

Title Effects of hydro-cooling combine with packing methods on enzymatic antioxidant activity and some physical changes in red hot chili cv. 'Superhot'

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### **Abstract**

Red hot chili cv. Superhot has very high potential for exporting due to a demand of hot chili in foreign market increases yearly. However, the exporting of fresh chili faces a big problem especially the darkening at pedicel. The darkening disorder at pedicel of hot chili mainly causes by a water loss from stomata apertures. From this problem, hydro-cooling in combination with package for extending the fresh quality of red hot chili was investigated. Red hot chilies cv. Superhot were obtained from an exporting company in Nakornrachasima province, Thailand. The chili fruit were selected for uniformity of size and colour then hydro-cooled at 0°C. Pre-cooled chilies were packed in plastic tray wrapped with 15 µm polyvinylchloride (PVC) film, 70 µm polyethylene (PE) bag and shell clam PE box then stored at 5°C. Non pre-cooled and unpacked chili fruit was set as a control treatment. Weight loss of hydro-cooled chili and packed in all kind of packages significantly decreased compared to control fruit. There was only slightly difference in water loss among packaging treatments. Hydro-cooled chili and packed in plastic packaging maintained the fruit firmness higher than control. Superoxide dismutase (SOD) activity was suppressed by hydro-cooling treatment in combination of packaging. However, there were no consistency patterns of changes in ascorbate peroxidase activity during storage of red hot chili in each treatment. The overall quality of red hot chili was highest in hydro-cooled chili kept in shall clam PE box.