

# Changes in Physicochemical Properties of Pickled Cabbage during Curing

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## ABSTRACT

The weather in Taiwan is favorable for vegetable growth, particularly for staple Vegetables such as cabbage, Chinese cabbage, so that they are prone to cause Unbalanced between production and marketing. Thus, it is very important to stabilize the market and price of staple vegetables. To extend the storage life of these vegetables, it needs to do some research work on post-harvest handling, processing and storage. Therefore, this study was to investigate post-harvest handling, processing and storage to find out the methods of extending storage time of cabbage. Pickling of cabbage is one of best ways to adjust the production and marketing of cabbage. This study was focused on stability of sensory properties-color and fragility of the pickled cabbage during storage. Three experiments were used to study including Experiment (the traditional recipe and processing method), experiment (citric acid, calcium chloride and lactic acid bacterium, prune vinegar and yeast were used to design the recipes and processing methods), experiment (based on experiment and experiment results to adjust the recipe to investigate the changes of nitrite content and peroxidase activity in the pickled cabbage during curing). The photo picture, pH value, moisture, color-Lab value, sensory properties, nitrite content and peroxidase activity were determined, The results were shown as follows: It was found that the recipes added citric acid and calcium chloride could improve the color and fragility of the pickled cabbage, and extend the storage life up to 4 months at 4 . Based on the results of the improved recipes to design a new recipe as follow: cabbage 100%, citric acid 5%, sugar 3% and calcium chloride 3% were used to prepare the pickled cabbage for analyzing nitrite content and peroxidase activity during curing. The result showed that there were no nitrite residue and peroxidase activity detected in the pickled cabbage. In conclusion: citric acid and calcium chloride are useful quality improving agents for pickled vegetables. They can improve color stability and fragility and extend storage life of the pickled.

Keywords : cabbage、pickled、citric acid、calcium chloride

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