidity decreased in all the treatment during storage. TSS.acid ratio increased initially, but after 28th day, it stared that declining in all the treatments except in fruits pre-treated with D. hansenii + calcium chloride. Thus our study indicated that although pre treatment of Sharbati peaches either with calcium with chloride or D hansenii alone reduced the spoilage and enhanced their shelf life significantly, their combination was much more effective in doing so.