

Abstract:

Second crop production fruit of “Bianca” fig was harvested at the eating ripe stage (20 August 2001) and dipped for 1 minute in a solution of cinnamic acid (1% in 96% ethanol) or in ethanol alone (96%). A lot of fruit received no treatment (control). Half of the fruit of the previous treatments were held for 24 hours in an atmosphere containing 400 ppb of 1-MCP at 20°C.

Fruit were then stored for 1 week at 15°C and 90% RH and inspected after 3 or 7 days of storage. Ethanol had a negative effect on aesthetical appearance of the peel, which showed large scalded areas. Fruit treated with ethanol in combination with cinnamic acid exhibited the same peel alteration. All treatments reduced decay with respect to control. Weight loss in fruit treated with ethanol either alone or in combination with cinnamic acid were similar to control, weight loss were slighter higher in 1-MCP fruit at both inspection times and after 3 days of storage in EtOH-CA-MCP. Regarding chemical parameters, an overall decrease of pH was observed in all treatments, counteracted by an increase in titratable acidity, with the highest variation in control fruit. In contrast, TSS remained quite stable in all treatments all over the storage period with the exception of control and 1-MCP fruit whose °Brix content decreased of about 1%.

Taste analysis, conducted only on healthy fruit, revealed only a slight alteration of sensory quality after 3 days of storage, but fruit treated with cinnamic acid developed an unpleasant “spicy” flavour after 7 days of storage; only EtOH, MCP and EtOH-MCP fruit maintained an acceptable taste. Optimisation of application of these compounds, lower storage temperatures and treatments with 1-MCP at different concentrations at temperatures lower than 20°C, may improve storability of figs.