

HYDROTHERMAL LYCHEE TREATMENT

Due to the increasing production of lychee in the domestic market, researches have been developed to increase the shelf-life of the fruit. The color change and the loss of moisture from the epicarp are the major technological problems preventing the acceptance of the product in the production and marketing chain.

Researches begun in 2009 by the Institute of Food Technology ITAL in Campinas / SP demonstrated that the hydrothermal treatment is effective in maintaining color and lychee reducing moisture loss when combined with cooling and the use of packaging systems.

The hydrothermal treatment in lychee aims to inactivate enzymes present in the epicarp acting in the fruit during storage, changing the bright red color to brown.

The hydrothermal treatment should not alter the taste and other sensorial attributes of lychee. Thus, it was realized two types of treatments: in water at 50° C / 20s and in water plus organic acid at 50° C / 10s. The newly harvested fruit, yet on the branches, were submerged in the baths and, after the removal of the moisture excess with forced ventilation, were detached from the branches, packed and stored under refrigeration.

The hydrothermal treatment technology combined with cooling and packaging provided the red maintenance of the epicarp, reduced the fruit moisture loss and prolonged the shelf-life of lychees for 20 days, compared to the three days of fruit conservation of the control treatment.

The hydrothermal treatment has been used in post-harvest to be a clean and safe technology, which eliminates the use of toxic products. The equipment is simple and affordable.

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