Heat treatment followed by MA storage reduces the internal browning of pineapple during cold storage

Postharvest heat treatment, alone and in combination with Modified Atmosphere packaging was investigated as a measure to reduce Internal Browning(IB) of pineapple cv. "*Mauritius*" and "*kew*" during cold storage. A brief heat-shock has previously been shown to increase tolerance of avocado, strawberry and papaya fruits to low temperature damage. Sets of pineapples harvested at full green stage were separately treated at ten different temperatures. Time combinations. The test temperatures ranged from 38-60 C^{o} and the exposure times varied between 10-60 mins.Treatment at 38C^{o} for 60 min.prior to cold storage reduced the IB over 45-55% and was found to be the most effective temperature combination for both cultivars. The fruits treated at this temperature ripened slower than untreated controls and showed a lower bix value and acidity after ripening. When the pineapples treated at 38C for 60mins. Werepacked in polythene bags (350G) prior to cold storage, the internal browning was reduced further by another 10%. Th efruits subjected to this combined treatment also remained firm and green during the period of cold storage and had a lower brix value and acidity compared to controls. SDS-olyacrylamide Gel Electrophoresis (SDS-PAGE) of the extracts revealed the presence of two Heat Shock Proteins (HSPs) in heat-treated fruits compared to control fruits.